THE ROLE OF STATE-KINDS IN THE MORPHOSEMANTICS OF SPANISH DEADJECTIVAL NOMINALIZATIONS

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A dissertation submitted for the degree of doctor of Linguistics

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Vitoria-Gasteiz, 2020

"El que no quisiere tomar este trabajo
déxelo estar, que no por esso se irá al infierno"

(Juan de Valdés, *Diálogo de la lengua*)

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AGRADECIMIENTOS

Desde siempre he tenido un gusto especial por los idiomas, pero nunca imaginé que el universo de la investigación lingüística sería tan apasionante como complejo. La elaboración de esta tesis doctoral ha supuesto uno de los mayores retos que he afrontado en mi vida, tanto en lo personal como en lo académico. Han sido varios años de duro trabajo y frecuentes momentos de falta de ideas y estancamiento emocional; pero también he vivido momentos de satisfacción por los resultados del aprendizaje, he disfrutado tratando de desenmarañar los misterios de la lingüística teórica y he conocido a muchas personas fantásticas durante las actividades académicas realizadas estos años. A todas esas personas que me han ayudado, directa o indirectamente, quiero dedicar las siguientes líneas. (Espero no dejarme a nadie).

En primer lugar, quiero dar la gracias a mi directora de tesis, Elena Castroviejo, sin cuya inestimable ayuda e infinita paciencia no habría logrado terminar la tesis. Se puede decir que nos conocimos casi de casualidad, y ahora puedo decir que se trató de una casualidad maravillosa. Elena reúne todas las cualidades que cualquier estudiante de doctorado desea de su director de tesis: no solo es una excelente persona, sino también es entusiasta y comprensiva y ha volcado en mí todo su conocimiento y tiempo. A ella debo muchas ideas de mi investigación y, especialmente, los ánimos brindados para no dejarme vencer por el desaliento cuando me topaba con alguno de los callejones sin salida de la labor investigadora. Por todo ello, estaré siempre en deuda con ella. *Moltes gràcies!*

Quiero, en segundo lugar, dar las gracias a Christopher Kennedy por supervisar mi estancia de investigación en la Universidad de Chicago y, en especial, por sacar tiempo de su apretada agenda para ayudarme en lo que por entonces no era sino el germen de la tesis. Igualmente, agradezco a Andrew Koontz-Garboden que supervisase mi estancia breve en la Universidad de Mánchester, quien también empleó su valioso tiempo para ayudarme a desarrollar la hipótesis principal. Para mí, ha sido todo un privilegio haber contado con la ayuda de dos investigadores de tan reconocido prestigio internacional y me siento muy afortunado por ello.

Doy las gracias también a Elena de Miguel, mi *madrina académica*, que despertó en mí el interés por la lingüística teórica cuando yo era un ingenuo estudiante de la Universidad Autónoma de Madrid que no tenía claro a qué dedicarse en la vida. Siempre tendré presente todo lo que me ha ayudado a lo largo de tantos años desde que fui estudiante de su clase de Sintaxis y le agradezco su generosidad por haber contado conmigo en tan numerosas ocasiones.

A lo largo de todos estos años, ha habido otros investigadores que han dedicado parte de su tiempo a discutir algunas ideas de mi tesis. Doy las gracias en especial a Antonio Fábregas, que

siempre saca tiempo para atender a los estudiantes, y también a Rafael Marín, María Arche, Julio Villa-García, Silvia Gumiel-Molina, Isabel Pérez-Jiménez, Luis Eguren, Louise McNally, Galit Sassoon, Boban Arsenijević, Bryan Leferman, Itamar Francez, Karlos Arregi, y seguro que me dejo alguno más.

Asimismo, doy las gracias a los profesores y compañeros del Instituto de Lengua, Literatura y Antropología (ILLA) del Consejo Superior de Investigaciones Científicas (CSIC), del Hizkuntzalaritza Teorikorako Taldea (HITT) de la Universidad del País Vasco, de las escuelas de verano Eastern Generative Grammar (Debrecen, Hungría) y Linguistic Summer Institute (Chicago, Illinois) y de la Universidad de Chicago y la Universidad de Mánchester. Doy las gracias también a mi profesora de inglés Karen T. Neilson y a los profesores de la Universidad Autónoma de Madrid, del Instituto Rosa Chacel y de los colegios Julio Pinto y Soledad Sainz, pues ellos también han contribuido desde su remoto tiempo a la materialización de esta tesis, y debo expresarles mi gratitud. Guardo especial cariño a Mari Jose, mi profe del colegio Soledad Sainz.

Tampoco habría sido posible terminar esta tesis sin la ayuda de Jenny y Melania, mis compañeras y amigas del ILLA-CSIC. No solo me han ayudado con su inagotable generosidad en algunos aspectos de la investigación, sino que con ellas he vivido los momentos más divertidos de estos últimos años, como "Don't tell Jenny" o "¿Tú crees en los estados davidsonianos?". No olvidaré nuestras sesiones de *terapia* y nuestras noches de fiesta. Doy las gracias también a mis compañeros del máster Cristina, Matías y Víctor; a mis compañeros de despacho del ILLA-CSIC Jaime, Carmen y Zara; y a mis compañeros de despacho de la Universidad del País Vasco Laura, Aitor, Lucía, Marina y Katie.

Agradezco a mis amigos, que son muchos, su continuo interés en animarme a que terminara la tesis de una vez por todas y les doy las gracias por su sincera y valiosa amistad. En concreto, quiero mencionar a Jose y Rubén, con quienes compartí muchas mañanas de trabajo entre risas (aún sigo sin saber si se dice *rabiosidad* o *rabiosismo*, pero sí sé qué le decimos a la tesis: *¡Hoy no!*), y también quiero mencionar a Guiomar, simplemente por ser ella (se te va a subir a la cabeza esto cuando lo leas).

Por último, pero no por ello menos importante, ni más, doy las gracias a mi familia, que también ha vivido en paralelo el proceso de elaboración de la tesis, que, como dice mi madre, ha sido peor que un parto. (Al final no os he incluido en una sección de *desagradecimientos*, así que podéis sentiros afortunados). Doy las gracias a mis padres, Ángel F. y Asunción; a mis hermanos, Tati, Tato y Gabi (de quienes ya estoy esperando un regalo de al menos tres euros cada uno); a mis cuñados, Óscar, Sandra y Patri, pese a que les digo a menudo que no terminan de caerme del todo bien; y por supuesto a los *sobris* más plastas del mundo, a los que cito por sendos nombres artísticos: el mago Gonzalini, que desde que tiene móvil se ha transformado en

un adolescente espectral; Rodri, tan pequeño y tan encantado de haberse conocido; Guinchi, autor de la mundialmente famosa saga de cuentos del Simio; y Angelillo, el investigador más joven de la familia, que marcó el camino con su inolvidable (para su desgracia) exposición sobre la amapola.

La investigación que subyace a esta tesis doctoral ha sido financiada parcialmente por un contrato FPI (BES-2013-066336) como parte del proyecto *At the intersection of modification and scalarity: the semantic mapping of scale structure onto the interpretation of modifiers* (ref.: FFI2012-34170. IP: Dra. Elena Castroviejo), del Ministerio de Economía, Industria y Competitividad, y del proyecto *Interaction between Meaning Types* (ref.: FFI2015-66732-P. IP: Dra. Elena Castroviejo), financiado conjuntamente por el Ministerio de Economía, Industria y Competitividad y el Fondo Europeo de Desarrollo Regional.

RESUMEN

El presente trabajo ofrece una caracterización morfosemántica de las nominalizaciones deadjetivales en español, que en las últimas décadas han despertado el interés de los investigadores de distintas disciplinas del conocimiento, como la ciencia cognitiva, la filosofía y, en especial, la lingüística teórica, donde se enmarca esta tesis. El objetivo es proporcionar una explicación detallada de las propiedades semánticas y morfológicas de los distintos tipos de nominalizaciones deadjetivales del español, prestando particular atención a las que llamo aquí nominalizaciones de *ejemplar* y de *clase* de estado, que definiré más abajo.

Las nominalizaciones deadjetivales son sustantivos que derivan de adjetivos, como *altura* < *alto* y *belleza* < *bello*. El estudio de las nominalizaciones deadjetivales tiene especial importancia para la lingüística teórica porque plantea muchas preguntas desde el punto de vista semántico, morfológico y sintáctico que aún no han recibido respuesta, y algunas de estas cuestiones se abordan en esta tesis. En relación con el punto de vista semántico, las nominalizaciones deadjetivales codifican conceptos abstractos, los cuales se caracterizan por que no tienen un referente claramente delimitado en el mundo real. Por ejemplo, mientras que el sustantivo concreto *gato* puede designar un animal en particular que se puede ver y tocar, el sustantivo abstracto *altura* no se refiere a ninguna entidad tangible. Por este motivo, el uso, definición y representación de estos conceptos es un asunto escurridizo y ha generado un intenso debate sobre su semántica y la composición de la ontología semántica de las lenguas naturales. En concreto, con el fin de dar cuenta del significado expresado por las nominalizaciones deadjetivales, la bibliografía se ha servido de 'grados', 'cualidades', 'tropos' y 'estados', lo que ha planteado la pregunta de cuáles de estos conceptos pertenecen realmente a nuestra ontología semántica y cuáles pueden derivarse de otras nociones más simples o, sencillamente, desecharse por innecesarios.

En lo relativo a la morfología, el análisis de las nominalizaciones deadjetivales, especialmente en comparación con las deverbales (como *destrucción* < *destruir*), también plantea preguntas interesantes. En particular, mientras que las nominalizaciones deverbales se forman a partir de verbos, que llevan morfemas de tiempo, aspecto de punto de vista y modo, las nominalizaciones deadjetivales se forman a partir de adjetivos, los cuales no incluyen morfología verbal. Esta diferencia nos hace plantearnos si hay algún tipo de información que puedan codificar las nominalizaciones deverbales ajena a las nominalizaciones deadjetivales. En esta tesis, mostraré que hay un interesante contraste con relación al aspecto de punto de vista, esto es, con relación a la *(im)perfectividad*, lo que arroja serias dudas sobre el supuesto de que las nominalizaciones deadjetivales en español no codifican información relacionada con el aspecto de punto de vista.

Otra importante cuestión morfológica que abordo aquí es la correspondencia de la gradación adjetival con el dominio de masa; en otras palabras, las nominalizaciones deadjetivales se forman a partir de adjetivos graduables y constituyen nombres de masa en circunstancias normales, así que se torna necesario explicar cómo interactúan estas dos propiedades.

Finalmente, desde el punto de vista sintáctico, las nominalizaciones deadjetivales participan en distintas construcciones sintácticas y expresan significados diferentes en cada una de ellas. Considérense (i) y (ii):

(i) a. la altura de Víctor
b. la belleza de la tormenta

(ii) a. La belleza está en el interior.
b. El puente tiene una altura {increíble / de diez metros}.
c. El puente tiene {mucha / dos metros de} altura.
d. Los electrones tienen altura.

Aunque la bibliografía sobre nominalizaciones deadjetivales se ha centrado en las que denomino de *ejemplar de estado*, ejemplificadas en (i), hay otros contextos sintácticos que nos ayudan a desvelar sus propiedades sintácticas y semánticas. Por un lado, las nominalizaciones de (i) van precedidas del determinante definido y seguidas de un sintagma preposicional que introduce el individuo del cual se predica la propiedad nominal. Por otro lado, ninguna de las nominalizaciones de (ii), que denomino nominalizaciones de *clase de estado*, se predica de un individuo en concreto: en (iia) *belleza* aparece precedida por el determinante definido; en (iib) *altura* va precedida por el determinante definido y seguida de un adjetivo o un sintagma de medida; en (iic) la nominalización va precedida del cuantificador de masa *mucha* o un sintagma de medida; en último lugar, la nominalización aparece en solitario. Teniendo en cuenta estos datos básicos, un estudio cabal de las nominalizaciones deadjetivales debe explicar por qué muestran dicha distribución sintáctica y qué diferencias semánticas hay entre cada estructura.

En suma, la importancia de estudiar las nominalizaciones deadjetivales para la lingüística teórica es extraordinaria, en la medida en que aquellas plantean algunos problemas semánticos, morfológicos y sintácticos que no se han resuelto aún. Con objeto de ser más explícito con respecto a estos problemas, a continuación proporciono un breve resumen de los contenidos de cada capítulo de la tesis.

En el **capítulo 1**, presento el concepto de 'nombres abstractos' y destaco su relevancia en la ciencia cognitiva, la filosofía y la lingüística teórica y los problemas que dichas disciplinas han puesto de manifiesto en la caracterización de los nombres abstractos como consecuencia de su

naturaleza escurridiza. Pongo el foco en la lingüística teórica y asumo la propuesta de Bosque (1999), según la cual la distinción concreto-abstracto no constituye una propiedad léxica independiente de los sustantivos, sino que deriva de otras nociones más específicas, como los usos metafóricos, las interpretaciones de clase, los predicados de eventualidad, etc.

Asimismo, presento el objeto de estudio, el objetivo y la hipótesis de la tesis: el objeto de estudio son los distintos tipos de nominalizaciones deadjetivales que se pueden formar en español en función de sus propiedades morfosemánticas y sintácticas, prestando especial atención a las que yo llamo nominalizaciones de ejemplar y de clase de estado; el objetivo de la tesis es explicar las propiedades fundamentales de las nominalizaciones deadjetivales y proporcionar un análisis formal que capte dichas propiedades; y la hipótesis principal consiste en que nuestra ontología semántica incluye clases de estados, merced a lo cual podemos dar cuenta de las propiedades de las nominalizaciones que se estudian aquí. Asimismo, hago uso de la noción de 'clases' y 'ejemplares' (de Carlson 1977), muestro su creciente importancia en la lingüística teórica y explico su aplicación al dominio de las entidades, los eventos y los estados. En cuanto al marco teórico en el que se enmarca este trabajo, la tesis descansa sobre los principios y métodos de la lingüística formal; en concreto, para dar cuenta de las caracterizaciones morfosemánticas, empleo el aparato formal de Heim y Kratzer (1998), que consta de una ontología de objetos semánticos y distintas reglas de composición, combinado con un mecanismo construccionista de formación de palabras, de acuerdo con el cual las palabras se forman y se combinan en la sintaxis.

Además, extraigo de la bibliografía las propiedades empíricas más básicas de las nominalizaciones deadjetivales, a fin de proveer al lector del conocimiento básico en esta materia. También paso revista a los tratamientos teóricos previos sobre nominalizaciones deadjetivales, muestro las limitaciones de los modelos basados en grados, cualidades y tropos y aporto pruebas empíricas de que son los modelos basados en estados los que captan correctamente la naturaleza estativa y abstracta de las nominalizaciones de ejemplar de estado.

Puesto que en esta tesis la estatividad constituye la columna vertebral del análisis de las nominalizaciones deadjetivales, en el **capítulo 2** proporciono una definición específica de los estados, basada en la caracterización tradicional de Vendler (1957) y Dowty (1979), como propiedades temporales que no involucran cambio en ninguno de sus participantes. Para delimitar el concepto en términos precisos, también examino la interacción de la estatividad con la causa, la homogeneidad y la gradación, que desempeñan un papel central en la configuración de la tipología de estados que presento en esta tesis. A este respecto, proporciono pruebas empíricas de que la clasificación tripartita formada por los estados de individuo, de estadio y davidsonianos no se fundamenta en consideraciones espaciotemporales, aspectuales ni en la

distinción relativo-absoluto, como se afirma en la bibliografía, sino en la causa. En concreto, los estados de individuo expresan propiedades no causadas; los de estadio expresan propiedades externamente causadas, donde la causa externa debe entenderse como una causa directa en el sentido de Maienborn y Herdtfelder (2017); y, siguiendo a Leferman (2017), los estados davidsonianos expresan propiedades internamente causadas.

A propósito de la homogeneidad, basándome en Dowty (1979) y Rothstein (2004), argumento que los predicados atélicos, a saber, los estados y las actividades, son cumulativos; las actividades no son divisibles estrictamente hablando o en todo caso son divisibles en intervalos, mientras que hay estados divisibles en subintervalos (*v. g. saber la respuesta*) y otros que son divisibles en intervalos (*v. g. dormir*). En relación con la gradación, argumento frente a Baglini (2015) que los estados no se definen como predicados graduables, ya que hay predicados estativos, como *pertenecer*, que no son graduables; por tanto, la gradación tampoco constituye una propiedad definitoria de los estados.

Para concluir el examen de la estatividad, y dado que asumo que las nominalizaciones deadjetivales provienen de los adjetivos graduables, presento los aspectos básicos de mi modelo sobre gradación, que se enmarca en la tradición clase-ejemplar (desde Carlson 1977). En particular, postulo siguiendo a Anderson y Morzycki (2015) que los adjetivos graduables expresan estados y que los grados no son objetos ontológicos, sino que derivan de las clases de estados. No obstante, a partir de la propuesta de Gehrke (2011, 2015, 2017) en relación con las pasivas adjetivales del alemán, donde los predicados eventivos se analizan como predicados de clases de eventos en lugar de ejemplares de eventos, postulo que los adjetivos graduables son predicados de clases de estados en lugar de ejemplares de estados. Cuando la propiedad se predica de un individuo en concreto, un nudo funcional se ensambla a la derivación para asociar una clase de estado del conjunto de clases de estado con un ejemplar de estado.

Tras proporcionar una caracterización precisa de la estatividad y esbozar mi modelo sobre la gradación, en el **capítulo 3** abordo el análisis de las nominalizaciones de ejemplar de estado, las cuales he ejemplificado en (i) y han monopolizado la bibliografía sobre las nominalizaciones deadjetivales. Mi propuesta se alinea con los modelos basados en estados, y proporciono argumentación empírica de que las nominalizaciones deadjetivales expresan estados, lo cual se halla en consonancia con el hecho de que sus adjetivos de base expresen estados con independencia de que sean predicados de individuo, estadio o estados davidsonianos. Las nominalizaciones de ejemplar de estado se caracterizan sintácticamente por estar flanqueadas por el determinante definido y sus argumentos, normalmente un sintagma preposicional que introduce el *sujeto* o individuo del que se predica la propiedad, y semánticamente por expresar una propiedad episódica, es decir, una propiedad que se localiza en un tiempo determinado.

No obstante, a diferencia de los enfoques existentes basados en los estados, sostengo que las nominalizaciones deadjetivales expresan estados *imperfectivos*, pues aceptan modificadores de tiempo y de frecuencia, pero rechazan los modificadores de aspecto introducidos por *durante* pese a ser atélicas. La razón por la que expresan eventualidades imperfectivas es que no incluyen la cópula en la derivación, y los adjetivos solo legitiman interpretaciones perfectivas cuando la morfología verbal está presente; dado que los modificadores aspectuales solo coaparecen con interpretaciones perfectivas, el hecho de que las nominalizaciones deadjetivales no los acepten se explica directamente.

La distinción clase-ejemplar se presenta muy útil también para dar cuenta de la combinación de las nominalizaciones deadjetivales con los adjetivos de frecuencia y manera y con los sintagmas de medida. De acuerdo con Gehrke y McNally (2015), los adjetivos de frecuencia (*v. g. frecuente*, *habitual*, etc.) pueden desencadenar lecturas temporales y no temporales; en esta línea, argumento que en español los adjetivos de frecuencia pueden desatar lecturas temporales en posición predicativa, prenominal y posnominal, caso en el cual operan sobre ejemplares, pero solamente pueden desatar lecturas no temporales en posición posnominal, y en tal caso operan sobre clases. Por ejemplo, *su frecuente tristeza* significa 'sus frecuentes estados de estar triste', mientras que *su altura frecuente* significa 'su frecuente grado de altura'.

Los adjetivos de manera (*v. g. extraño*, *sorprendente*, etc.) pueden analizarse como predicados de clases de estados que hacen intersección con el conjunto de las clases de estados denotado por la nominalización, y proporciono evidencia empírica de que, a diferencia de los adverbios correspondientes, no dan lugar a entrañamientos de la forma positiva del adjetivo: por ejemplo, *extrañamente alto* entraña *alto*, mientras que *extraña altura* no entraña *alto*. Mantengo que la razón de esta asimetría radica en que las nominalizaciones no se evalúan con respecto a un estándar de comparación en ausencia de un cuantificador o un modificador explícitos. Por último, también analizo los sintagmas de medida, *v. g. de diez metros* en *La altura del puente es de diez metros*, como predicados de clases de estados, pero se diferencian de los adjetivos de manera en que aquellos denotan clases de estados ordenadas inherentemente.

El capítulo concluye con una reflexión sobre la contribución semántica de los sufijos deadjetivales; en concreto, postulo que estos pueden tomar como aducto bien el dominio completo de los adjetivos a los que se adjuntan, que es la situación más habitual, o bien pueden restringir el dominio tomando solo un subconjunto propio de las clases de estados denotadas por el adjetivo de base. Este último análisis trata de dar cuenta de la especialización del significado o el hecho de que hay algunas (pocas) nominalizaciones que expresan un significado más específico que el de sus adjetivos de base: por ejemplo, *simple* puede significar 'sencillo' o 'idiota', mientras que *simplicidad* significa 'sencillez' y *simpleza* significa 'idiotez'. Por lo demás,

concluyo que los sufijos deadjetivales no aportan ningún otro significado relevante que pueda sistematizarse desde el punto de visto léxico-semántico.

Una vez desarrollado un análisis minucioso de las principales propiedades semánticas y morfológicas de las nominalizaciones de ejemplar de estado, en el **capítulo 4** exploro su composición semántica y las comparo con los nombres de masa canónicos (*v. g. agua*). Las nominalizaciones deadjetivales constituyen nombres de masa porque denotan conjuntos de elementos, en concreto de clases de estados, ordenados entre ellos. Sin embargo, los nombres de masa canónicos y las nominalizaciones están asociados a dominios distintos: los primeros están parcialmente ordenados por la relación parte-todo. En cambio, siguiendo a Francez y Koontz-Garboden (2017a), las segundas están asociadas a escalas, que defino como conjuntos de clases de estados totalmente preordenadas; mi propuesta difiere de la de estos autores en que para ellos las escalas integran porciones de sustancia en lugar de clases de estados.

Asimismo, delimito el papel de la gradación y la atelicidad en el dominio de la masa. En línea con Grimm (2014), argumento que el análisis estándar (desde Mourelatos 1978) de acuerdo con el cual hay una correspondencia entre la atelicidad y el dominio de la masa no se sostiene. A diferencia de Grimm, que no ofrece una propuesta alternativa precisa, postulo que existe una correspondencia entre la *gradación* y el dominio de masa y que dicha correspondencia se da porque tanto los predicados graduables como los nombres de masa denotan conjuntos de elementos ordenados entre ellos. Además, disocio la contabilidad de la pluralización morfológica y muestro que esta entraña aquella, pero no al revés. La pluralización requiere heterogeneidad y, dado que los estados son homogéneos en tanto que son atélicos, estos rechazan el plural en circunstancias normales (*v. g. *sus tristezas*). No obstante, también muestro que las nominalizaciones estativas se pueden pluralizar (*v. g. sus alturas*) si se hallan involucrados ciertos factores.

Asimismo, estudio todos los tipos de nominalizaciones de clase de estado ejemplificados en (ii), que, con pocas excepciones, no han sido examinados en la bibliografía. Las nominalizaciones de clase de estado se caracterizan sintácticamente por no ir acompañadas de sus argumentos y semánticamente por tener una interpretación genérica, esto es, por expresar propiedades que no pueden situarse en un tiempo determinado. Las nominalizaciones definidas, ejemplificadas en (iia), van precedidas del determinante definido. En contraste con Roy (2010), que afirma que la lectura genérica se deriva de la estativa cuando aparece un operador genérico GEN en ausencia de los argumentos nominales, yo argumento, en línea con la tradición de clase-ejemplar en general y con Espinal y Borik (2015) en particular, que la interpretación genérica como clase de estado es la básica, mientras que la interpretación episódica como ejemplar de estado es la derivada.

También estudio las nominalizaciones indefinidas y las cuantificadas, que ejemplifico en (iib) y (iic), respectivamente. Las primeras van precedidas del determinante indefinido y seguidas de un adjetivo de manera o un sintagma de medida que funciona como modificador adnominal, mientras que las segundas van precedidas de un cuantificador de masa o un sintagma de medida que funciona como cuantificador de masa. Asumo con Eguren y Pastor (2014, 2015) que las nominalizaciones indefinidas proyectan sintagmas nominales, mientras que las cuantificadas proyectan sintagmas cuantificadores; además, a partir del análisis de las estructuras pseudopartitivas y los compuestos del inglés desarrollado por Schwarzschild (2002), argumento que las nominalizaciones indefinidas constituyen nombres contables, mientras que las cuantificadas constituyen nombres de masa. En lo concerniente a las nominalizaciones escuetas, ejemplificadas en (iid), argumento que son excepcionales en español, en contraste con otras lenguas, como el ulwa y el wólof, porque requieren un contexto que imponga un cero en la escala de la nominalización.

Asimismo, repaso brevemente las nominalizaciones de participante y de evento y muestro que la distinción entre clase y ejemplar también es adecuada para captar su formación y significado. Considérense los datos siguientes:

(iii) a. Tengo varias durezas en el pie.
b. El político cometió varias irregularidades.

En (iiia) la nominalización de participante *durezas* denota un conjunto plural de entidades a las que se atribuye la propiedad adjetival, es decir, denota entidades duras. En cambio, en (iiib) la nominalización *irregularidades* denota un conjunto plural de eventos a los que se atribuye la propiedad adjetival, esto es, denota eventos que se consideran irregulares.

Desde una perspectiva morfológica más general, planteo la pregunta de si el fenómeno de la nominalización es irrestricto o si, por el contrario, podemos predecir el número y el tipo de nominalizaciones que puede formar la misma base predicativa. A este respecto, proporciono evidencia empírica de que los argumentos de la base (evento, agente, tema, etc.) desempeñan un papel fundamental, si bien hay que tener en cuenta otros aspectos idiosincrásicos del español. Para cerrar el análisis, en virtud de la evidencia empírica proporcionada en esta tesis según la cual no hay nominalizaciones que denoten en el dominio de los grados, concluyo que podemos prescindir de estos como argumentos con su propio tipo ontológico.

Como se resume en el **capítulo 5**, la contribución principal de esta tesis consiste en que nuestra ontología semántica debe incluir clases y ejemplares en general, y clases de estado y ejemplares de estado en particular, para dar cuenta del comportamiento morfosemántico y

sintáctico de las nominalizaciones deadjetivales del español. Al incorporar las clases y los ejemplares en nuestra ontología semántica, no es necesario postular la existencia de los grados, que se derivan de las clases de estados, ni de las cualidades o los tropos, cuya existencia simplemente no se justifica.

Hay otras contribuciones interesantes que resultan de la principal: por ejemplo, esta tesis ofrece una caracterización precisa de la estatividad y de su relación con la causa, la homogeneidad y la gradación, nociones cuya interacción a menudo no se delimita con precisión en la bibliografía. Otra contribución importante de esta tesis es que explora la interfaz morfología-semántica, que no es precisamente un terreno frecuentado en la investigación, y emplea un aparato teórico que combina la semántica formal con las teorías construccionistas de formación de palabras, mostrando que ambas perspectivas se complementan. Delimitar el papel de la gradación y la telicidad con respecto a los nombres de masa y la pluralización morfológica es otra contribución relevante e innovadora.

Asimismo, esta tesis proporciona una caracterización meticulosa de las nominalizaciones de ejemplar y clase de estado, con arreglo a la cual las primeras desatan lecturas episódicas porque se predican de un individuo en un tiempo determinado, mientras que las segundas desatan lecturas genéricas porque no se predican de ningún individuo en un tiempo determinado. Por una parte, del análisis de la combinación de las nominalizaciones de ejemplar de estado con los modificadores temporales, de frecuencia y de aspecto, se derivan interesantes consecuencias teóricas respecto al aspecto léxico y, especialmente, al de punto de vista. Por otro, el simple hecho de analizar las nominalizaciones de clase de estado es otra contribución relevante de la tesis, ya que la bibliografía, con pocas excepciones, las ha pasado por alto. Desentrañar sus propiedades semánticas y morfosintácticas sobre la base de la dicotomía clase-ejemplar aporta resultados esclarecedores que nos permiten delinear los distintos tipos de nominalizaciones deadjetivales en términos precisos, mostrando el impacto específico de los determinantes, los adjetivos de manera y los sintagmas de medida en la configuración sintáctica.

Esta tesis también proporciona una mejor comprensión del proceso de nominalización como un fenómeno semánticamente restringido, en el que interactúan las propiedades de las bases predicativas, los argumentos, los nudos funcionales que van asociados a ellas y los nominalizadores para crear los significados complejos que pueden expresar las nominalizaciones. Por último, espero que esta tesis sea útil para aquellos lectores interesados en descubrir fenómenos empíricos novedosos del español, en particular en relación con las nominalizaciones deadjetivales y los principales contextos en los que estas aparecen.

ABSTRACT

The present work offers a morphosemantic characterization of deadjectival nominalizations in Spanish, which in the last decades has interested researchers from different academic disciplines, like cognitive science, philosophy and, especially, theoretical linguistics, where my dissertation is framed. My goal is to provide a detailed explanation of the semantic and morphological properties of the different types of deadjectival nominalizations, with a particular attention to what I call *state-token* and *state-kind* nominalizations, which I will define below.

Deadjectival nominalizations are nouns that are derived from adjectives, like *altura* 'height' < *alto* 'tall' and *belleza* 'beauty' < *bello* 'beautiful'. The study of deadjectival nominalizations is of special importance for linguistic theory because it raises many questions from the semantic, morphological and syntactic point of view that are not solved yet, and some of these questions are addressed in this dissertation. Regarding the semantic point of view, deadjectival nominalizations encode abstract concepts, which do not have a clearly delimitated referent in the actual world. For instance, while the concrete noun *gato* 'cat' can refer to a particular animal that we can see and touch, the abstract noun *altura* 'height' does not refer to any tangible entity. For that reason, the use, definition and representation of these concepts is elusive and has brought up an intense debate about their semantics and the composition of the semantic ontology of natural languages. In particular, to capture the meaning expressed by deadjectival nominalizations, the literature has made use of 'degrees', 'qualities', 'tropes' and 'states', which has raised the question of which of these concepts actually belong to our semantic ontology and which can be derived from other more basic notions or simply dispensed with.

As for the morphological point of view, the study of deadjectival nominalizations, especially in comparison with deverbal ones (like *destrucción* 'destruction' < *destruir* 'to destroy'), also raises interesting questions. Particularly, while deverbal nominalizations are formed out of verbs, which carry verbal morphemes of tense, viewpoint aspect and mood, deadjectival nominalizations are formed out of adjectives, which do not include verbal morphology. This dissimilarity raises the question of whether there is some type of information that deverbal nominalizations, unlike deadjectival ones, can encode. In this dissertation, I will show that there is an interesting contrast in relation to viewpoint aspect, that is, to *(im)perfectivity*, which casts serious doubts on the standard assumption that Spanish nominalizations are not supposed to encode viewpoint aspect-related information. Another important morphological consideration that I address here is the correlation between adjectival gradability and the mass domain; in other words, deadjectival nominalizations come from gradable adjectives and constitute mass nouns in normal circumstances, so it is necessary to explain how these two properties interact.

Finally, from the syntactic point of view, deadjectival nominalizations participate in different syntactic constructions and display distinct meanings in each of them. Consider (i) and (ii):

(i) a. la altura de Víctor
the height of Víctor
'Víctor's height'
b. la belleza de la tormenta
the beauty of the storm

(ii) a. La belleza está en el interior.
the beauty is in the interior
'Beauty is inside.'
b. El puente tiene una altura {increíble / de diez metros}.
the bridge has a height incredible of ten meters
'The bridge has a(n) {incredible height / height of ten meters}.'
c. El puente tiene {mucha / dos metros de} altura.
the bridge has much two meters of height
d. Los electrones tienen altura.
the electrons have height
'Electrons have some height.'

Although the literature on deadjectival nominalizations has focused on the ones that I call here *state-token* nominalizations, which are exemplified in (i), there are other syntactic contexts that help us shed light on their syntactic and semantic properties. On the one hand, the nominalizations involved in (i) are preceded by the definite determiner and followed by a prepositional phrase that introduces the individual of whom the nominal property is predicated. On the other hand, none of the nominalizations in (ii), which I call *state-kind* nominalizations, are predicated of a specific individual. In (iia) the nominalization *belleza* 'beauty' is preceded by the definite determiner; in (iib) *altura* 'height' is preceded by the indefinite determiner and followed by an adjective or by a measure phrase; in (iic) the nominalization is preceded by the mass quantifier *mucha* 'much, a lot of' or by a measure phrase; finally, in (iid) the nominalization appears in isolation. Taking these basic data into consideration, a thorough study on deadjectival nominalizations has to explain why they show the previous syntactic distribution and what semantic differences each structure exhibits.

In brief, the importance of studying deadjectival nominalizations for linguistic theory is extraordinary, insofar as they involve some semantic, morphological and syntactic issues that are

not solved yet. In order to be more explicit with respect to these issues, in what follows I provide a summary of the contents of each chapter of this dissertation.

In **chapter 1**, I present the concept of 'abstract nouns' and highlight their relevance in cognitive science, philosophy and theoretical linguistics and the problems that these disciplines have pointed out in characterizing abstract nouns as a consequence of their elusive nature. I place the focus on theoretical linguistics and assume Bosque's (1999) insights according to which the concrete-abstract distinction does not constitute an independent lexical property of nouns, but rather it is derived from other more specific notions, like metaphorical uses, kind interpretations, eventuality predicates, etc.

In addition, I present the object of study, goals and hypothesis of this dissertation: the object of study are the different types of deadjectival nominalizations that can be formed in Spanish depending on their morphosemantic and syntactic properties, with a particular attention to the ones that I call state-token and state-kind nominalizations; the goals of the dissertation are to explain the fundamental properties of deadjectival nominalizations and to provide a formal analysis that captures these properties; and the hypothesis is that our semantic ontology must include state-kinds in order to account for the properties of the nominalizations under study. I bring to light the notions of 'kinds' and 'tokens', show their increasing relevance in linguistic theory since Carlson (1977) and explain their application to the domain of entities, events and states. Regarding the theoretical framework in which this work is set, the thesis follows the principles and methods of formal linguistics. In particular, to provide morphosemantic characterizations I employ Heim & Kratzer's (1998) basic formal apparatus, which consists of an ontology of semantic objects and distinct rules of composition, in conjunction with a constructionist device of word formation, according to which words are both formed and combined in the syntax.

Furthermore, I extract the most basic empirical properties of deadjectival nominalizations from the literature, in order to provide the reader with the necessary basic knowledge on this topic. I also review previous theoretical accounts on deadjectival nominalizations, showing the limitations of degree-based, quality-based and trope-based approaches and providing evidence that state-based approaches make the correct prediction of capturing the abstract and eventuality nature of state-token nominalizations.

Given that stativity constitutes the backbone of the analysis of deadjectival nominalizations in this dissertation, in **chapter 2** I provide a specific definition of states, based on the classical view by Vendler (1957) and Dowty (1979), as temporal properties that do not involve change in any of their participants. In order to delimitate the concept in precise terms, I also explain the interaction of stativity with causation, homogeneity and gradability, which play a crucial role in

configuring the typology of states that I present in this dissertation. In this respect, I provide evidence that the three-way classification of states into individual-level, stage-level and Davidsonian states is not based on spatiotemporality, aspect or the relative-absolute distinction, as claimed in the literature, but rather on causation. Specifically, individual-level states express non-caused properties; stage-level states express externally caused properties, where the external cause must be understood as a direct cause in the sense of Maienborn & Herdtfelder (2017); and, following Leferman (2017), Davidsonian states express internally caused properties.

Regarding homogeneity, based on Dowty (1979) and Rothstein (2004), I argue that atelic predicates, namely, states and activities, are cumulative; activities are not divisible strictly speaking or are just divisible in intervals, while there are states that are divisible in subintervals (e.g. *saber la respuesta* 'to know the answer') and others that are divisible in intervals (e.g. *dormir* 'to sleep'), so divisibility is not a defining property of states. In relation to gradability, I argue against Baglini (2015) that states are not defined as gradable predicates, since there are stative predicates like *pertenecer* 'to belong' that are not gradable, so gradability does not constitute a defining property of states either.

To complete the examination of stativity, and given that I assume that deadjectival nominalizations are derived from gradable adjectives, I present the basic aspects of my model of gradability, which is framed within the kind-token tradition (from Carlson 1977, 2003). In particular, I follow Anderson & Morzycki (2015) in positing that gradable adjectives express states and that degrees are not ontological objects, but rather they are derived from state-kinds. Nonetheless, in the spirit of Gehrke's (2011, 2015, 2017) insights on German adjectival passives, where eventive predicates are taken as predicates of event-kinds rather than event-tokens, I posit that gradable adjectives are predicates of state-kinds rather than state-tokens. When the property is predicated of a specific individual, a functional node attaches to the derivation to associate a state-kind from the set of state-kinds with a state-token.

Once I have provided a precise characterization of stativity and sketched my view on gradability, in **chapter 3** I deal with the analysis of state-token nominalizations, the ones that are exemplified in (i) and have monopolized the literature on deadjectival nominalizations. I side with state-based approaches and argue that deadjectival nominalizations express states, which is in accordance with the fact that their base adjectives express states irrespective of whether they are individual-level, stage-level or Davidsonian states. State-token nominalizations are syntactically characterized by being flanked by the definite determiner and their arguments, usually a prepositional phrase introducing the *holder* or the individual of whom the property is predicated, and semantically characterized by expressing an episodic property, that is, a property that holds at a particular time.

Nonetheless, unlike the existing state-based approaches, I contend that deadjectival nominalizations express *imperfective states*, since they accept temporal and frequency modification, but they reject aspectual modifiers introduced by *durante* 'for' even though they are atelic. The reason why they express imperfective eventualities is that they do not include the copula in their derivation, and adjectives can only license perfective interpretations when verbal morphology is present; given that aspectual modifiers can only co-occur with perfective interpretations, the fact that deadjectival nominalizations do not accept them is straightforwardly explained.

The kind-token distinction is proven to be useful when accounting for the combination of deadjectival nominalizations with frequency and manner adjectives and with measure phrases. Frequency adjectives (e.g. *frecuente* 'frequent', *habitual* 'usual', etc.) can trigger temporal or non-temporal readings according to Gehrke & McNally (2015); I argue that, in Spanish, frequency adjectives can trigger temporal readings when combined with deadjectival nominalizations in prenominal, post-nominal and predicative position, in which case they operate over state-tokens, but they can only trigger non-temporal interpretations in post-nominal position, in which case they operate over state-kinds. For instance, *su frecuente tristeza* 'their frequent sadness' means 'their frequent states of being sad', whereas *su altura frecuente* '(lit.) their height frequent' means 'their frequent degree of height'.

Manner adjectives (e.g. *extraño* 'strange', *sorprendente* 'surprising', etc.) can be taken as predicates of state-kinds that intersect with the set of state-kinds denoted by the nominalization and I provide evidence that, unlike their manner adverbial counterparts, they do not give rise to entailments to the positive: for example, *extrañamente alto* 'strangely tall' entails *alto* 'tall', while *extraña altura* 'strange height' does not entail *alto* 'tall'. I contend that this asymmetry holds because nominalizations do not have to be evaluated with respect to a standard of comparison in the absence of an explicit quantifier or modifier, as will be explained in due time. Finally, I also analyze measure phrases, e.g. *de diez metros* '(lit.) of two meters' in *La altura del puente es de diez metros* 'The height of the bridge is ten meters, as predicates of state-kinds, but they differ from manner adjectives in that the former denote state-kinds that are inherently ordered.

The chapter concludes with a reflection on the semantic contribution of deadjectival suffixes; particularly, I posit that deadjectival suffixes can take as their input either the domain of the adjectives to which they attach, which is the most usual situation, or can restrict their domain by taking a proper subset of the set of state-kinds denoted by the base adjectives. This analysis captures semantic narrowing or the fact that there are (few) nominalizations that express a more specialized meaning than their corresponding bases: for instance, *simple* can mean 'simple' or 'foolish', while *simplicidad* means 'simplicity' and *simpleza* means 'foolishness'. Apart from all

this, I conclude that deadjectival suffixes do not contribute any other relevant meaning that can be systematized from the lexical-semantic point of view.

Having developed a careful examination of the main semantic and morphological properties of state-token deadjectival nominalizations, in **chapter 4** I explore their internal composition and compare them to canonical mass nouns like *agua* 'water'. Deadjectival nominalizations constitute mass nouns because they denote sets of elements, specifically state-kinds, that are ordered with respect to one another. However, canonical mass nouns and deadjectival nominalizations are associated with different domains: the former are partially ordered by a mereological part-whole relation. In contrast, following Francez & Koontz-Garboden (2017a), the latter are associated with scales, which I take to be sets of totally preordered state-kinds; my proposal differs from Francez & Koontz-Garboden's in that these authors claim that scales are composed of portions of a substance instead of state-kinds.

In addition, I delimit the role of gradability and atelicity in the mass domain. In line with Grimm (2014), I argue that the standard analysis (from Mourelatos 1978) according to which there is a mapping from atelicity onto the mass domain in untenable. Unlike Grimm, who does not offer a precise alternative proposal, I posit that there is a mapping from *gradability* onto the mass domain and that this mapping holds because both gradable predicates and mass nouns can be construed as sets of elements that are ordered with respect to each other. In addition, I disassociate countability from morphological pluralization, showing that the latter entails the former, but not the other way around. Pluralization requires heterogeneity and, given that states are homogeneous inasmuch as they are atelic, they reject the plural in normal circumstances (e.g. **sus tristezas* 'their sadnesses'). Nevertheless, I also show that stative nominalizations can pluralize (e.g. *sus alturas* 'their heights') if certain factors are involved.

Furthermore, I study all types of *state-kind* nominalizations exemplified in (ii), which have not been studied in the literature, with few exceptions. State-kind nominalizations are syntactically characterized by not being accompanied by their arguments and semantically characterized by triggering generic interpretations, that is, by expressing properties that cannot be placed at a particular time. Definite nominalizations, exemplified in (iia), are preceded by the definite determiner. In contrast to Roy (2010), who claims that the generic reading is derived from the stative reading when a generic operator GEN occurs in the absence of the nominal arguments, I argue, in the spirit of the kind-token tradition in general and Espinal & Borik's insights (2015) in particular, that the generic qua state-kind reading is the basic one, while the episodic qua state-token reading is the derived one.

I also study indefinite and quantified nominalizations, which are exemplified in (iib) and (iic), respectively. The former are preceded by the indefinite determiner and followed by a manner

adjective or a measure phrase functioning as an adnominal modifier, while the latter are preceded by a mass quantifier or a measure phrase functioning as a mass quantifier. I assume with Eguren & Pastor (2014, 2015) that indefinite nominalizations project nominal phrases, while quantified nominalizations project quantifier phrases; in addition, based on Schwarzschild's (2002) insights on English pseudopartitives and compounds, I argue that indefinite nominalizations constitute count nouns, while quantified nominalizations constitute mass nouns. Concerning bare nominalizations, exemplified in (iid), I argue that they are exceptional in Spanish, in contrast to languages like Ulwa and Wolof, because they require a context that imposes a zero on the scale of the nominalization.

In addition, I briefly study *participant* and *event* nominalizations and show that the kind-token distinction is also appropriate to account for their formation and meaning. Consider the following data:

(iii) a. Tengo varias durezas en el pie.
have.1.SG several hardnesses on the foot
'I have several calluses on my foot.'
b. El político cometió varias irregularidades.
the politician committed several irregularities

In (iiia) the participant nominalization *durezas* '(lit.) hardnesses, calluses') denotes a plural set of entities to which the adjectival property is ascribed, that is, hard entities. In contrast, in (iiib) the nominalization *irregularidades* ('lit.) irregularities' denotes a set of plural events to which the adjectival property is ascribed, that is, events that are considered irregular.

From a more general morphological perspective, I pose the question of whether the phenomenon of nominalization is unconstrained or rather we can predict the number and types of nominalizations that the same predicative base is able to form. I provide evidence that the process of nominalization is semantically constrained, and the arguments of the base (event, agent, theme, etc.) play a crucial role, although certainly there are other idiosyncratic aspects of Spanish involved. To conclude the analysis, in light of the empirical evidence provided in this dissertation according to which there are no nominalizations denoting in the degree domain, I wrap up by stating that degrees can be dispensed with as arguments with their own ontological type.

As summarized in **chapter 5**, the main contribution of this dissertation is that our semantic ontology must include kinds and tokens in general and state-kinds and state-tokens in particular in order to account for the semantic and morphosyntactic behavior of deadjectival

nominalizations in Spanish. By including kinds and tokens in our semantic ontology, we do not need to postulate the existence of degrees, which are derived from state-kinds, or qualities or tropes, whose existence is simply unjustified.

There are other interesting contributions that stem from the main one: for instance, this dissertation offers a precise characterization of stativity and its interaction with causation, homogeneity and gradability, which is often treated inaccurately in the literature. Another important contribution is that this dissertation explores the morphology-semantics interface, which is not precisely a crowded field for investigation, and makes use of a theoretical apparatus that blends formal semantics with constructionist theories of word formation, showing that the two different perspectives complement each other. The delimitation of the role of gradability and atelicity with respect to the mass domain and morphological pluralization is another relevant and innovative contribution.

In addition, this dissertation provides a meticulous characterization of state-token and state-kind nominalizations, according to which the former trigger an episodic reading because they are predicated of an individual at a particular time, whereas the latter trigger a generic reading because they are not predicated of any specific individual at any particular time. On the one hand, the examination of the combination of state-token nominalizations with temporal, frequency and aspectual modifiers has interesting theoretical consequences with respect to lexical and, especially, viewpoint aspect. On the other hand, the simple fact of analyzing state-kind nominalizations is another relevant contribution of my dissertation, because these have been overlooked in the literature on gradability, with very few exceptions. Disentangling their semantic and morphosyntactic properties on the basis of the kind-token dichotomy provides insightful results that allow us to delineate the different types of deadjectival nominalizations in precise terms, showing the specific impact of the definite and indefinite determiners, manner adjectives and measure phrases on the syntactic configuration.

This dissertation also contributes a better understanding of the process of nominalization as a semantically constrained phenomenon, in which the properties of predicative bases, their arguments, the functional nodes that are involved and the nominalizers interact to give rise to the complex meanings that nominalizations can express. Finally, I hope that this dissertation is useful to those readers who are interested in discovering novel empirical facts about Spanish, particularly with respect to deadjectival nominalizations and the main contexts in which these occur.

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LIST OF GLOSSING CONVENTIONS AND ABBREVIATIONS

1 'first person'
2 'second person'
3 'third person'
ACC 'accusative'
CL 'noun class marker, singular, default'
EXC 'exceed, comparative main verb'
F 'feminine'
FIN 'completive, neutral focus'
FUT 'future'
IPFV 'imperfective'
M 'masculine'
N 'neuter'
NEG 'negation, negative'
NOM 'nominative'
PFV 'perfective'
PL 'plural'
REFL 'reflexive'
S-F 'subject focus'
SG 'singular'

AP 'adjectival phrase'
AspP 'aspect phrase'
CP 'complementizer phrase'
DP 'determiner phrase'
DegP 'degree phrase'
NMLZ 'nominalizer'
NP 'nominal phrase'
*n*P 'little nominal phrase'
PP 'prepositional phrase'
PredP 'predication phrase'
QP 'quantifier phrase'
RP 'relator phrase'
SC 'small clause'
TP 'tense phrase'

Chapter 1

Introduction

The present work explores Spanish deadjectival nominalizations at the morphology-semantics interface. The goal is to provide a thorough characterization of the different types of deadjectival nominalizations, focusing on the analysis of what I call *state-token* and *state-kind* nominalizations and showing why the study of deadjectival nominalizations is important for linguistic theory. Before entering into details, it is useful to zoom out and situate the study of deadjectival nominalizations in a broader frame, considering that they are just a subclass of so-called abstract nouns, which have attracted the interest of researchers from different academic disciplines, particularly cognitive science, philosophy and theoretical linguistics, the latter perspective constituting the frame of my investigation.

1.1 Abstract nouns: a cross-disciplinary perspective

Deadjectival nominalizations like *happiness* and *honesty*, which I will define below, belong to a wider group of nouns that refer to concepts that lack a tangible referent in the actual world, which are called abstract nouns, such as *happiness* and *honesty* themselves, and *accident*, *war*, *party*, *time*, *week*, *love*, *hunger*, *pain*, etc. These nouns are opposed to concrete nouns, which refer to concepts with a clearly identifiable and delimited actual referent, such as *horse*, *boat*, *table*, *sand*, *water*, *salt*, etc. For example, if we want to explain what the meaning of the word *table* is, we can point to a certain piece of furniture that has a slab fixed on several legs; in contrast, if we want to explain what *time* is, we need to resort to more or less precise theoretical definitions of the concept. Thus, while concrete nouns refer to real objects that we can see and touch, abstract concepts involve feelings, actions, situations, experiences, human qualities and, in principle, even sensations that are perceived by smell, hearing and taste; for example, concepts like 'fragrance', 'whistle' and 'bitterness' do not point to clear referents in the actual world, although they are perceived by three of our five senses.

The fact that abstract nouns lack a clear referent in the actual world is the fundamental reason why they pose serious difficulties in defining them and it is precisely due to their elusiveness that they have attracted the attention of different academic disciplines, especially cognitive science, philosophy and theoretical linguistics. From the perspective of cognitive science, Borghi et al. (2017) point out that abstract nouns pose the challenge of explaining their use and representation, taking into account the sophisticated ability of human beings to use

abstract thought. Specifically, in discussing recent theories on the characterization of abstract concepts, they raise the question of whether they are *grounded* (or *embodied*), that is, influenced, like concrete nouns such as *cat*, by the kind of body that organisms possess to be grounded in perception, action and emotion systems. For example, seeing a cat, caressing it or hearing it meow activates internal stimulation of perceptual, motor and emotional experiences; in contrast, it is not clear if abstract concepts are also grounded, given the lack of a clear referent in the actual world.

Another question that the authors raise is whether abstract concepts are defined in the same terms as concrete concepts with respect to their statistical distribution by the co-occurrence of words in large corpora and, consequently, whether their meaning could be derived from the relationship between associated words rather than between words and their referents. Linguistic factors are also taken into consideration: specifically, the existing theories on cognitive science discuss the role of language focusing on its multi-folded aspects, as a bodily, social and emotional experience, as well as to underline the role of language as a medium of thought, which is able to extend our cognitive abilities and social experience. Finally, conceptual acquisition and the relationship between acquisition and brain representation is at stake, taking into account the fact that abstract concepts are acquired later than concrete ones, at a time when children have already mastered many other words. To sum up, providing an explanation of the representation of abstract concepts is crucial for the cognitive science to understand higher-order human cognition.[1]

From the philosophical perspective, abstract nouns, especially the ones that involve human properties like *wisdom*, have already attracted the attention of philosophers since Aristotle. The literature in this respect is vast, so I do not intend to be exhaustive and will focus on the main important aspects of the tradition. Of great importance is the Aristotelian conception of 'universals', which are predicates that can be particularized by many specific objects, which are called 'particulars'. For example, *red* is a universal property because it can be predicated of my shirt, which is a particular, but also of my former car, which is another particular; accordingly, universals differ from particulars in that they can be present in different objects and at different times.

Abstract concepts have been recently retrieved by Moltmann (2004, 2009, 2015), who develops an analysis based on *kinds of tropes* and *tropes*. The notion of a linguistic 'kind', which is crucial for the purposes of this dissertation and which I will define later on in precise terms, is tantamount to what Moltmann conceives as universals. In linguistic semantics, the bare mass

[1] I will not expand on the current remarks brought to light by cognitive science with respect to abstract nouns; the reader is referred to Vigliocco et al. (2014), Barsalou (2016), Dove (2016), Zwaan (2016), Borghi et al. (2017) and references therein.

noun *gold* in, for example *Gold is beautiful*, is considered a term referring to a kind whose instances are particular gold quantities, as in *This is gold*. Analogously, in *Tigers are common*, the bare plural *tigers* is a term that refers to a kind whose instances are individual tigers, as in *I love these tigers*. With this in mind, Moltmann claims that bare nouns like *wisdom* refer to kinds of tropes, which are universal properties, since they can be particularized by many individuals: *Socrates*, *Aristotle, Plato,* etc. In contrast, determiner phrases (DPs) like *Socrates' wisdom* refer to tropes, which are particularized properties or concrete manifestations of a property in an individual. Thus, tropes are individualized properties, which means that *Socrates' wisdom* and *Aristotle's wisdom* refer to different tropes even assuming that Socrates and Aristotle were equally wise.

According to Moltmann, tropes were considered one of the four categories of beings in Aristotle's *Categories* (substances, secondary substances and qualities being the other three categories), and the category of tropes had subsequently been taken for granted in Aristotelian metaphysics, throughout the Middle Ages (Ockham, Aquinus), early modern philosophy (Locke, Spinoza), up to contemporary Neo-Aristotelian metaphysics (Lowe) as well as the more radical trope-based one-category ontologies (Williams, Campbell). Moltmann goes a step further and claims that the notion of 'tropes' must be introduced in the semantic ontology of theoretical linguistics, particularly casting doubts that degree-based and state-based approaches are able to provide a satisfactory explanation for the semantics of deadjectival nominalizations. In section 1.4, I will contend that, although the spirit of her proposal according to which universals and particulars play a relevant role in determining the semantics of deadjectival nominalizations, the trope-based theory does not offer any substantial advantages over the state-based approach, which I embrace in this dissertation. Regardless, and zooming out from Moltmann's particular treatment of abstract nouns, their role in philosophy since Aristotle in relation to the ontological categories of natural language lays bare their importance in yet another discipline.

Finally, abstract nouns have also played an important role in theoretical linguistics, specifically in the configuration of nominal typologies. As claimed by Bosque (1999), among the different classifications that are traditionally proposed for nouns (like proper/common, individual/collective and count/mass nouns), the concrete-abstract distinction is the most problematic from the linguistic point of view due to their elusive nature. Etymologically, *abstract* means 'disassociated, detached', so abstract nouns refer to entities that are disassociated from real objects, like characteristics related to their shape, size, color, composition, use, etc., and traditional grammars often employ this or similar descriptions.

As Bosque (1999) points out for Spanish, the notion that underlies abstract nouns is precisely problematic because we rather make use of other more specific linguistic notions when

attempting to define it. Bosque classifies these notions into four groups: kind interpretations and imaginary referents, figurative uses, mass/count nouns and eventuality nouns.

In relation to kind interpretations and imaginary referents, take the noun *caballo* 'horse', which is supposed to refer to a concrete entity. However, in *El caballo es un cuadrúpedo* '(lit.) The horse is a quadruped, Horses are quadrupeds', we do not refer to a tangible horse. In that case, the alleged abstract interpretation for the noun is derived from a kind reading. On the other hand, we can suppose that *unicornio* 'unicorn' is an abstract noun because it refers to an imaginary animal; however, the grammar is not sensitive to the real-imaginary distinction. Both *caballo* and *unicornio* are not classified into different lexical classes or, in other words, both nouns are predicates of entities that participate in the same syntactic contexts. The same holds for *barco* 'boat' in *el barco que vi ayer* 'the boat I saw yesterday' vs. *El barco con el que soñé ayer nunca existirá* 'The boat I dreamt about yesterday will not exist ever', although we might think that only the first statement alludes to a tangible boat.

Concerning figurative uses, in principle nouns like *camino* 'path' or *campo* 'field' refer to concrete objects, as in *camino pedregoso* 'stony path' or *campo verde* 'green field'. In contrast, they are supposed to refer to abstract objects in *el camino a la victoria* 'the way to victory' or *el campo de la tecnología* 'the field of technology'. In the former case, the noun is used literally, while in the latter case it is used metaphorically. Analogously, *corona* 'crown' refers to a concrete object in *corona de oro* 'golden crown', but it refers to an abstract object in *el respeto a la corona* 'the respect to the crown', where the latter case is called a metonymic use.

As far as mass/count nouns are concerned, although abstract properties like *belleza* 'beauty' are usually lexicalized as mass nouns, there are also count nouns like *semana* 'week' or *confusión* 'confusion' that have abstract referents. Regardless of whether *caballo* 'horse' and *confusión* 'confusion' refer to tangible objects or not, morphosyntactically they behave as count nouns; analogously, *arena* 'sand' and *belleza* 'beauty' behave as mass nouns even though *belleza* does not refer to a tangible object.

Finally, as for eventuality nouns, certain nouns like *accidente* 'accident' and *preocupación* 'concern' express eventualities, that is, temporal objects and, thereby, have abstract referents. The noun *accidente* 'accident' expresses an event, while *preocupación* 'concern' expresses a state. Thus, their abstract character is derived from the fact that they express eventualities rather than entities. It is important to keep this claim in mind, because in this dissertation I explain the abstract character of deadjectival nominalizations by virtue of their eventuality nature.

In summary, Bosque (1999) shows that the concrete-abstract distinction is linguistically elusive because it is based on our world knowledge rather than on independent lexical properties. Note that it does not mean that it is inappropriate to say that a certain noun is

abstract; rather, his claim is that its abstractness is derived from other more specific linguistic notions. This conclusion, which is the starting point of this dissertation, poses the question as to which specific semantic notion lies behind the abstract nature of deadjectival nominalizations like *belleza* 'beauty'. Throughout this dissertation, I will show that stativity is the central notion that articulates the semantics of these nominalizations, from which their abstractness is derived. The theoretical implications of this analysis are numerous, especially as to how gradable predicates and states are semantically structured, and I hope that my analysis sheds light on some of the puzzling aspects that abstract nouns pose for morphology and semantics. In the following section, I present the aim of the dissertation, the object of study and the main hypothesis.

1.2 Aim of the dissertation, object of study and main hypothesis

The present dissertation investigates the morphology-semantics interface in the domain of Spanish deadjectival nominalizations. Deadjectival nominalizations are nouns that are derived from adjectives, such as *altura* 'height' < *alto* 'tall', *tristeza* 'sadness' < *triste* 'sad' and *honestidad* 'honesty' < *honesto* 'honest', by means of their attachment to certain suffixes (*-ura*, *-eza*, *-idad*, etc.), which are called deadjectival suffixes or nominalizers. The goals of this dissertation are the following: **(a) to draw a comprehensive picture of all types of deadjectival nominalizations that can be formed in Spanish, focusing on what I call state-token and state-kind nominalizations; (b) to explain their fundamental semantic and morphosyntactic properties; and (c) to provide a formal analysis that captures these properties**. Under the assumption that our ontology of semantic objects includes kinds and tokens (since Carlson 1977, 2003), **the main hypothesis of this dissertation is that state-kinds and state-tokens play a central role in capturing the properties of deadjectival nominalizations**.

As previously shown, deadjectival nominalizations are a subset of so-called abstract nouns, which, unlike concrete nouns, do not have a clear and delimitated real referent in the actual world. The interest that these nouns have attracted in different disciplines stems from the fact that they are associated with notions that present many difficulties in their representation and characterization. Focusing on theoretical linguistics, the existence of deadjectival nominalizations poses many questions related to our ontology of semantic objects, their specific semantic structure, their morphological composition and their syntactic distribution. By examining deadjectival nominalizations, this dissertation does not only **aim to offer a precise characterization of their semantic and morphosyntactic properties**, but also **to show the empirical and theoretical consequences** derived from the study of these nominalizations with respect to different issues that are not solved or even dealt with yet.

In particular, this dissertation provides **a comprehensive characterization of stativity**, focusing on its relation to **causation**, **homogeneity** and **gradability and its interaction with lexical and viewpoint aspect**, which is not always clearly demarcated in linguistic theory. I also provide a thorough analysis of deadjectival nominalizations that illustrates the **similarities and differences with respect to canonical mass nouns like *water***, in order to posit a precise structure for the two types of nouns and the relationship between gradability and the mass domain. Moreover, this dissertation supports a model of gradability that makes use of the most basic tools that are necessary to explain the empirical phenomena, taken as basics the model of **degrees as kinds** designed by Anderson & Morzycki (2015) and elaborating on their fundamental aspects to capture the main advantages of degree-less and degree-based theories.

This dissertation also offers a **comparison between gradable adjectives and their nominalizations**, highlighting the intimate relationship between copular and possessive structures in Spanish and their cross-linguistic relevance, focusing on languages like Ulwa and Wolof, which employ possessive structures as the natural way to express property concepts like *tall*, *big*, *old*, *red*, *cold*, *beautiful*, *smart*, etc. in the sense of Dixon (1982). Furthermore, this dissertation offers an across-the-board **analysis of deadjectival nominalizations by reconciling syntactic and semantic approaches**, showing that they do not operate independently, but rather they complement each other, to account for the formation and meaning of the different types of nominalizations compositionally, which has a crucial impact on our understanding of the morphology-semantics interface. Finally, I show that **the phenomenon of nominalization is not unconstrained**, but rather it is regulated by general principles even though it sometimes gives the impression of being an arbitrary process. To wrap up, this dissertation embraces the job of providing a complete description of deadjectival nominalizations in Spanish with the ultimate goal of contributing a better understanding of the morphosyntactic and semantic principles that regulate natural languages.

The analysis of the semantic and morphosyntactic behavior of deadjectival nominalizations endorses the proposal that our ontology of semantic objects must contain kinds and tokens in general (Carlson 1977, 2003; a.o.) and state-kinds and state-tokens in particular (Anderson & Morzycki 2015). Recall from the previous section that there is a long philosophical tradition that dates back to Aristotle according to which natural languages make reference to universals and particulars. Carlson (1977, 2003) develops these insights and posits the existence of linguistic kinds and tokens (see also Zamparelli 1995; Chierchia 1998a; Landman & Morzycki 2003; Dayal 2004; McNally & Boleda 2004; Landman 2006; Castroviejo & Schwager 2008; Espinal & McNally 2011; Gehrke 2011, 2015, 2017; Umbach & Gust 2014; Gehrke & McNally 2015; Espinal & Borik 2015; Zhang 2020; a.o.). A kind consists in all objects that share a certain property in any given

world, while a token is simply one of those objects in a certain world. Readers who are not familiar with the kind-token literature may think about tokens as ordinary entities, states and events, which refer to unique and particular objects, and think about kinds as pluralities of entities, states and events. Observe the following examples:

(1) a. La jirafa se comió las ramas.
the giraffe REFL *ate the branches*
'The giraffe ate the branches.'
b. La jirafa es un animal herbívoro.
the giraffe is an animal herbivorous
'Giraffes are herbivorous animals.'

In (1a) there is a particular giraffe that ate the braches, whereas in (1b), which is treated in traditional grammar as a synecdoche or a metonymy use insofar as the part is taken as the whole, the DP *la jirafa* '(lit.) the giraffe' refers to a plurality of giraffes in any given world. According to the kind-token tradition, we can claim that in (1a) the DP *la jirafa* 'the giraffe' denotes an entity-token, while the same DP denotes an entity-kind in (1b).

The kind-token dichotomy has been also applied to the domain of eventive verbs to account for German adjectival passives (Gehrke 2011, 2015, 2017) and to the domain of states to account for the combination of gradable adjectives with degree and manner modifiers (Anderson & Morzycki 2015); the specific details of these proposals are explained in chapter 2. Building on this literature, the hypothesis of this dissertation is that the kind-token dichotomy can also be applied to the domain of deadjectival nominalizations. Observe the following examples:

(2) a. la belleza del jardín
the beauty of.the garden
b. La belleza está en el interior.
the beauty is in the interior
'Beauty is inside.'

In (2a) the nominalization is followed by a prepositional phrase (PP) introducing the individual of which the nominal property is predicated, which we can call *holder*, while in (2b) the PP does not occur and beauty is taken as a general notion. What I argue for is that the DP *la belleza del jardín* 'the beauty of the garden' in (2a) refers to a state of beauty that holds at a

particular time; in contrast, in (2b) the DP *la belleza* 'the beauty' refers to all possible states of beauty in a given world.

There are other types of deadjectival nominalizations that can be formed out of gradable adjectives, which I illustrate next:

(3) a. {mucha / dos metros de} altura
much two meters of height
b. una altura {increíble / de dos metros}
a height incredible of two meters
'a(n) {incredible height / height of two meters}'
c. Los electrones tienen altura.
the electrons have height
'Electrons have some height.'

(4) Tengo varias durezas en el pie.
have.1.SG several hardnesses on the foot
'I have several calluses on my foot.'

(5) El político cometió varias irregularidades.
the politician committed several irregularities

Note that the same lexical item can constitute different types of nominalizations depending on its syntactic distribution and semantic properties, such as *altura* 'height' in (3). The nominalizations occurring in (3) are characterized by the absence of any arguments, and I argue that they denote in the domain of state-kinds, like *belleza* 'beauty' in (2b): in (3a) the nominalization is preceded by a mass quantifier or a measure phrase that functions as a mass quantifier; in (3b) the nominalization is preceded by the indefinite determiner *una* 'a' and followed by an adjective or a measure phrase that functions as an adnominal modifier; and in (3c) the nominalization appears in isolation. The study of state-kind deadjectival nominalizations, which constitutes a novelty in the literature on deadjectival nominalizations (with very few exceptions), is not only important to provide a better characterization of their semantic structure and syntactic behavior; particularly, it also sheds light to one of the most problematic issues related to the morphology-semantics interface, namely, the relationship between atelicity and gradability with respect to mass and count nouns in the stative domain. I advance more details of the proposal in section 1.5.

The complete picture of deadjectival nominalizations includes so-called participant and event nominalizations. In (4) the nominalization has an entity referent, appears without arguments and

admits pluralization; following Fábregas (2016), I assume that this is a participant nominalization and denotes in the domain of entities. Finally, in (5) the nominalization appears without arguments, admits pluralization and can be the complement of the verb *cometer* 'to commit'; based on Arche & Marín (2015) and Arche et al. (to appear), they express events. In this dissertation, although I do not focus my attention on participant or event deadjectival nominalizations, I show that their analysis provides additional evidence in favor of incorporating kinds and tokens in our semantic ontology.

Throughout this dissertation, I justify the typology of deadjectival nominalizations presented here, exemplified in (2)-(5), on the basis of the different morphosemantic and syntactic properties that they display. I also present empirical evidence that the hypothesis that our semantic ontology must include kinds, and state-kinds in particular, is the most appropriate one to account for their properties and morphological formation.

In conclusion, the object of study of this dissertation are the different types of deadjectival nominalizations in Spanish, with a particular look at state-token and state-kind nominalizations, and its ultimate goal is to provide a morphosyntactic and semantic analysis that captures their main properties. The hypothesis of this dissertation is that the state-kind/state-token distinction must also be applied to the domain of deadjectival nominalizations. In the following section, I explain the basic methodology employed in this work.

1.3. Methodology

To achieve the goals described in the previous section, I count on rigorous data collection and the analytic tools and tenets from theoretical linguistics. The main data that I examine are taken from my introspection as a native speaker of European Spanish and from the literature on deadjectival nominalizations. I focus on the literature on Spanish, although I compare Spanish data to English and French, as well as Ulwa (based on Francez & Koontz-Garboden 2015, 2017a, 2017b) and Wolof (based on Baglini 2015) when useful, insofar as the latter two languages make use of possessive structures as their natural and common mechanism to express property concepts (I illustrate the contrast in subsection 1.4.1). Exceptionally, I also show some data taken from the Internet when necessary to support personal acceptability judgments that may generate doubts to native speakers of Spanish. Most of the data offered in this dissertation do not cast serious doubts about their (un)acceptance; in exceptional cases in which the judgments might not be completely clear, I offer an explanation as to why this could be the case and how they can be accounted for.

Below I describe the basic theoretical assumptions that sustain the analysis, which consist in a syntactic apparatus of word formation and combination in addition to semantic rules of

composition. In relation to morphosyntax, the theories on word formation can be divided into two big groups: on the one hand, in lexicalist theories (Halle 1973; Aronoff 1976; Wasow 1977; Anderson 1992; Pustejovsky 1995; Lieber 2004, 2016; a.o.) syntax and morphology are two independent components with their own rules: the former contains the rules that account for the *combination* of words, while the latter contains the rules that account for the *formation* of words. On the other hand, constructionist theories (Halle & Marantz 1993; Marantz 1997, 2000; Alexiadou 2001, 2011a, 2013a, 2013b; Borer 2005, 2013; Embick 2004; Embick & Marantz 2008; Acquaviva 2009, 2014; Harley 2014; Fábregas 2016; a.o.) challenge the hypothesis that morphological rules are different from syntactic rules and posit that the two types are the same. Accordingly, constructionist models rely on the assumption that the unique generative component is the syntax, to which all the regularities must be ascribed. Thus, the formation of words is subject to the same syntactic constraints that the combination of words is subject to, whereas semantic irregularities or idiosyncrasies belong to the lexicon. Certainly, in Distributed Morphology, the dominant sub-theory of constructionist theories, morphology is an independent component with its own rules (e.g. fusion, fission, impoverishment, etc.). However, these rules do not regulate the formation of words, but rather they constitute adjustment rules that mediate between syntax and phonology. Thus, the fundamental insight of constructionist theories is that the formation of words as well as its combination holds in the syntax.

For the purposes of this work, I will show that the formation and syntactic distribution of deadjectival nominalizations can be accounted for without the assistance of another generative component other rather than the syntax. The basic syntactic rules are *merge* and *move* (from Chomsky 1981):[2] merge is the operation whereby two constituents (affixes, words, phrases and sentences) are combined together to form complex constituents, while move is the operation whereby a constituent moves from one position to another one higher in the structure. The meaning of a complex constituent is determined compositionally, that is, by the interaction of the meaning of its constitutive parts by means of certain composition rules.

In relation to semantic assumptions, in order to determine the meaning of a complex constituent properly, we need a semantic apparatus that includes an ontology of basic objects or types and semantic rules of composition. Regarding the former, I assume an ontology that includes kinds and tokens. Recall that a kind consists in a plurality of objects that share a certain property in any given world, while a token is just one of its members; I develop the proposal in chapter 2. Accordingly, the usual sets of entities, events and states can be divided into entity-kinds, event-kinds and state-kinds, on the one hand, and entity-tokens, event-tokens and state-

[2] In the Minimalist Program (Chomsky 1995 et seq. work), the two syntactic operations merge and move are derived from one only operation called *merge*. Internal merge is equivalent to move in the classical model, while external merge is equivalent to merge.

tokens, on the other. In addition, I assume the existence of the domain of the truth values 1 for true and 0 for false and the domain $D_{\langle\sigma,\tau\rangle}$ of an infinite number of functions or complex types that involve two simple or complex types σ and τ: [3]

(6) a. D_{ek} is the set of entity-kinds in the domain D. Variables: x_k, y_k, z_k…

b. D_{vk} is the set of event-kinds in D. Variables: e_k, e_k'…

c. D_{sk} is the set of state-kinds in D. Variables: s_k, s_k'…

d. D_e is the set of entity-tokens in D. Variables: x, y, z…

e. D_v is the set of event-tokens in D. Variables: e, e'…

f. D_s is the set of state-tokens in D. Variables: s, s'…

g. D_t = {1, 0}, the set of the two truth values. Variable: t.

h. $D_{\langle\sigma,\tau\rangle}$ is the set of functions from D_σ to D_τ. Functions: F, G, R…

With respect to the rules of semantic composition, I assume the usual rules that appear in Heim & Kratzer (1998), where ⟦ ⟧ stands for the interpretation function:

(7) Terminal Node (TN)

If σ is a terminal node, $[\![\sigma]\!]$ is specified in the lexicon.

(8) Functional Application (FA)

If α is a branching node, {β, γ} is the set of α's daughters, and $[\![\beta]\!]$ is a function whose domain contains $[\![\gamma]\!]$, then $[\![\alpha]\!] = [\![\beta]\!]([\![\gamma]\!])$.

(9) Predicate Modification (PM)

If α is a branching node, {β, γ} is the set of α's daughters, and $[\![\beta]\!]$ and $[\![\gamma]\!]$ are both of type <n,t>, then $[\![\alpha]\!] = \lambda n : n \in D_n.\ [\![\beta]\!](n) \wedge [\![\gamma]\!](n)$.[4]

(10) Lambda Abstraction (λ-A)

If α is a branching node whose daughters are a binder index λi and β, then $[\![\alpha]\!]^g = \lambda x \in D.\ [\![\beta]\!]^{g[i \to x]}$

I also see the need to employ (a version of) Kratzer's (1996) Event Identification rule. In its original formulation, this rule allows an event predicate to combine with its external argument,

[3] In this dissertation, I assume an extensional rather than an intensional semantics, so I do not make use of variables to represent world indices despite the fact that kinds can be defined as pluralities in any given world. Likewise, for convenience sake, I do not employ time variables to formally capture the temporal location of eventualities in the past, the future or the present.

[4] In its original formulation, Predicate Modification operates when two predicates of type <e,t> are involved; however, since Davidsonian and Neo-Davidsonian semantics, where eventuality predicates are supposed to encode an event argument e or a state argument s, it was extended to eventualities of type <v,t> and <s,t>. In this dissertation, where kinds and tokens are also involved, I extend this rule to the set of all possible semantic objects of type <n,t>.

and Wellwood (2014) extends its application to states. In this dissertation, I posit that *eventuality* predicates, which include events and states following Bach (1986), denote in the kind rather than the token domain, so the rule must be reformulated in order to allow eventuality-kinds to combine with their external argument. Specifically, I call this rule Eventuality Identification (EI) and propose the following reformulation for predicates of state-kinds:

(11) Eventuality Identification (EI)

If α is a branching node, $\{\beta, \gamma\}$ is the set of α's daughters, and $[\![\beta]\!]$ is in $D_{<n,< sk,t>>}$ and $[\![\gamma]\!]$ is in $D_{<sk,t>}$, then $[\![\alpha]\!] = \lambda n : n \in D_n \lambda s_k : s_k \in D_{sk}. [\![\beta]\!](s_k, n) \wedge [\![\gamma]\!](s_k)$.

In prose, this rule establishes that a predicate of state-kinds of type $<s_k$,t> can combine with a subject of the underspecified type *n*, which includes entities, as in *The table is terrible*; events, as in *The war was terrible*; states, as in *Your sadness is terrible*, etc., although the most usual case is the one in which the subject is an entity. The reason why I posit that state-kinds rather than state-tokens take subjects is that, in the spirit of Gehrke (2011, 2015, 2017), who claims that eventive verbs are predicates of event-kinds rather than event-tokens, I extend this insight to the stative domain and posit that stative predicates denote state-kinds. I explain Gehrke's proposal and develop mine in depth in chapter 2. Finally, I assume the rule of Existential Closure (∃C) for those variables that remain unbound in the derivation. Although in its original formulation (Heim 1982) it was only applied at the end of the derivation, following usual practice I assume that this rule can operate in any syntactic position if the derivation demands it.

Given that this dissertation transits on the semantics-morphology interface, the analysis offered here intends to reconcile the basic assumptions of constructionist theories on word formation and the ones of the formal semantic apparatus with the principle of compositionality, which is the backbone assumption of modern natural language semantics. Particularly, in addition to positing a semantic denotation for gradable adjectives and deadjectival suffixes that is consistent with the innovative vision offered here, I provide a semantic denotation for the functional projections that are involved in the formation of deadjectival nominalizations in accordance with constructionist theories.

In sum, in this section I have presented my morphosyntactic and semantic assumptions. On the one hand, I assume a constructionist device of word formation according to which words are formed in the syntax by means of syntactic rules. The meaning of a nominalization is determined compositionally by the interaction of the meanings of words, affixes and functional nodes, by means of semantic rules that specify how those meanings interact to give rise to a more

complex meaning. In the following section, I describe the main contributions of previous accounts on deadjectival nominalizations.

1.4 Deadjectival nominalizations in linguistic theory

In this section, I provide the reader with the necessary background to understand why the study on deadjectival nominalizations is relevant for linguistic theory and to understand the details of the analysis proposed in this dissertation. In this respect, the literature on deadjectival nominalizations is heterogeneous and significantly biased for one type thereof, which I call here state-token nominalizations. To be true to the said heterogeneity and bias, this section is divided into two subsections: in subsection 1.4.1, I provide an outlook of the fundamental properties of deadjectival nominalizations that the literature has identified, particularly looking at Spanish data; thus, this subsection is fundamentally descriptive, does not enter into details and does not assume any specific theoretical background from the reader. In subsection 1.4.2, I review previous approaches on what I call state-token deadjectival nominalizations, the ones that dominate the landscape of deadjectival nominalizations and have monopolized the literature on this topic. I classify them depending on their main empirical and theoretical contributions and examine the specific theoretical assumptions and technical details on which these analyses are based, ranging from generative syntax to formal semantics.

1.4.1 Basic empirical properties

As I have mentioned before, the literature on deadjectival nominalizations is highly heterogeneous. The proposals vary substantially depending on whether they place the focus on morphosyntactic, semantic, syntactic and even philosophical considerations, where the semantic issues are highly variable for two reasons. First, the semantic contributions differ considerably depending on which aspects are considered more relevant: for example, some proposals are concerned with the individual-level/stage-level distinction, others with the combination of nominalizations with temporal, frequency or manner modifiers, others focus on the similarities and differences of nominalizations with respect to regular mass nouns like *water*, etc.

Second, the elusive nature of abstract nouns, particularly of deadjectival nominalizations, according to which they lack a tangible referent in the actual world, as shown in section 1.1, leads the authors to search for the most appropriate semantic object that characterizes its domain, in particular states, qualities, degrees or tropes. Certainly, eventive nouns like *accident* do not have a tangible referent in the actual world either, but they have not given rise to intense debates about their nature because of the long linguistic tradition that has delimitated the concept in precise terms, or at least in contrast to other notions like 'qualities', 'degrees', 'states'

and 'tropes', which are difficult to accurately tell apart. Due to these complexities, let us show first the fundamental morphosyntactic and semantic properties of deadjectival nominalizations without taking theoretical considerations into account, which will be examined in the following subsection.

The formation of deadjectival nominalizations can be subsumed under the more general phenomenon of *nominal derivation*, according to which a nominalizer attaches to a certain base (an adjective, a verb or even a noun) to form a noun. Focusing on deadjectival nominalizations, these are nouns that result from the attachment of an adjective to a deadjectival suffix. The number of deadjectival suffixes in Spanish is quite high; below, the most usual ones are presented in order to acquaint the reader with them (see more details in Santiago & Bustos Gisbert 1999 and RAE & ASALE 2009: chapter 6).

(12) a. -**dad**, -**edad**, -**idad**, -**tad**

cruel > crueldad; sol(o) > soledad; fiel > fidelidad; leal > lealtad

cruel cruelty alone loneliness faithful faithfulness loyal loyalty

b. -**ez**, -**eza**, -**icie**, -**icia**

tozud(o) > tozudez; bell(o) > belleza; calv(o) > calvicie; avar(o) > avaricia

stubborn stubbornness beautiful beauty bald baldness greedy greed

c. -**ura**

dulc(e) > dulzura.

sweet sweetness

d. -**or**

amarg(o) > amargor

bitter bitterness

e. -**ía**

valient(e) > valentía

brave braveness

f. -**era**

borrach(o) > borrachera.

drunk drunkness

g. -**ería**

tont(o) > tontería

silly silliness

h. -**ia**, -**ncia**

eficaz > eficacia; elega(nt)(e) > elegancia.

effective effectiveness elegant elegance

i. -**ismo**

fatal > fatalismo.

fatal fatalism

j. -**ud**, -**tud**, -**itud**

inquiet(o) > inquietud; joven > juventud; verosímil > verosimilitud[5]

restless restlessness young youngness credible credibility

Note that the most visible consequence of adopting a synchronic perspective of word formation is the necessity of positing that the nominalization does not take the gender vowel from the adjective. This and other morphophonological consequences, like positing different forms or allomorphs for the same suffix (*-dad*, *-edad*, *-idad* and *-tad*) in (12a), the monophthongization of the base (e.g. *valient(e)* 'brave' > *val(i)entía* 'braveness') in (12e), vocalic alterations (e.g. *joven* 'young' > **juven* > *juventud* 'youngness' in (12j) and suppletion (e.g. *fiel* 'faithful' > *fidelidad* 'faithfulness') in (12a) constitute post-syntactic phenomena and will not be examined here. For the different treatments of post-syntactic phenomena in constructionist theories, the reader is referred to the literature in Distributed Morphology (Halle & Marantz 1993; Marantz 1997; Embick & Marantz 2008; Harley 2014; a.o.), according to which there is an independent component called *morphology* with its own rules of adjustment that mediates between the syntax and phonology, and also to the Nanosyntax literature (Starke 2009, 2011; Caha 2009; Taraldsen 2009; Fábregas 2016), according to which such component does not exist, and the phenomena illustrated here and others are rather a matter of the syntax-phonology interface.

Once I have presented the main suffixes that are involved in the formation of Spanish deadjectival nominalizations, I will describe the main properties of the latter. First, although there are few cases of deadjectival nominalizations that are derived of apparent non-gradable adjectival bases, which I briefly discuss in chapter 5, deadjectival nominalizations are usually formed out of gradable adjectives. The literature on gradable adjectives since Bolinger (1972) is enormously vast, in particular compared to the literature on deadjectival nominalizations, so I will not review the different proposals on the market (see e.g. Morzycki 2015 and references

[5] In Spanish, certain adjectives bear gender morphemes, such as *alt-o* 'tall.M' / *alt-a* 'tall.F'; for convenience sake, I use the masculine form when referring to the adjective in isolation.

therein). For the purposes of this section, it is sufficient to show that gradable adjectives express properties that may hold to a higher or lower degree. Observe the following data:

(13) a. muy triste / honesto / tozudo / valiente
very sad honest stubborn brave
b. tristeza / honestidad / tozudez / valentía
sadness honesty stubbornness braveness

(13a) shows that *triste* 'sad', *honesto* 'honest', *tozudo* 'stubborn' and *valiente* 'brave' refer to properties that can be graded and, thus, combine with the degree modifier *muy* 'very', which indicates that the property holds to a high degree. Importantly, these adjectives can form nominalizations, see (13b). The challenge that these data pose is to provide a comprehensive analysis that captures both the morphological and semantic properties of deadjectival nominalizations on the basis of the adjectives from which they are derived in accordance with the principle of compositionality.

Second, as a general rule, deadjectival nominalizations constitute mass nouns:

(14) a. mucha arena agua / tristeza / honestidad / tozudez / valentía
much sand water sadness honesty stubbornness braveness
'a lot of sand/water/sadness/honesty/stubbornness/braveness'
b. *mucha mesa / silla / tormenta / guerra
much table chair storm war

(14a) shows that canonical mass nouns like *arena* 'sand' and *agua* 'water' combine with the mass quantifier *mucha* 'much, a lot of' and that deadjectival nominalizations also accept it. In contrast, count nouns like the ones in (14b), regardless of whether they express entities, such as *mesa* 'table' and *silla* 'chair', or events, such as *tormenta* 'storm' or *guerra* 'war', are incompatible with mass quantifiers. Nonetheless, some authors have pointed out that deadjectival nominalizations can accept morphological pluralization, which is a property of count nouns. For example, Grimm (2014) notes for English the following examples:

(15) a. Please, let's not insult both our intelligences by pretending this is open to question. (Google)

b. Warrick, Sara, and Grissom handle this case, dealing with their ignorances about the deaf community. (Google)

(From Grimm 2014: 194, 195)

These data, which are also applicable to Spanish, e.g. *nuestras inteligencias* 'our intelligences' or *sus ignorancias* 'their ignorances', pose the challenge of explaining why they are licensed and which constraints regulate their formation. Beyond this issue, they pose the challenge of providing a thorough characterization of deadjectival nominalizations that allows us to explain their usual behavior as mass nouns, but also taking into consideration their less usual behavior as count nouns. Ultimately, the analysis of deadjectival nominalizations plays a central role in determining how mass and count nouns are construed in natural languages and what structural properties differentiate them. All these issues will be tackled in chapter 4.

Nevertheless, this is not the end of the story with respect to the mass and count issue. Tovena (2001) observes for Italian and French, and her observation is applicable to Spanish, that canonical mass nouns differ from abstract nouns, including deadjectival nominalizations, when appearing in certain syntactic contexts that involve exclamative determiners (see also Brucart & Rigau 2002 for Catalan; Baglini 2015 for Wolof; Francez & Koontz-Garboden 2017a for Ulwa, English and Hebrew):

(16) a. quanto coraggio! = che coraggio!
what courage
'How much courage! = What a courage!'
b. quanto burro! ≠ che burro!
what a lot of butter *what (good) butter*
'How much butter! ≠ What a butter!'

(From Tovena 2001: 573)

While in (16b) the exclamative determiner *quanto* 'how much' induces a reading according to which there is a lot of butter and the exclamative determiner *che* 'what a' induces a reading according to which the type of butter is good (or bad, strange, etc.), that distinction is neutralized in (16a), where both determiners induce a reading according to which there is a lot of courage. This contrast, which reveals the intrinsic complexity of the domain of deadjectival nominalizations, reinforces the necessity of a comprehensive analysis that captures not only their similarities with canonical mass nouns, but also their differences.

To conclude the mass and count issue, Arche & Marín (2015) and Fábregas (2016) note that there are other cases in which morphological pluralization is valid:

(17) a. Juan cometió dos imprudencias / varias crueldades.
Juan committed two imprudencies several cruelties
'Juan carried out two imprudent acts / several cruel acts.'
b. Esta mañana han tenido lugar varias imprudencias/injusticias.
this morning have taken place several imprudencies injustices
'This morning several imprudent acts / injustices have taken place.'

(From Arche & Marín 2015: 264, 265)

(18) a. Juan tiene algunas rojeces en la piel.
Juan has some rednesses on the skin
'Juan has some blotches on his skin.'
b. No me molestes con pequeñeces.
not me bother with smallnesses
'Don't bother me with trivialities.'

(From Fábregas 2016: 218, translation mine)

However, these cases differ radically from the ones shown by Grimm (2014) in (15) insofar as they express either events or entities. Thus, *imprudencias* 'lit. imprudencies, imprudent acts', *crueldades* '(lit.) cruelties, cruel acts' and *injusticias* '(lit.) injustices, unjust acts' in (16) refer to events that are imprudent, cruel and unfair, respectively, while in (17) *rojeces* '(lit.) rednesses, blotches' and *pequeñeces* '(lit.) smallnesses, trivialities' refer to red entities and small entities, respectively. In contrast, whatever the nominalizations in (15) express, namely, degrees, qualities, states or tropes, the plural does not turn out to change their nature. Thus, what is important to take into consideration up to now is that deadjectival nominalizations often form mass nouns, but they can also form count nouns under certain circumstances (which will be analyzed in due time). For expository reasons, previous approaches on participant and event deadjectival nominalizations are postponed until chapter 4, where I also provide an analysis thereof and explain why their study is also important for the semantics-morphology interface.

Third, another prominent aspect of deadjectival nominalizations is that they preserve the semantic relation that their adjectival bases maintain with their arguments or, in other words, inherit argument structure (see Pena 2004, Villalba 2013 and Zato 2020 for Spanish; Roy 2010 for French; Borer 2013 for English). The most powerful argument in favor of argument structure inheritance is provided by adjectives that select for more than one participant:

(19) a. Mi trabajo es compatible con mis aficiones.
my work is compatible with my hobbies
b. la compatibilidad de mi trabajo con mis aficiones
the compatibility of my work with my hobbies

(20) a. El museo está próximo a la estación.
the museum is close to the station
b. la proximidad del museo a la estación
the closeness of.the museum to the station

On the one hand, the examples in (19a) and (20a) illustrate that adjectives like *compatible* 'compatible' and *próximo* 'close' select for two arguments, some of which are headed by a certain preposition. On the other hand, (19b) and (20b) show that argument structure is preserved in their corresponding nominalizations. Note that the holder of the nominalization is introduced by *de* 'of', while the other argument retains the PP subcategorized by its base adjective.

In this respect, the interaction of deadjectival nominalizations with their arguments brings to light interesting contrasts. Roy (2010) claims for French that deadjectival nominalizations can appear in two main syntactic environments:

(21) a. La popularité (constante) de ses chansons m'impressionne.
the popularity constant of his songs me.impresses
b. La popularité (*constante) est une qualité qui lui fait défaut.
the popularity constant is a quality that to.him does default

(From Roy 2010: 146)

These data, which are also applicable to Spanish, show that deadjectival nominalizations can be predicated of their arguments, as in (21a), in which case they admit frequency modifiers (which Roy calls aspectual modifiers). In contrast, when deadjectival nominalizations are not accompanied by their arguments, as in (21b), frequency modifiers like *constante* 'constant' are unlicensed. Although these data do not show the whole picture of the combination of deadjectival nominalizations with time-related modifiers, which I divide into frequency, temporal and aspectual modifiers due to their different behavior, they constitute a good sample of the semantic differences displayed by deadjectival nominalizations depending on whether they co-occur with their arguments or not. The challenge that these data pose is to figure out the semantics conveyed by each syntactic construction taking into account the interaction of the

arguments of deadjectival nominalizations, which has an important impact on the syntax-semantics interface.

The fact that the literature on deadjectival nominalizations does not distinguish the different types of time-related modifiers poses serious difficulties when it comes to showing the reader a detailed state of the art at this point of the dissertation, so I will enter into details in the following subsection. So far, it is interesting to note that Fábregas (2016) shows that there is a crucial contrast between temporal and aspectual modifiers when interacting with deadjectival nominalizations:

(22) a. *La ofuscación de Juan durante varios minutos fue muy grande.
the bewilderment of Juan for several minutes was very big
'Juan's bewilderment for several minutes was very big.'
b. La ofuscación de Juan durante la fiesta fue notable.
the bewilderment of Juan during the party was noticeable
'Juan's bewilderment during the party was noticeable.'
(From Fábregas 2016: 127, 128. My translation)

(22a) shows that the nominalization *ofuscación* 'bewilderment' cannot co-occur with aspectual modifiers introduced by *durante* 'for', while (22b) shows that the nominalization can co-occur with temporal modifiers introduced by *durante* 'during'. Fábregas claims that the occurrence of temporal modifiers is usually unacceptable; however, as I will show in chapter 3, data like (22b) are not isolated, but rather they are systematic. A correct interpretation of the contrast in (22) is necessary to account for the semantics of deadjectival nominalizations and, especially, for their relation to lexical and viewpoint aspect. In addition, an accurate analysis must be able to explain the apparent contradiction of these contrasts with (21), where it appears to be that deadjectival nominalizations are sensitive to time-related modification when the arguments are not realized, taking into consideration that in (22) the contrast is produced when arguments are actually realized.

Fourth, the literature on English nominalizations has pointed out that they show a semantic contrast with respect to underived nouns like *height*, *width*, *weight*, etc. (see Moltmann 2009, Baglini 2015, Francez & Koontz-Garboden 2017b). While phrases like *Paul's heaviness* entail that Paul is heavy, phrases like *Paul's weight* does not prompt that entailment. These contrasts are not common in Spanish (cf. *peso* 'weight' vs. *gordura* 'fatness'); however, as Fábregas (2016) points out, most deadjectival nominalizations can trigger what the author calls either a *scale* or a *quality* reading. In order to avoid introducing any theoretical background yet, I will provide an

informal explanation here and postpone the details of his proposal for the following subsection. In the scale reading deadjectival nominalizations are used for naming the dimension, while in the quality reading they are used for naming the adjectival property. For example, in the scale reading *la belleza de Paul* 'Paul's beauty' refers to the amount of beauty that is associated with Paul, with no reference to whether that amount is big or small, and we do not know whether Paul is beautiful or not. In contrast, in the quality reading *la belleza de Paul* 'Paul's beauty' refers to Paul's quality of being beautiful, in which case Paul has enough amount of beauty to be considered beautiful.

Finally, the literature has highlighted the tight connection of adjectival structures, which include an adjective plus a copular verb, with possessive structures. In Dixon's (1982) seminal work on what the author calls *property concepts*, Dixon points out that languages differ in the mechanisms they make use of to express them. According to the author, there are seven main types of property concepts, and English expresses them by means of adjectives: dimension (*big*, *small*, *long*, *tall*, *short*, *wide*, *deep*, etc.), age (*new*, *young*, *old*, etc.), value (*good*, *bad*, *lovely*, *atrocious*, *perfect*, *proper*, etc.), color (*black*, *white*, *red*, etc.), physical (*hard*, *soft*, *heavy*, *wet*, *rough*, *strong*, *hot*, *sour*, etc.), speed (*fast*, *quick*, *slow*, etc.), human propensity (*jealous*, *happy*, *kind*, *clever*, *generous*, *cruel*, *proud*, etc.). This classification, although not explicitly justified from the lexical-semantic point of view by Dixon, constitutes a good starting point to illustrate how English lexicalizes this type of concepts by means of adjectives. In this regard, Francez & Koontz-Garboden (2015, 2017a) and Baglini (2015) show concerning Ulwa and Wolof, respectively, that the most natural way of expressing property concepts in these languages is by means of possessive structures:

(23) a. Alas pan-ka
3.SG stick-3.SG
'His/her stick'
b. Yang as-ki-na minisih-ka.
1.SG shirt-1.SG dirty-ka
'My shirt is dirty.'

(Francez & Koontz-Garboden 2017a: 31, 32)

(24) a. Aïda am na-Ø ceeb.
Aïda have FIN-3.SG rice
'Aïda has rice.'

b. Aïda am na-Ø xel
Aïda have FIN.3.SG mind
'Aïda is smart.'

(Baglini 2015: 133)

On the one hand, according to Francez & Koontz-Garboden, in (23a) *-ka* is a possessive morpheme that can be used for expressing alienable possession, while (23b) shows that the same morpheme is involved in the syntax of property concepts. On the other hand, according to Baglini (2015), *am* 'to have' is the verb that is used for alienable possession in (24a), while it can also be used to express property concepts, see (24b). Thus, the relationship between adjectival and possessive structures has a great cross-linguistic importance, since there are languages that tend to use one of the two structures to express the same property.

This dissertation also offers empirical evidence that in Spanish adjectival and possessive structures are strongly connected. For example, what I call quantified and indefinite nominalizations participate in possessive structures involving the verb *tener* 'to have':

(25) a. El puente tiene {mucha / dos metros de} altura.
the bridge has much two meters of height
b. El puente tiene una altura {increíble / de dos metros}.
the bridge has a height incredible of two meters
'The bridge has a(n) {incredible height / height of two meters}.'

Quantified nominalizations, like *altura* 'height' in (25a), are preceded by a mass quantifier or a measure phrase functioning as a mass quantifier, while indefinite nominalizations, like *altura* 'height' in (25b), are preceded by the indefinite determiner *una* 'a' and followed by a manner adjective or a measure phrase functioning as an adnominal modifier. Crucially, both types of nominalizations appear as the internal argument of the possessive verb *tener* 'to have'. With the exception of the syntactic analysis on Spanish measure phrases developed by Eguren & Pastor (2014, 2015), these nominalizations have not been studied in the literature on gradability.

Concerning bare nominalizations, Francez & Koontz-Garboden (2017a: 2, 38) note for English that the possessive structure *Krishna has wisdom*, where *wisdom* can be taken as a bare nominalization because it appears in isolation, is "limited" and "a more marked way of saying *Krishna is wise*". This type of structure also holds in Spanish and, although it is true that it is more limited than the adjectival one, I will show in chapter 4 that there is more to say about these constructions and provide an answer as to why they are more limited in Spanish, showing

that they are not just a more marked way of expressing the adjectival property. For the purposes of this section, what is important to take into account is that there is a tight connection between adjectival and possessive structures when expressing property concepts, and this connection has important implications both cross-linguistically and intra-linguistically.

To recapitulate the main ideas, in this subsection I have described deadjectival nominalizations focusing on their most visible properties. First, they are derived from gradable adjectives by means of their attachment to deadjectival suffixes. Second, they generally form mass nouns, although they can sometimes form count nouns too; in the former case, they differ from canonical mass nouns in the readings that they can trigger in certain syntactic contexts, like the ones involving exclamative determiners. Third, they inherit argument structure from their base adjectives and reject frequency modifiers when they are not accompanied of their arguments; in addition, when their arguments are present, they accept temporal modifiers, but they reject aspectual ones. Fourth, Spanish deadjectival nominalizations can trigger a scale reading, in which case the nominalization is used for naming the dimension, or a quality reading, in which case the nominalization is used for naming the adjectival property. Fifth, deadjectival nominalizations play a crucial role in languages like Ulwa and Wolof, since they are involved in possessive structures, which are the primary form of expressing property concepts. As for Spanish, possessive structures typically occur when quantified and indefinite nominalizations are involved and are exceptional when they include bare nominalizations.

With this brief description of the main fundamental properties of deadjectival nominalizations, particularly in Spanish, I hope I have shown the reader a basic picture of the phenomenon devoid of any particular theoretical bias. In the following subsection, I explore the different proposals that address the formation and meaning of deadjectival nominalizations and provide a critical review of their empirical and theoretical implications.

1.4.2 Theoretical proposals

In this section, I review previous proposals on what I call here state-token deadjectival nominalizations, examining their basic theoretical assumptions. Given the elusiveness of these nominalizations, the literature has focused on determining what semantic notion is the most appropriate to account for their core meaning, namely, degrees, qualities, tropes and states. In this review, I leave aside the proposals on participant and event nominalizations, which will be examined in chapter 4.

As a general critique, we will see that the approaches that posit that DPs containing deadjectival nominalizations like *la belleza de la torre* 'the beauty of the tower' denote degrees or qualities do not account for the fact that deadjectival nominalizations express properties that

are subject to time. Regarding tropes, they do not contribute any significant differences with respect to states that justify their existence as ontological objects. By contrast, state-based approaches fare better than the other proposals insofar as they are able to account for the fact that deadjectival nominalizations are subject to time, given that states constitute temporal objects or eventualities. Nevertheless, some critical refinements will be proposed; specifically, previous state-based proposals are not able to explain why deadjectival nominalizations are incompatible with aspectual modifiers preceded by *durante* 'for' even though this is expected because they express atelic eventualities, as will be shown below. As developed in chapter 3, the explanation I propose has to do with the fact that these nominalizations express *imperfective* states, which do not include their temporal boundaries.

Before reviewing each proposal, two important *caveats* must be made at this point: first, although for the sake of clarity I classify the proposals depending on whether they make use of one of these four concepts: degrees, qualities, tropes or states, some proposals integrate more than one. Second, the characterization of each concept varies depending on each proposal, which supplies this review with some additional complexity that I will attempt to disentangle.

1.4.2.1 Degrees as primitive objects

1.4.2.1.1 Basic tools

In Bochnak's (2013) study of Luganda nominalizations, the author claims that DPs containing deadjectival nominalizations denote degrees. To understand the proposal, a basic background is necessary. The most influential theory on adjectival gradability is the degree-based approach (Seuren 1973; Cresswell 1976; von Stechow 1984; Bierwisch 1989; Schwarzschild & Wilkinson 2002; Kennedy 1997, 2007; Kennedy & McNally 2005; Fults 2006; Morzycki 2008, 2009, 2015; a.o.), in which degrees are considered abstract representations of measurement of type *d*.[6] Thus, degrees are just points (or intervals in Schwarzschild & Wilkinson 2002) on a scale, which can be defined as a totally ordered set of degrees along a dimension (like *height*, *cost*, *depth*, etc.). As total orders, scales are antisymmetric, which means that two degrees that occupy the same place in the ordering are necessarily the same.[7] For example, if John and Mary are equally tall, they are associated with exactly the same degree of height.

On the other hand, it is usually assumed that gradable adjectives denote relations between individuals and degrees of type <d,<e,t>>. In order for the adjective to be predicated of an

[6] For Creswell (1976), degrees are equivalence classes of individuals. For example, the degree *two meters* is not a numerical representation, but rather the set of all individuals that are precisely that tall. On the other hand, for Anderson & Morzycki (2015), degrees are equivalence classes of states, so the degree *two meters* is the set of states of being precisely that tall. In this dissertation, I assume the latter approach for the reasons that will be given in chapter 2.

[7] Formally, $\forall d, d' \in S$, $\leq$ is antisymmetric: $[d \leq d' \wedge d' \leq d] \rightarrow d = d'$, where d and d' are degrees on the scale S (Morzycki 2015: 106).

individual, the degree argument must be bound by degree modifiers (such as *very*, *more*, *quite*, etc.), see (26).[8] Measures phrases, like *two meters* in *John is two meters tall*, are usually considered to denote degrees and saturate the adjectival degree argument, see (27).[9] In the absence of an explicit degree modifier, it is assumed that the null morpheme POS (from Cresswell 1976) binds the degree argument, which accounts for the fact that the adjectival property holds to a contextually salient degree, see (28). In other words, *John is tall* does not mean 'John has some degree of height', but rather 'John has certain degree of height that at least meets a contextual standard of comparison'.[10]

(26) a. $[\![tall]\!] = \lambda d\lambda x.\,\text{height}(x, d)$.

b. $[\![very]\!] = \lambda G_{<d,<e,t>>}\lambda x.\,\exists d[G(x, d) \wedge d \gg st_G]$.

c. $[\![very\ tall]\!] = \lambda x.\,\exists d[\text{height}(x, d) \wedge d \gg st_{height}]$.

d. $[\![John\ (is)\ very\ tall]\!] = 1$ iff $\exists d[\text{height}(\text{j}, d) \wedge d \gg st_{height}]$.

(27) a. $[\![tall]\!] = \lambda d\lambda x.\,\text{height}(x, d)$.

b. $[\![two\ meters]\!] = \text{two meters}$.

c. $[\![two\ meters\ tall]\!] = \lambda x.\,\text{height}(x, \text{two meters})$.

d. $[\![John\ (is)\ two\ meters\ tall]\!] = 1$ iff $\text{height}(\text{j}, \text{two meters})$.

(28) a. $[\![tall]\!] = \lambda d\lambda x.\,\text{height}(x, d)$.

b. $[\![POS]\!] = \lambda G_{<d,<e,t>>}\lambda x.\,\exists d[G(x, d) \wedge d \geq st_G]$.

c. $[\![POS\ tall]\!] = \lambda x.\,\exists d[\text{height}(x, d) \wedge d \geq st_{height}]$.

d. $[\![John\ (is)\ POS\ tall]\!] = 1$ iff $\exists d[\text{height}(\text{j}, d) \wedge d \geq st_{height}]$.

Informally, (26d) is a true proposition iff John is associated with a degree of height that surpasses a contextual standard *st* by a large degree (I take the denotation of *very* from Morzycki 2015: 115; see Kennedy & McNally 2005 for a different implementation). As for (27d), the statement is true iff John is associated with the degree *two meters* on the scale of height. Finally, (28d) is true iff John is associated with a degree of height that at least meets a contextual standard *st*.

[8] Another widely accepted option is to assume that gradable adjectives denote measure functions of type <e,d> and that degree modifiers, which are of type <<e,d>,<e,t>>, combine with them to turn them into properties of individuals of type <e,t> (see Bartsch & Vennemann 1973 and Kennedy 1999).

[9] Another less popular option is to posit that measure phrases are, like the rest of degree modifiers, of type <<d,<e,t>>,<e,t>> (see Kennedy & McNally 2005).

[10] See Fults (2006), Rett (2008), Panzeri & Foppolo (2012) and Wellwood (2014, 2015) for discussion on why gradable adjectives are evaluated with respect to a standard of comparison in the absence of an explicit degree modifier. For discussion on possible overt realizations of the null morpheme POS in Chinese and Arabic, see Grano (2012) and Grano & Davis (2018), respectively.

In short, degree-based theories rely on the assumption that gradable adjectives carry a degree argument of type *d*, which must be bound by degree modifiers or saturated by measure phrases. In addition, gradable adjectives lexicalize scales, which are sets of totally ordered degrees along a dimension. Degrees are conceived as abstract representations of measurement, that is, points (or intervals) on a scale.

1.4.2.1.2 Degrees as arguments of deadjectival nominalizations

Having explained the most basic tools of degree-based analyses, we are ready to understand how they can be applied to the domain of nominalizations. Assuming an ontology that includes degrees as basic types, Bochnak (2013) argues that Luganda gradable adjectives denote relations between individuals and degrees of type <d,<e,t>>. Deadjectival nominalizers, he claims, change the order of the arguments, so deadjectival nominalizations denote relations between degrees and individuals of type <e,<d,t>>. (29) represents how the adjective *-wanvu* 'tall' combines with the nominalizer *bu-* to form the nominalization *buwanvu* 'height':

(29) a. $[\![-wanvu]\!] = \lambda d \lambda x.\, \text{height}(x) \geq d.$

b. $[\![bu\ -]\!] = \lambda G \lambda x \lambda d.\, \text{G}(x, d).$

c. $[\![buwanvu]\!] = \lambda x \lambda d.\, \text{height}(x) \geq d.$

(From Bochnak 2013: 130, 131)

Omitting several steps in the derivation that are irrelevant here, once the individual argument *x* is saturated, the maximality operator *max* (Link 1983; Rullmann 1995) takes the maximal degree from the sets of degrees *d* associated with the individual *x*. The output of an expression like *obuwanvu bwa Lydia* 'Lydia's height' would be the maximal degree of height associated with Lydia:

(30) $[\![obuwanvu\ bwa\ Lydia]\!] = \max(\lambda d.\, \text{height(l)} \geq d).$

(Bochnak 2013: 127)

According to the author, this analysis captures the general intuition that *Lydia's height* means 'Lydia's degree of height', and actually it can be paraphrased like that.

However, although Bochnak's analysis is appealing insofar as it is compositional and coincident with our intuitions about the meaning of phrases like *Lydia's height*, it runs into several problems. First, given that two degrees that occupy the same position on the scale must be the same by antisymmetry, the analysis predicts that two DPs containing deadjectival

nominalizations in which distinct individuals have the same degree on the scale denote identical objects. I illustrate the phenomenon in Spanish, but it is also applicable to English and, presumably, to Luganda by extension. Consider the following data:

(31) a. La altura de María sorprendió a David.
the height of María surprised ACC *David*
'María's height surprised David.'
b. La altura de Mario sorprendió a David.
the height of Mario surprised ACC *David*
'Mario's height surprised David.'

In a context in which María and Mario are equally tall, Bochnak's analysis predicts that the DP *la altura de María* 'María's height' in (31a) and *la altura de Mario* 'Mario's height' in (31b) denote the same degree of height, that is, denote identical objects. However, in a context in which María's height surprised David, it should be possible to utter, according to Bochnak, that Mario's height surprised David, but it is not necessarily the case. Lucas Champollion makes a similar remark concerning Francez & Koontz-Garboden (2017a) in personal communication: in a context in which John and Mary have the same weight and John's weight broke a chair, it would be possible to affirm *Mary's weight broke the chair* if *John's weight* and *Mary's weight* denoted degrees, but this is not the case. Thus, DPs containing deadjectival nominalizations or underived nouns like *height* do not denote identical objects if the property is predicated of different individuals even though these individuals are associated with the same degree on the scale; briefly formulated, the DPs involved have different *identity conditions* (I will come back to this issue in subsections 1.4.2.2.1 and 1.4.2.3, in the review of quality-based and trope-based approaches).

Second, degrees, either defined as points/intervals on a scale, equivalences classes of individuals (Cresswell 1976) or equivalence classes of states (Anderson & Morzycki 2015), cannot be located in time. In other words, degrees are not temporal objects and, if DPs containing deadjectival nominalizations denoted degrees, it would be expected that they could not be located in time. However, throughout this dissertation I will show and provide enough empirical evidence that the occurrence of temporal modification is possible and regular:

(32) a. la anchura del lago en invierno
the width of.the lake in winter

b. la tristeza del estudiante durante el confinamiento
the sadness of.the student during the lockdown

The combination of deadjectival nominalizations with temporal modifiers is examined in depth in chapter 3, where I argue that they express states. For the purposes of this section, it is enough to note that DPs containing deadjectival nominalizations express properties that hold in time, which captures their combination with temporal modifiers, as shown in (32).

In sum, Bochnak's analysis whereby DPs containing deadjectival nominalizations denote degrees makes two incorrect predictions: first, that two DPs involving different individuals that are associated with the same degree on the scale denote identical objects; second, that DPs containing deadjectival nominalizations are incompatible with temporal modifiers. In conclusion, DPs containing deadjectival nominalizations cannot denote degrees. In the following subsection, I review quality-based approaches.

1.4.2.2 The quality domain

In this section, I review previous proposals on deadjectival nominalizations according to which they express qualities. Although the precise characterization of the concept of 'quality' depends on each proposal, the aspect that these proposals have in common is that qualities constitute properties that are not subject to time. I will divide the proposals into two groups: the first group (Levinson 1978, 1980; Nicolas 2004, 2010; Francez & Koontz-Garboden 2015, 2017a, 2017b) characterizes qualities as abstract mass nouns, while the second group (Martin 2013; Fábregas 2016; Jaque & Martín 2019) characterizes them as atemporal properties.

1.4.2.2.1 Qualities as abstract mass nouns

In this subsection, I review the approaches in which deadjectival nominalizations express qualities, which are defined as abstract mass nouns. The term *quality* dates back to Levinson (1978, 1980), who claims that nouns like *redness* express qualities, while phrases like *being red* express properties. The main difference between the two concepts is that properties are conditions or *states*, while qualities are *stuff*, hence their treatment as abstract mass nouns. In other words, qualities like *redness* and canonical mass nouns like *water* are substances or entities, but they differ in that the former are concrete, while the latter are abstract.

Similarly, Nicolas (2004, 2010), who does not employ the term *quality* explicitly, claims that both canonical mass nouns like *water* and deadjectival nominalizations are mereologically ordered in the sense of Link (1983), but only the latter are abstract and constitute inherently

relational nouns.[11] For example, *wisdom* denotes a relation between a property *x* and a bearer *i* of that property, see (33a). As for *Julie's wisdom*, it denotes an entity of type *e*, specifically the particular instance of wisdom instantiated by Julie, see (33b).

(33) a. $[\![wisdom]\!] = \lambda x \lambda i.\, \mathrm{wisdom}(x, i)$.

b. $[\![Julie's\ wisdom]\!] = \iota x.\, \mathrm{wisdom}(x, \mathrm{j})$.

Finally, Francez & Koontz-Garboden also claim that property concept nouns express qualities, which they define by two crucial assumptions:

- Assumption 1. They are ordered by a total preorder ≤, thought of a size ordering; thus, ≤ induces an equivalence relation consisting of all and only those portions that are of the same size. The total preorder ≤ is transitive, reflexive, but not antisymmetric, which means that two portions of a quality that are of the same size (i.e. they occupy the same place in the ≤ ordering) are not identical.
- Assumption 2. They are partially ordered by a mereological part relation ⋞. The size preorder ≤ preserves ⋞, so that given a quality *P* and two portions $p, q \in P$: $p \lhd q \rightarrow p \leq q$.

Assumption 1 accounts for two facts: first, it explains why qualities and canonical mass nouns prompt different readings in certain contexts, like in exclamatives (as explained in section 1.4.1 in relation to Tovena's 2001 data in Italian). For example, the utterance *What strength Kim has!* is equivalent to *How much strength Kim has!*; in contrast, *What blood you have!* is not equivalent to *How much blood you have!* Francez & Koontz-Garboden argue that this contrast is due to the fact that qualities, unlike canonical mass nouns, are totally preordered by size. Quality-nouns like *strength* are inherently gradable; in other words, they invoke a scale, namely, the scale provided by the total preorder. Thus, two portions of *strength* are ordered relative to one another, and what the authors call a *property reading* arises in *wh*-exclamatives, under the assumption that the descriptive and expressive contents of *wh*-exclamatives are always built on a gradation. In contrast, canonical mass nouns are not inherently gradable. Thus, two portions of *blood* are not necessarily ordered relative to one another, and a property reading cannot arise in *wh*-exclamatives.

The second fact accounted for by the assumption 1 is linked with antisymmetry and identity conditions (recall subsection 1.4.2.1.2 in relation to degree-based theories). If the ordering ≤ is

[11] I will describe what a mereological structure is in depth in chapter 4.

not antisymmetric, it explains why, even if a rose and a tulip are equally beautiful, the rose's beauty and the tulip's beauty are not the same thing. In other words, even though a rose and a tulip are equally beautiful, the phrases *the beauty of the rose* and *the beauty of the tulip* do not denote identical objects. Finally, assumption 2 accounts for the fact that property concepts constitute mass nouns.

In their analysis of Ulwa property concepts, Francez & Koontz-Garboden claim that roots denote qualities. For example, the root *minisih-* denotes a predicate of qualities of type <p,t>, see (34a). In order to predicate a quality of an individual *x*, possessive morphology is necessary: in Ulwa, possessive morphology is provided by the morpheme *-ka*. This morpheme introduces the function π, which associates an individual *x* with the portion *z* of the substance *P*, see (34b). The interval *I* includes all and only portions of dirtiness that rank above a certain threshold, that is, all and only the portions of dirtiness that are considered big enough in the context. When the root *minisih-* combines with the possessive morpheme *-ka*, the resulting noun is *minisihka*, which can be translated as 'dirty' and whose denotation is offered in (34c).

(34) a. $[\![minisih -]\!] = \text{dirtiness} \subseteq D_p$.

b. $[\![-ka]\!] = \lambda P_{<p,t>} \lambda x_{<e>} \lambda I_t \subset P. \exists^I z[\pi(x, z)]$.

c. $[\![minisihka]\!] = \lambda x_{<e>} \lambda I_t \subset \text{dirtiness}. \exists^I z[\pi(x, z)]$.

Thus, property concept mass nouns, and deadjectival nominalizations by extension, are like canonical mass nouns like *water* insofar as they are predicates of substances that are mereologically ordered, but they differ in that deadjectival nominalizations are also totally preordered by size.

Although I assume with Francez & Koontz-Garboden, and provide additional evidence in chapter 4, that deadjectival nominalizations are associated with a total preorder, this proposal presents the same empirical problem as Levinson's and Nicolas', since qualities are also characterized as predicates that are not subject to time. As shown in section 1.4.2.1, deadjectival nominalizations can combine with temporal and frequency modifiers, which reveals that they do hold in time. In a nutshell, although the identification of qualities with abstract mass nouns correctly captures the mass condition of deadjectival nominalizations, it incorrectly predicts that they are not subject to time. In the following subsection, I present the second group of proposals according to which deadjectival nominalizations express qualities.

1.4.2.2.2 Qualities as atemporal properties

In this section, I review the approaches in which the term *quality* is used to refer to certain nouns that express atemporal properties. The proposals do not make use of a formal semantics apparatus, so they do not define what *atemporal properties* are in formal terms, but we can take them as inherent properties that characterize an individual.

a) Deadjectival nominalizations as predicates of atemporal properties

This proposal states that deadjectival nominalizations express properties that are not subject to time. According to Fábregas (2016), the ontology of semantic objects must include degrees and qualities. Qualities are defined as non-dynamic properties that are not subject to time, in contrast to states, which are non-dynamic properties that are actually subject to time. Deadjectival nominalizations can trigger two readings in the absence of an explicit mass quantifier or a measure phrase: a quality and a scale reading. For example, from *la hermosura de María* 'María's beauty', it can follow that María is beautiful, that is, that she is associated with a degree of beauty that exceeds a contextual standard of comparison. This is the quality reading. In contrast, from *la dureza del talco* 'the hardness of the talc', it does not follow that the talc is hard (actually its hardness is minimal in the Mohs scale), but rather it is conveyed that the talc is associated with some degree of hardness. This is the scale reading. Most of Spanish deadjectival nominalizations can prompt the two readings. In order to distinguish them, the author makes use of the phrase *no es suficiente* 'is not enough' as a diagnostic:

(35) a. La belleza de esta persona no es suficiente (para casarse con ella).
the beauty of this person not is enough for marry with her
'The beauty of this person is not enough to marry them.'
b. La hermosura de esta persona no es suficiente para llamarla hermosa.
the beauty of this person not is enough for call.her beautiful
'The beauty of this person is not enough to call them beautiful.'

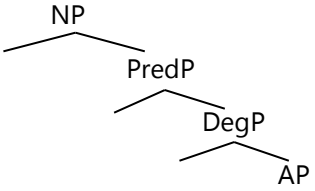
(From Fábregas 2016: 206. Translation mine)

(35a) expresses that the person is beautiful, but that their quality of being beautiful is not enough for achieving something (here, marrying somebody). In contrast, (35b) conveys that the degree of beauty associated with that person is not enough for being considered beautiful. Fábregas assumes that gradable adjectives are associated with scales and project the functional node DegP over the adjectival projection AP (Corver 1997; Kennedy 1997, 2007; a.o.). Based on

Bowers (1993) and Baker (2003), the author also assumes that adjectives project PredP (dominating DegP), which allow them to select for a subject.

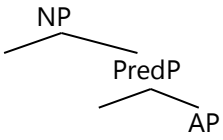
Regarding nominalizations, Fábregas assumes a constructionist device of word formation according to which words are built up in the syntax. Deadjectival nominalizations are formed when a deadjectival nominalizer merges with an adjectival structure. In order to account for the quality and scale readings, Fábregas posits that DegP must only be included in the derivation in the former case, which predicts that the degree of the base adjective has a contextual value on the scale if no mass quantifier or measure phrase is present. With respect to PredP, it must be present in both types of nominalizations in order to capture their ability to select for a subject. The morphosyntactic representation is as follows:

(36)



Quality reading

(37)



Scale reading

Thus, the nominalizer attaches to an adjectival structure and projects NP. In the quality reading, the node DegP enters the derivation: this correctly predicts that the quality reading entails the meaning of the positive form of the adjective (we presume that DegP is projected by the null morpheme POS, although Fábregas does not say that explicitly). In contrast, the absence of DegP in the scale reading predicts that the standard of comparison is not met, and the degree associated with the individual has an unspecified value on the scale: consequently, the nominalization does not entail the meaning of the positive form of the adjective and, the author claims, can express all the values of degrees on the scale.

Fábregas argues that deadjectival nominalizations cannot express states because they typically reject aspectual or temporal modification, although he admits that temporal modifiers are sometimes accepted, as shown in (22). Regarding frequency modifiers, the author claims that they are compatible with deadjectival nominalizations, as in *su constante belleza* 'their constant beauty', but they are licensed conceptually: they do not modify the property itself, but rather a particular manifestation of that property in an individual. Accordingly, deadjectival

nominalizations express qualities (or degrees in the scale reading) rather than states. In sum, Fábregas claims that deadjectival nominalizations do not accept temporal or aspectual modifiers in normal circumstances, but they can sometimes accept temporal modifiers; they also accept frequency modifiers, but their licensing does not prove that they are subject to time.

Fábregas' proposal makes the interesting contribution of showing that deadjectival nominalizations can express two readings: a quality reading, in which a standard of comparison is entailed, and a scale reading, in which that standard of comparison is not entailed. However, the existence of these two different readings does not mean that DPs containing deadjectival nominalizations denote degrees or qualities, since these do not constitute temporal objects. In this sense, the proposal presents the same shortcomings as the other proposals reviewed so far: first, in defining degrees and qualities as atemporal objects, the combination of deadjectival nominalizations with frequency modifiers remains unexplained and cannot be attributed to conceptual information. If this were the case, we could not explain why they are systematically rejected when the arguments of the nominalization are not present, as shown in (21a).

Second, with respect to the combination of deadjectival nominalizations with temporal modifiers, unlike what is claimed by the author, it is a regular rather than an exceptional phenomenon. In other words, deadjectival nominalizations combine naturally with temporal modifiers:

(38) a. la anchura del mar en verano
the width of.the sea in summer
b. la belleza del jardín durante la tormenta
the beauty of.the garden during the storm

In (38) I include two of the numerous examples of deadjectival nominalizations that combine with temporal modifiers, which proves that they express properties that are subject to time, hence neither degrees nor qualities.

Finally, the fact that deadjectival nominalizations do not accept aspectual modifiers does not necessarily mean that they do not hold in time. Instead, as I will argue in chapter 3, I take these data as evidence for saying that they express *imperfective* states. Aspectual modifiers inform about the duration of eventualities and only perfective eventualities, the ones that are finished or do include their boundaries, are compatible with them. Thus, the incompatibility of deadjectival nominalizations with aspectual modification does not necessarily mean that they are not subject to time; in fact, I will argue that this incompatibility can be explained if we assume that they are imperfective.

In sum, Fábregas' proposal makes the important contribution that deadjectival nominalizations trigger either a scale or a quality reading in the absence of an explicit mass quantifier or measure phrase, where only the latter reading entails a standard of comparison. However, the problem of positing that DPs containing deadjectival nominalizations denote degrees or qualities is that it counterfactually predicts that deadjectival nominalizations express properties that are not subject to time. The fact that they cannot combine with aspectual modifiers need not be an argument in favor of their atemporal nature; in fact, I argue that it suggests that they express imperfective states, which do not include their temporal boundaries. In chapter 3, I develop the insight that deadjectival nominalizations can trigger scale (which I call *degree*) and quality readings, but they express *imperfective states* in both cases.

In the following subsection, I review the approaches in which deadjectival nominalizations derived from individual-level predicates express qualities, while the ones derived from stage-level predicates express states.

b) Individual-level nominalizations as predicates of atemporal properties

Martin (2013) for French and Jaque & Martín (2019) for Spanish propose that the individual-level/stage-level distinction is crucial to explain the semantics of deadjectival nominalizations: broadly speaking, the ones that are derived from individual-level predicates express qualities/ dispositions and habits, while the ones that are derived from stage-level predicates express states. In this subsection, I will focus on Martin's (2013) proposal on French because it includes more empirical details. Following standard assumptions (since Carlson 1977), Martin identifies individual-level predicates with permanency and stage-level states with transitoriness. With respect to the former, there are nominalizations that express qualities/dispositions and habits. Qualities or dispositions are properties that are not subject to time. In contrast, habits must be instantiated many times in order to be ascribed to individuals and, therefore, express states. This observation is based on the licensing of deadjectival nominalizations with the predicates *durer* 'to last' or *perdurer* 'to perpetuate' depending on whether they express qualities or habits:

(39) a. Cette habitude a duré / perduré des années.
this habit has lasted endured some years
'This habit lasted/perpetuated for years.'
b. ??Cette qualité / ?Cette disposition a duré / perduré des années.
this quality this disposition has lasted endured some years
'This quality / This disposition lasted/perpetuated for years.'

The author shows that there is subset of nominalizations that pattern with qualities and another subset that can express both qualities and habits, but the occurrence of *durer* 'to last' and *perdurer* 'to perpetuate' induce the habitual reading:

(40) a. ??Son intelligence dure / perdure depuis une éternité.
his intelligence lasts endures since a enternity
'His intelligence lasts/perpetuates from time immemorial.'
b. ??Une intelligence de dix ans / de toute une vie.
a intelligence of ten years of all a life
'An intelligence of ten years / of a whole life.'

(41) a. Cette inconstance dure depuis le début de la saison.
this inconstancy lasts since the beginning of the season
b. Son despotisme a perduré à travers les siècles.
his despotism has endured through the centuries
'His despotism perpetuated through centuries.'

(42) Heureusement que son despotisme n'a jamais pu se manifester.
fortunately that his despotism not.has never could REFL *manifest*
'Fortunately, his despotism could never manifest itself.'

In (40) the nominalization *intelligence* cannot combine with the predicates *durer* 'to last' or *perdurer* 'to perpetuate' or with other temporal modifiers like *de dix ans* 'of ten years' and *de toute la vie* 'of a whole life', which indicates that *intelligence* expresses a quality or disposition. In contrast, (41) shows that *inconstance* 'inconstancy' and *despotisme* 'despotism' are compatible with such modifiers; in that case, they have a habitual reading, which indicates that they express eventualities, specifically states. Regarding (42), it illustrates that the nominalization *despotisme* 'despotism' can also express qualities when used in a context in which the property was never manifested.

On the other hand, Martin admits that it is possible that certain quality denoting nouns, which are supposed to express atemporal properties, can express *transitory qualities* or *transitory dispositions*. This is the case of *despotisme* 'despotism', which can be linked to an event like *hurler* 'to shout', hence it expresses a quality that has a duration:

(43) Pierre a hurlé pendant toute la réunion. Ce despotisme n'a plu à personne.
Pierre has shouted during all the meeting this despotism not.has pleased to anybody
'Pierre shouted during the whole meeting. This despotism didn't please anybody.'

In short, Martin argues that nominalizations derived from individual-level predicates can express either qualities or dispositions, which are not subject to time, or habits, which are actually subject to time and can be considered states. In addition, the author accepts that certain dispositional nouns can express transitory qualities.

This said, this proposal runs into three problems, which are explained in what follows. First, in accepting that certain nominalizations can express *temporary qualities* or *dispositions*, the definition of qualities as atemporal objects becomes blurred. Specifically, if qualities are properties that are not subject to time, it is contradictory to accept that there exist transitory qualities. Second, Martin's proposal mistakenly predicts that certain deadjectival nominalizations derived from individual-level adjectives are not subject to time. Specifically, the problem with this proposal is that it overlooks that even deadjectival nominalizations derived from individual-level predicates accept temporal modifiers naturally. Consider the following examples in Spanish, although the observation is also applicable to French:

(44) a. la validez de este argumento durante el Renacimiento
the validity of this argument during the Renaissance
b. la popularidad de esta canción en 1990
the popularity of this song in 1990

The nominalizations *validez* 'validity' and *popularidad* 'popularity' are derived from the individual-level predicates *válido* 'valid' and *popular* 'popular' and (44) shows that they can combine with temporal modifiers. What these data suggest is that the fundamental property of deadjectival nominalizations that are derived from individual-level predicates cannot be that they are not subject to time.

The third problem of Martin's proposal is related to the use of the predicates *durer* 'to last' and *perdurer* 'to perpetuate' and phrases like *de dix ans* '(lit.) of two years' as tests to identify eventualities. Here I examine their Spanish equivalent verbal predicates *durar* 'to last' and *perdurar* 'to perpetuate' and the phrase *de diez años* '(lit.) of ten years'. In this respect, two observations are in order. First, there are deadjectival nominalizations derived from individual-level predicates that accept them:

(45) a. Su popularidad duró poco, hasta que tuvieron el accidente.
their popularity lasted shortly until that had.3.PL the accident
'Their popularity lasted shortly, until they had the accident.'

b. La belleza del palacio perduró durante siglos, hasta que se incendió.
the beauty of.the palace endured for centuries until that REFL *burnt*
'The beauty of the palace endured for centuries, until it burnt.'

(46) a. Esta canción tuvo una popularidad de diez años.
this song had a popularity of ten years
b. Este contrato tuvo una validez de dos años.
this contract had a validity of two years

Second, the verbs *durar* 'to last' and the phrase *de diez años* '(lit.) of ten years' are also compatible with entity-denoting nouns, which suggests that they do not make reliable tests to identify eventualities:

(47) a. La silla duró varios meses.
the chair lasted several months
b. un vino de varios / siete años
a wine of several seven years

Although I will come back to this question in chapter 3, we can conclude that the analysis according to which deadjectival nominalizations that are derived from individual-level predicates express qualities or dispositions qua atemporal properties incorrectly predicts that they are not subject to time. In chapter 2, I examine the individual-level/stage-level distinction and argue that this is based on causation rather than spatiotemporality or aspect. In the following section, I review the trope-based approach.

1.4.2.3. The trope-based approach

As explained in section 1.1, building on a long philosophical tradition that dates back to Aristotle, Moltmann (2004, 2009, 2015) suggests to enrich the ontology of semantic objects by including tropes (see also Richtarcikova 2017 for Slovak), which can be defined as particular manifestations of a property in an individual. The author claims that, while nominalizations like *redness* refer to kinds of tropes, DPs containing deadjectival nominalizations, such as *the redness of the box*, refer to tropes. In other words, while *redness* is the universal that can be instantiated by different individuals, *the redness of the box* refers to a particularized property with a spatiotemporal localization. According to Moltmann (2009: 51, 52), the trope is "spatio-temporally located just where the box is located while it is red". For *John's happiness*, the author provides the following denotation:

(48) $[\![John's\ happiness]\!]^{w,i} = \mathrm{f}(\mathrm{John}, \mathrm{happy}, \mathrm{w}, \mathrm{i}).$

(Moltmann 2009: 60)

Informally, in (48) a function *f* maps the individual *John*, the property *happy*, the world *w*, and the time *i* onto the trope that is the particular manifestation of the property *happy* in the individual *John* in a given world *w* at a given time *i*. Moltmann is especially interested in comparing the trope-based analysis to degree-based and state-based approaches. Regarding degree-based approaches, first Moltmann claims that her analysis can account for identity conditions (see section 1.4.2.1) or the fact that *John's height* and *Mary's height* do not refer to identical objects even though John and Mary are equally tall; the reason is that involving different individuals results in different manifestations of the property. Second, deadjectival nominalizations can be modified by adjectives that express manner rather than degrees, as in *exquisite/strange beauty*. According to the author, degrees cannot be strange or beautiful, whereas tropes can combine with manner modifiers because these express the particular way in which tropes are realized.

With respect to state-based approaches, which will be reviewed in section 1.4.2.4, Moltmann (2009: 58) claims that there is a crucial difference between states and tropes, namely, that only the latter are *grounded*, which means that tropes can be "described and evaluated with regard to the particular way in which they manifest a property". As a consequence, deadjectival nominalizations can act as the complement of the verbs *to admire* and *to describe*. Observe the following data:

(49) a. John described Mary's beauty.
b. John admires Mary's beauty.
(50) a. ??John described Mary's being beautiful.
b. ??John admires Mary's being beautiful.

(Moltmann 2009: 58)

Assuming that phrases like *Mary's being beautiful* denote states, phrases like *Mary's beauty* must denote a different object, since they do not participate in the same syntactic contexts, as shown in (49) and (50). Moltmann claims that deadjectival nominalizations express tropes, which involve the particular way in which the property is manifested in the individual; in contrast, the verbal gerunds or *gerundives* (I take this term from Zucchi 1993) that occur in (50) express states, which "just consist in the holding of a property of an object, without involving any particular way

in which the property manifests itself in the object" (Moltmann 2009: 58). As a consequence, tropes, but not states, can be described or admired.

Although Moltmann makes interesting contributions to the analysis of deadjectival nominalizations, which I will mention below, I conclude with Jaque (2014) and Anderson & Morzycki (2015) that tropes do not contribute any relevant linguistic differences with respect to states, which renders them unnecessary in our semantic ontology. Specifically, it is true that Moltmann's analysis presents the advantage over degree-based theories that is able to account for identity conditions and the combination of deadjectival nominalizations with manner modifiers. Nonetheless, the fact that degree-based approaches are limited in this sense does not mean that we need to make use of tropes instead of states. If DPs containing deadjectival nominalizations denote states, identity conditions are directly explained, since two states that involve two different participants are necessarily different. The same holds with manner modifiers, although the explanation requires a deeper elaboration that will be detailed in chapters 2 and 3; for the moment, it is sufficient to note that there is nothing in the characterization of states that prevents them from co-occurring with manner modifiers; in other words, states can be strange and beautiful. Thus, Moltmann's proposal presents empirical advantages over degree-based theories, but these advantages are not exclusive of a model that includes tropes in its semantic ontology.

Consequently, the crucial aspect on which Moltmann's analysis is based is the specific difference between tropes and states, namely, that only the former are grounded. In this respect, Moltmann claims that deadjectival nominalizations express tropes, which are grounded, and therefore can be the complement of the verbs *to describe* and *to admire*. However, Moltmann's claim is based on two controversial assumptions: (a) that the phrases containing gerundives in (50) denote states and (b) that states are not grounded. Certainly, although the literature has not provided an entirely satisfactory analysis of gerundives yet (see Vendler 1968; Chomsky 1970; Zucchi 1993; Siegel 1998; Alexiadou et al. 2010; Alexiadou 2013a; a.o.), insofar as it is unclear what specific semantic object is denoted by English gerundive phrases, there is empirical evidence that they do not denote eventualities. Consider the following data that include eventive verbs in the form of a gerundive and a nominalization:

(51) a. *Bill Clinton's destroying the memo took place at noon.
b. Clinton's destruction of the memo took place at noon.

(From Siegel 1998: 4, 6)

(51a) shows that gerundives are incompatible with the predicate *to take place*; in contrast, (51b) shows that the nominalization is actually compatible with the predicate. Given that events take place at some particular time and place, what these data show is that the structure *Bill Clinton's destroying the memo* does not denote an event, although it includes a verbal structure that does express an event. Empirical evidence that English gerundives have an internal verbal structure is mainly provided by their combination with adverbs and their compatibility with the accusative case:

(52) Pat disapproved of my quietly/*quiet leaving the room.

(Alexiadou et al. 2010: 551)

(52) shows that the internal argument of the gerundive is realized as a direct object (*the room*) and that the gerundive can be modified by the adverb *quietly*, but cannot be modified by the adjective *quiet*. These two properties, among others pointed out in the literature cited above, reveal that English gerundives have an internal verbal structure that presumably expresses an event. However, the whole gerundive structure does not denote an event. As an extension of this analysis, the contrast of (49) with (50) cannot be attributed to the fact that that in (49) the nominalizations express tropes and in (50) the gerundives express states, since gerundives cannot express eventualities, but rather to the fact that gerundives express a different object from states. Finding out the specific object that is expressed by gerundives is not the goal of this dissertation; the reader is especially referred to Zucchi (1993: 207), who claims that they express *state of affairs*, which are defined as "things of which one may be aware, may be informed, but which, unlike propositions, cannot properly be said to have the property of truth or falsehood, or be objects of belief". The reader is also referred to Serrano (2015) for an analysis of Spanish complement clauses, as well as infinitival complements, introduced by the definite determiner, which could show analogous patterns.

The second controversial assumption on which Moltmann's analysis is based is that the author claims that states are not grounded. However, if *groundedness* is defined as the particular way in which a state is manifested, states can be grounded insofar as they are compatible with manner modifiers. Ernst (2016) provides empirical evidence that the combination of manner modifiers with stative predicates is more constrained than the combination with events because the latter are more complex, but it is more frequent than is often assumed. Examples like *She loved him unevenly* and *She belongs to the club tenaciously* are only two of the numerous examples provided by the author. Hence, if states are compatible with manner modifiers, there are no reasons to posit that states are not grounded.

In conclusion, although Moltmann's proposal makes interesting contributions with respect to the kind-token dichotomy, on which my hypothesis is based, it relies on the unnecessary existence of tropes as ontological objects. Identity conditions, the combination of deadjectival nominalizations with manner modifiers and groundedness are properties that can be captured by positing that deadjectival nominalizations express states rather than tropes. In the following subsection, I review the last type of approaches to deadjectival nominalizations, namely, state-based approaches, on which my proposal is essentially based.

1.4.2.4 State-based approaches

This subsection examines the analyses according to which deadjectival nominalizations encode states (Roy 2010; Villalba 2013; Borer 2013; Baglini 2015), which I consider more appropriate to capture the properties associated with those nominalizations. Given that Borer's (2013) and Villalba's (2013) proposals are applications of Roy's (2010) analysis to English and Spanish, respectively, I will only review Roy's (2010) and Baglini's (2015) works. We will see that, although these proposals make the correct prediction that deadjectival nominalizations express states, these approaches must be refined in order to account for the fact that deadjectival nominalizations have an imperfective nature, that is, they express eventualities that do not include their temporal boundaries, as will be explained in chapter 3 in detail.

1.4.2.4.1 Deadjectival nominalizations as predicates of eventualities

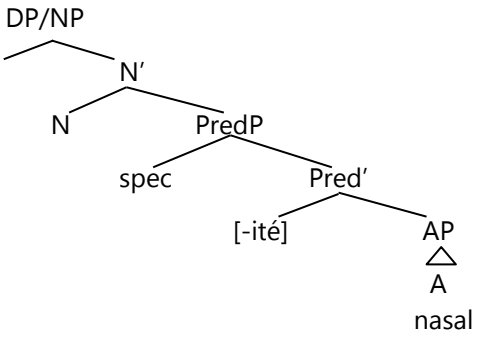
Roy's (2010) seminal work on French deadjectival nominalizations is based on the observation that these can express two readings: a state and a quality reading. Inspired by Grimshaw's (1990) analysis on deverbal nominalizations, Roy argues that the occurrence of the arguments of the nominalization induces an eventuality reading, specifically a state reading, hence the acceptance of frequency modifiers (which the author calls aspectual modifiers), see (53a). In contrast, the absence of argument structure gives rise to a quality reading, hence the rejection of frequency modifiers, see (53b).

(53) a. La popularité constante *(de ses chansons) m'impressionne.
the popularity constant of his songs me.impresses
b. La popularité (*constante) est une qualité qui lui fait défaut.
the popularity constant is a quality that to.him does default

(Roy 2010: 146)

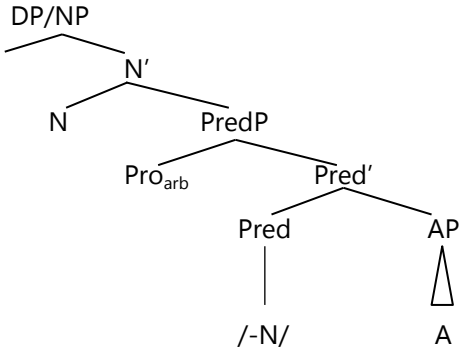
The morphosyntactic structure proposed by Roy for state and quality nominalizations, respectively, is reproduced below:

(54)



(From Roy 2010: 149)

(55)



(From Roy 2010: 151)

According to Roy, the adjectives that can appear in predicative position can select for a subject, which can be syntactically captured by positing that they project the functional node PredP over AP, and Spec-PredP introduces the subject. If adjectives that appear in predicative position project PredP and form nominalizations, both state and quality nominalizations must include PredP; in fact, the author claims that the nominalizer is the spell out of head-PredP. In (54), since the author assumes that gradable adjectives are predicates of states, the stative properties of their derived nouns are straightforwardly explained. As for quality nominalizations in (55), the absence of temporality comes from a generic interpretation when a generic operator GEN binds a null subject Pro_{arb}, which appears in Spec-Pred. Thus, the quality reading is not derived from an alleged ambiguity of gradable adjectives according to which they can express either states or qualities, but rather it emerges when the state is involved in a generic context.

In short, Roy argues that there are two types of deadjectival nominalizations, namely, state and quality nominalizations. The stative reading results directly from the stative properties of the base adjectives, while the quality one arises when the arguments are not present. State

nominalizations express eventualities and can combine with frequency modifiers; in contrast, quality nominalizations do not combine with frequency modifiers.

In this dissertation, I assume with Roy (2010) that there is a crucial difference between deadjectival nominalizations whose arguments are present and deadjectival nominalizations whose arguments are absent. In addition, I assume that the difference is that the former express *episodic* properties, that is, particular situations, while the latter express *generic* properties, that is, properties that do not make reference to any particular situation (Carlson 2011). However, for the specific reasons that are laid out in chapter 4, this difference must not be expressed in terms of states and qualities, where the latter are derived from the former when a generic interpretation arises. On the contrary, more in line with the kind-token tradition, I posit that the basic reading is the generic qua *kind* reading, while the stative qua *token* reading is the derived one.

The other aspect in which my analysis differs from Roy's is that the author says nothing with respect to the incompatibility of deadjectival nominalizations with aspectual modifiers even when their arguments are present, as shown in section 1.4.1. This incompatibility does not constitute an argument against the eventuality nature of deadjectival nominalizations (cf. Fábregas 2016), but rather I argue that it naturally follows from the fact that deadjectival nominalizations express imperfective states. In chapter 3, based on García Fernández (1999, 2000), I will show that aspectual modifiers are licensed when a perfective interpretation is available. Specifically, gradable adjectives express imperfective states by default in the absence of the copula; given that deadjectival nominalizations do not include the copula in their derivation, they can only express imperfective states, that is, states that do not include their temporal boundaries.

In conclusion, Roy's analysis for deadjectival nominalizations constitutes the point of departure of this dissertation, insofar as it posits that deadjectival nominalizations express states when their arguments are present. However, Roy's proposal does not explain why deadjectival nominalizations do not combine with aspectual modifiers even though they express eventualities. In addition, as will be shown in chapter 4, my proposal differs from Roy's insofar as the quality qua kind reading is the basic reading, while the stative qua token reading is the derived one. In the following subsection, I review Baglini's (2015) analysis of property concept nouns as stative predicates, where states are defined as gradable predicates.

1.4.2.4.2 States as gradable predicates

Baglini (2015) is concerned with the similarities and differences between canonical mass nouns like *rice* and property concept nouns like *courage*. Although both types constitute mass nouns,

the author shows that there are systematic differences that hold cross-linguistically. Particularly, she shows that Wolof (from the Niger-Congo family) exhibits analogous contrasts as the ones brought to light by Tovena (2001) with respect to Italian and French. First, the degree modifier *lool* 'very' is incompatible with canonical mass nouns like *ceeb* 'rice' and compatible with gradable adjectives like *rafet* 'pretty', as expected; interestingly, it can also co-occur with property concept nouns like *xel* 'wit':

(56) a. Awa am na-Ø ceeb (*lool).
Awa have FIN-3SG rice very
'Awa has rice.'
b. Awa rafet-na-Ø (lool).
Awa pretty-FIN-3SG very
'Awa is (very) pretty.'
c. Awa am na-Ø xel (lool).
Awa have FIN-3SG wit very
'Awa is (very) witty.'

(Baglini 2015: 17)

Second, Wolof makes use of two distinct verbs to express comparison: *ëpp* and *gën*, which can be translated as 'to exceed'. While the former does not discriminate between canonical mass nouns and property concept nouns, the latter is incompatible with canonical mass nouns:

(57) a. Aïda mu-a ëpp doole Binta.
Aïda 3SG-S-F EXC strength Binta
'Aïda is stronger than Binta.'
b. Aïda mu-a ëpp ceeb Binta
Aïda 3SG-S-F EXC rice Binta
'Aïda has more rice than Binta.'

(58) a. Aïda mu-a gën-a am doole Binta.
Aïda 3SG-S-F EXC have strength Binta
'Aïda has more strength than Binta.'
b. *Aïda mu-a gën-a am ceeb Binta.
Aïda 3SG-S-F EXC have rice Binta
Intended: 'Aïda has more rice than Binta.'

(From Baglini 2015: 158)

Third, property concept nouns, like count nouns and unlike canonical mass nouns, are compatible with the indefinite singular determiner *b-enn* 'any, a single' in negative sentences:

(59) a. Am-u-ma b-enn doole.
have-NEG-1SG.FIN CL-some strength
'I don't have any strength.'
b. Jend-u-ma b-enn cigarette.
buy-NEG-1SG.FIN CL-some cigarette
'I didn't buy a single cigarette.'
c. *Naan-u-ma benn ndox.
drink-NEG-1SG.FIN CL-some water
Intended: 'I didn't drink any water' / I didn't drink any drop of water.

(Baglini 2015: 97)

Baglini concludes that there is enough empirical evidence that canonical mass nouns and property concept nouns denote in different domains. The former have a mereological structure in the sense of Link (1983) or, in other words, are associated with parthood relations. In contrast, property concept nouns are associated with scales, which are totally preordered in intensity (recall from section 1.4.2.2.1 that Francez & Koontz-Garboden 2017a propose the same ordering, although applied to qualities rather than states). According to Baglini, this dissimilarity can be captured by positing that property concept nouns express states, which are totally preordered in intensity because of their strict homogeneity and give rise to degrees through equivalence classes. In contrast, canonical mass nouns are predicates of substances and have a mereological structure.

The fundamental property that characterizes states in contrast to events according to Baglini (see also Baglini & Kennedy 2019) is that the former can be graded intensively in equivalence classes of states or degrees (what Fleischhauer 2016 calls *degree gradation*), while the latter can be graded extensively in frequency or duration (what Fleischhauer 2016 calls *extent gradation*). Accordingly, in (60a) the stative predicate *to love*, unlike the eventive predicate *to run* in (60b), cannot trigger temporal readings in gradable constructions:

(60) a. Sam loves his mother a lot/a little/so much. (*FREQUENCY/*DURATION)
b. John ran a lot. (FREQUENCY/DURATION)

(60a) means that Sam loves his mother to a certain degree, but it cannot mean that Sam loves his mother frequently or for some time. In contrast, (60b) means that John ran many times or for a long time. In short, the author identifies gradability (i.e. degree gradation) with stativity.

The other important insight in Baglini's analysis is that constructions involving the copula plus an adjective in languages like English are tightly connected with possessive constructions involving deadjectival nominalizations in Wolof, as shown in subsection 1.4.1. In fact, in Wolof the equivalent structure of *Ali is intelligent* is *Ali has intelligence*, which equates them with alienable possession structures like *Ali has rice*. The semantic composition for *am ceeb* 'to have rice' and *Ali am xel* 'Ali is intelligent, (lit.) Ali has intelligence' is reproduced below:

(61) a. $[\![ceeb]\!] = \lambda y.\,\mathrm{rice}(y).$

b. $[\![am]\!] = \lambda P_{<\alpha,t>}\lambda x\lambda\alpha \in^{D\uparrow}_{<\alpha,R>}.\, P(\alpha) \wedge \pi(\alpha)(x).$

c. $[\![am\ ceeb]\!] = \lambda x\lambda y \in^{D\uparrow}_{<e,\leq part>}.\, \mathrm{rice}(y) \wedge \pi(y)(x).$

(62) a. $[\![xel]\!] = \lambda s.\,\mathrm{mind}(s) = \{s \mid s \in S_{\succcurlyeq mind}\}.$

b. $[\![am]\!] = \lambda P_{<\alpha,t>}\lambda x\lambda\alpha \in^{D\uparrow}_{<\alpha,R>}.\, P(\alpha) \wedge \pi(\alpha)(x).$

c. $[\![am\ xel]\!] = \lambda x\lambda s \in^{D\uparrow}_{<s,>mind>}.\, \mathrm{mind}(s) \wedge \pi(s)(x).$

d. $[\![Ali\ am\ xel]\!] = \lambda s \in^{D\uparrow}_{<s,>mind>}.\, \mathrm{mind}(s) \wedge \pi(s)(\mathrm{Ali}).$

e. $[\![EVAL]\!] = \lambda P_{<s,t>}\lambda s.\, P(s) \wedge [s] \succcurlyeq_{\delta} \mathrm{stnd}_{\delta,C}.$

f. $[\![EVAL\ Ali\ am\ xel]\!] = \lambda s.\,\mathrm{mind}(s) \wedge \pi(s)(\mathrm{Ali}) \wedge \exists[s] \succcurlyeq_{mind} \mathrm{stnd}_{mind,C}.$

(From Baglini 2015: 176, 177)

The verb *am* 'have' takes a predicate of type <α,t>, where *α* stands for entities or states, and returns a function from individuals to entities/states. Therefore, Baglini introduces a possession relation in the denotation of *am*, which associates an entity/state with a possessor. If states are involved, she assumes that the null morpheme EVAL (from Rett 2008) recues the derivation from having the trivial meaning 'Ali has some degree of intelligence'. This null morpheme, reminiscent of POS in degree-based theories, captures the intended meaning: 'Ali has certain degree of intelligence that reaches a contextual standard of comparison'.

In sum, Baglini argues that, while canonical mass nouns are predicates of substances, property concept nouns are predicates of states. The former are associated with a mereological ordering, while the latter are associated with degrees through equivalence classes of states, which are totally preordered. The fact that states, unlike events, do not prompt temporal readings in gradable contexts is explained because states are ordered intensively in degrees, while events are ordered extensively in time.

Baglini's analysis is in accordance with the idea defended in this dissertation that property concept nouns express states. Moreover, I assume with the author that the fundamental difference between canonical mass nouns and deadjectival nominalizations is that the former are mereologically ordered, while the latter are associated with scales as equivalence classes of states, which are totally preordered. However, as pointed out with respect to Roy's (2010) analysis, I refine the existing state-based analyses by positing that deadjectival nominalizations express imperfective states.

Regardless, my most important disagreement with Baglini's analysis is related to her conception of states as eventualities that are gradable, which departs from the classical conception of stativity based on Vendler (1957) and Dowty (1979) according to which states are defined by their lack of dynamism. A precise characterization of stativity is offered in chapter 2; for the moment, it is sufficient to note that, if states were defined by being gradable, we could not account for the existence of non-gradable states like *pertenecer* 'to belong' and *poseer* 'to own', which do not participate in gradable constructions (I provide examples in Spanish, but they can also be applied to English):

(63) a. *Sam perteneció mucho al equipo.
Sam belonged a.lot to.the team
b. *Sam poseyó el récord mucho.
Sam owned the record a.lot

As shown in (63), the verbs *pertenecer* 'to belong' and *poseer* 'to own' do not give rise to any acceptable reading in gradable constructions: they cannot trigger a durative/frequentative reading because they do not express events, but they cannot express a degree reading either because they do not constitute gradable predicates. What these data suggest is that states are not defined on the basis of gradability. I develop this insight in chapter 2, where I argue that states are defined as temporal objects that do not involve any changes in their participants, irrespective of whether they are gradable or not.

To sum up, on the one hand, Baglini's analysis is consistent with the idea defended in this dissertation that property concept nouns express states that lexicalize scales, which consist of degrees as totally preordered equivalence classes of states. On the other, this proposal does not explain why deadjectival nominalizations do not accept aspectual modifiers even though they express eventualities and incorrectly defines stativity on the basis of gradability.

1.4.2.5 Conclusions of the section

In this subsection, previous approaches on deadjectival nominalizations are reviewed from a theoretical perspective. Specifically, the proposals are divided into four groups depending on which ontological objects they deploy: degrees, qualities, tropes and states. I have shown that degree-based and quality-based approaches fail to capture the fact that deadjectival nominalizations express properties that are subject to time. As for tropes, they do not show any relevant differences with respect to states that allow us to distinguish them properly. Thus, neither qualities nor tropes need to be included in our semantic ontology to account for the meaning of deadjectival nominalizations. With respect to degrees, in chapter 2 I argue that they can be derived from state-kinds, so I do not take degrees as basic semantic objects either.

By contrast, state-based approaches are shown to be superior to the rest of approaches insofar as they can account for the fact that deadjectival nominalizations express properties that are subject to time. Nevertheless, these approaches require a specific refinement in order to explain why deadjectival nominalizations are incompatible with aspectual modifiers, which I take as evidence that they express imperfective states.

1.5 Overview of the dissertation

After having gone over the main properties of deadjectival nominalizations and the different theoretical views on them, I turn to the questions that the present dissertation attempts to address. In the remaining of this chapter, I guide the reader into the structure of this work. Starting with **chapter 2**, I present in some detail the theoretical model on which my analysis is based. Specifically, in this chapter I pose the following questions:

(a) What is the defining property of states?
(b) Do gradable adjectives, which constitute bases for nominalizations, express states?
(c) What lies behind the distinction among individual-level, stage-level and Davidsonian states?
(d) What is the role of strict homogeneity and gradability in relation to stativity?
(e) What is the basic composition of gradable adjectives and their nominalizations?

Thus, in this chapter I provide a thorough scrutiny of stativity, which constitutes the backbone of the analysis. Specifically, the most important question is *(a)* to define what a state is in precise terms and *(b)* to find out whether gradable adjectives express states. I argue that states are eventualities that do not involve change in any of their participants and that gradable adjectives express states. Regarding question *(c)*, I examine individual-level, stage-level and Davidsonian states in order to figure out whether they show different spatiotemporal or

aspectual properties that may call into question the hypothesis that gradable adjectives express states; I argue that they all express states, but they differ as to how causation is manifested in each case. Thus, causation is an important property that distinguishes the main three types of stative predicates, but it does not constitute a defining property of stativity. With respect to question *(d)*, I argue that strict homogeneity and gradability do not constitute defining properties of stativity either, although they play an important role in the delineation of the whole typology of states presented in this dissertation.

With regard to *(e)*, I address the question of how the domain of gradable adjectives must be structured. Essentially, my model of gradability includes insights from Kennedy & McNally (2005), Kennedy (2007), Gehrke (2011, 2015, 2017), Anderson & Morzycki (2015) and Francez & Koontz-Garboden (2015, 2017a), which will be collated in due time. Specifically, what I propose is that gradable adjectives are predicates of state-kinds, which can express state-tokens when their arguments are present. In addition, I posit that gradable adjectives and their nominalizations are associated with scales, which are sets of degrees qua state-kinds that are totally preordered.

In **chapter 3**, I propose an analysis of state-token nominalizations, which are characterized by being flanked by the definite determiner and their arguments, usually a PP introducing the participant of which the property is predicated or *holder*, as illustrated in (64).

(64) a. la altura de Víctor
the height of Víctor
'Víctor's height'
b. la belleza de la tormenta
the beauty of the storm

The analysis addresses the following questions:

(a) What do these deadjectival nominalizations express? What theoretical implications does it have?
(b) Why is the kind-token dichotomy important to account for these nominalizations?
(c) Are there any relevant distinctions between gradable adjectives and their nominalizations?
(d) What is the role of the nominalizer?

Regarding *(a)*, the question boils down to positing whether DPs containing deadjectival nominalizations denote states, degrees, qualities or tropes, according to the literature on this

topic. My analysis is in accordance with Roy (2010), Villalba (2013), Borer (2013), Baglini (2015) and Glass (2019), who claim that these nominalizations express states. Empirical evidence that they express states comes mainly from the fact that they are compatible with temporal and frequency modification. However, I propose an important refinement for state-based analyses, namely, that these nominalizations express *imperfective* states, which explains why they are incompatible with aspectual modifiers. The implications of such an analysis are related to the composition of our semantic ontology and to the properties that nominalizations can encode not only with respect to lexical aspect, but also with respect to viewpoint aspect.

Concerning *(b)*, I argue that the kind-token distinction is relevant to account for the combination of state-token nominalizations with frequency and manner adjectives and measure phrases. Based on Gehrke & McNally's (2015) insights, I show that the distribution and interpretation of frequency adjectives can be explained depending on whether they operate in the kind or token domains; as for manner adjectives and measure phrases, I follow Anderson & Morzycki (2015) in positing that they operate in the kind domain.

To answer question *(c)*, we need to find out whether the properties that characterize gradable adjectives, like the endpoints encoded by their scales, the individual-level/stage-level distinction, argument structure, etc., are maintained by their corresponding nominalizations. I argue that all the adjectival properties are inherited by their corresponding nominalizations, but gradable adjectives and their nominalizations differ with respect to one interesting property: gradable adjectives invoke a standard of comparison in the absence of an explicit degree modifier, whereas deadjectival nominalizations are not obligatory assessed with respect to a standard of comparison.

Finally, in relation to question *(d)*, the aim is to determine what the semantic contribution of deadjectival nominalizers is, if there is one, especially taking into consideration that there are (few) cases of pairs of nominalizations derived from the same base, like *simplicidad* 'simplicity' / *simpleza* 'foolishness' < *simple* 'foolish, simple', which express a more specialized meaning than their base. What I argue for is that the deadjectival nominalizer acts as a filter of the domain of their bases: it can take as its input the adjectival domain, which is the most usual situation, or can restrict it, but it cannot broaden it. To put it differently, the nominalizer can only take some of the senses that the base adjective can express. For instance, the base *simple* can mean 'simple' or 'foolish', while their derived nominalizations *simplicidad* 'simplicity' and *simpleza* 'foolishness' restrict the domain of the adjective by taking only one of the adjectival senses.

In **chapter 4**, I explore the internal structure of deadjectival nominalizations with a particular look at the mass and count distinction and examine state-kind deadjectival nominalizations,

which are not accompanied by their arguments and trigger generic interpretations, as illustrated in (65).

(65) a. La belleza está en el interior.
the beauty is in the interior
'Beauty is inside.'
b. El puente tiene una altura {increíble / de diez metros}.
the bridge has a height incredible of ten meters
'The bridge has a(n) {incredible height / height of ten meters}.'
c. El puente tiene {mucha / dos metros de} altura.
the bridge has much two meters of height
d. Los electrones tienen altura.
the electrons have height
'Electrons have some height.'

The questions that I will attempt to answer are the following ones:

(a) Must the analysis of deadjectival nominalizations be subsumed under the analysis of canonical mass nouns?
(b) What is the constraint that regulates the formation of mass nominalizations?
(c) Why is the kind-token dichotomy important to account for state-kind nominalizations?
(d) What are the constraints that regulate the process of nominalization?

In order to answer question *(a)*, I compare canonical mass nouns like *agua* 'water' to deadjectival nominalizations and conclude that, even though they are similar insofar as they can be taken as sets of elements that are ordered with respect to each other, they are associated with different domains, which explains the semantic differences that they exhibit in certain syntactic contexts, like exclamatives. Canonical mass nouns are associated with a mereological partial order of portions, while deadjectival nominalizations are associated with a total preorder of state-kinds.

Regarding *(b)*, I discuss whether the basic constraint that regulates the formation of mass nominalizations is that the base predicate has to be either *atelic*, as usually assumed since Mourelatos (1978), or *gradable*. On the one hand, I provide empirical evidence that there is a mapping from gradability onto the mass domain, so it is gradable predicates that form mass nominalizations. On the other hand, I show that atelicity plays an important role with respect to

morphological pluralization, which I disassociate from countability: atelic predicates do not pluralize in normal circumstances regardless of whether they constitute mass or count nouns, although I set out three conditions in which the plural marking is licit.

In relation to question *(c)*, I study the four types of state-kind nominalizations that I illustrate in (65), which have received little attention in the literature. I argue that all the nominalizations that appear in (65) denote in the domain of state-kinds because they are incompatible with temporal and frequency modifiers. In addition, I analyze the specific properties that each type of nominalization displays and the role of the light verb *tener* 'to have'.

To conclude, question *(d)* inquires whether we can predict the number and type of nominalizations that can be formed out of the same predicative base. To complete the inventory of deadjectival nominalizations that can be formed in Spanish, I examine participant and event nominalizations succinctly, exemplified in (66a) and (66b), respectively.

(66) a. Tengo varias durezas en el pie.
have.1.SG several hardnesses on the foot
'I have several calluses on my foot.'
b. El político cometió varias irregularidades.
the politician committed several irregularities

In order to account for the existence state-token, state-kind, participant and event nominalizations, I defend that nominalization is a constrained phenomenon whereby the domain of the arguments of predicative bases constitutes the domain of the resulting nominalizations, although there are other idiosyncratic factors that have to be taken into consideration to provide a thorough picture of the phenomenon. In particular, deadjectival nominalizations can express states, entities and events because their base adjectives encode a state argument and are typically predicated of entity-denoting individuals, but they can also be predicated of events in certain circumstances; I will develop these insights in chapter 4.

Lastly, **chapter 5** summarizes the main contributions of this dissertation, which are derived from the general conclusion that a model that makes use of state-kinds is best suited to provide a satisfactory explanation for the morphosyntactic and semantic properties of deadjectival nominalizations. Additionally, I mention some extensions of the analysis, pose new questions about other related phenomena and briefly describe the main problems that they raise, which will be presumably addressed in future investigations.

Chapter 2

Stativity and its interaction with causation, homogeneity and gradability

In the previous chapter, I concluded that the group of approaches that makes better predictions about the semantics of deadjectival nominalizations is the state-based approach, given that deadjectival nominalizations express properties that are subject to time. In this chapter, I present the theoretical assumptions that underlie the analysis that will be defended in this dissertation, where stativity plays a central role. Focusing on the verbal and adjectival domains, I argue (a) that states are defined as temporal objects that do not involve change in any of their participants and (b) that stativity interacts with different concepts that are not always differentiated correctly in the literature, among which 'causation', 'strict homogeneity' and 'gradability' stand out; specifically, these concepts play an important role to configure the typology of states that I present here, although they do not constitute defining properties. In section 2.1, I present a precise characterization of 'stativity' in the spirit of Vendler (1957) and Dowty (1979) and provide evidence that gradable adjectives, which are the bases of deadjectival nominalizations, express states.

In section 2.2, I examine the three main types of states that have been identified in the literature on stativity, namely, individual-level, stage-level and Davidsonian states. I claim that, although the division into the three categories is correct, their fundamental properties are related to causation rather than other notions like spatiotemporality, aspect or the relative-absolute distinction. Specifically, I propose that individual-level states express non-caused properties; stage-level states express externally caused properties; and, based on Leferman (2017), Davidsonian states express internally caused properties.

In section 2.3, I provide a specific characterization of gradability and homogeneity, where the latter is based on cumulativity and divisibility in terms of Krifka (1989, 1992). On the one hand, I argue against Baglini (2015) that stativity is not necessarily linked to gradability and that Davidsonian states are not necessarily characterized by being extensively gradable in the sense of Fleischhauer (2016). On the other hand, in line with Dowty (1979) and Rothstein (2004), I also show that, while states and activities are cumulative, not all stative predicates are divisible in instants. Additionally, I provide evidence that only activities and some Davidsonian states are divisible in intervals, and it is this property that allows them to be measured extensively.

In section 2.4, I present Anderson & Morzycki's (2015) model, in which gradable adjectives encode a state variable and degrees are derived from state-kinds. I conclude that this model is superior to the other ones insofar as it captures the main advantages of degree-based and

degree-less approaches, as well as the fact that gradable adjectives express eventualities. Nevertheless, in the spirit of Gehrke's (2011, 2015, 2017) analysis of German adjectival passives, I propose one modification to Anderson & Morzycki's model, namely, that gradable adjectives are predicates of state-kinds, but they can express state-tokens when predicated of an individual, in which case additional functional material is responsible for instantiating a state-kind.

Finally, section 2.5 summarizes the main ideas of the chapter.

2.1. Stativity and aspect

The goals of this section are to develop a precise characterization of states, by identifying their fundamental properties, and to provide evidence that gradable adjectives express states, since they express properties that are subject to time and do not involve change in any of their participants.

Since Vendler (1957), there has been a long tradition that defines states on the basis of negative tests with respect to events. In other words, many authors have defined states as those eventualities that do not pass the standard tests usually employed for identifying events. This method works well when verbs and adjectives (in combination with the copula) are involved, since there is a wide consensus that they can only express either events or states; thus, when verbs and adjectives are involved, we can accept that what is not an event is a state.[12] However, in the nominal domain, where other ontological objects like substances, degrees, qualities and tropes are good candidates for constituting their core semantics, that reasoning cannot be valid. In other words, neither the DP *the dog* nor the DP *John's belonging to the team* passes the standard tests employed for identifying events in the nominal domain, but that does not entail that both DPs are associated with the same semantics. The goal of this section is, thus, to identify a property that defines states in positive terms. Based on Vendler (1957) and Dowty (1979), I assume that states, like events and unlike the rest of objects, are subject to time or, in other words, are temporal objects, so they have to combine with time-related modifiers, i.e. temporal, aspectual and frequency modifiers. In the following subsection, I present empirical evidence that this is the case.

[12] Nevertheless, some specific refinements must be done. Since Carlson (1977), it is argued that individual-level adjectives like *(be) intelligent* express properties inherent in an individual. Therefore, if these adjectives expressed atemporal properties, this could indicate that they do not express states, but rather a more impoverished object like a *quality* or *disposition* (in the sense of Martin 2013). In this respect, it must be noted that the term *state* has been traditionally used either in a broad sense, which includes the semantics of those verbs and adjectives that do not express events, or in a narrow sense, whereby stage-level predicates, but not individual-level ones, deserve that denomination. In this dissertation I argue that both individual-level and stage-level predicates hold in time, so they can be considered states. More details in subsection 2.2.2.

2.1.1. States as non-dynamic eventualities

Since Vendler (1957) and Dowty (1979), there has been a broad agreement that verbs are predicates of either events, which express dynamic properties, or states, which express non-dynamic properties (see also Davidson 1967; Higginbotham 1985; Parsons 1990; Smith 1991; Pustejovsky 1995; Landman 2000; Rothstein 2004; Borik 2006; Rothmayr 2009; a.o.). In order to identify events, different tests have been employed; given that I focus on Spanish data in this dissertation, I will review some of the tests that are widely used in the literature on Spanish (see Bosque 1989, 1999; Picallo 1991, 1999; De Miguel 1999; RAE & ASALE 2009; Marín 2013; Jaque 2014; Fábregas 2016; a.o.), which are the equivalent tests originally used for other languages with the necessary adaptations.

First, events, unlike states, accept anaphoric reference by means of *Esto tuvo lugar…* 'This took place…'. In (1a), the eventive predicate *esconderse* 'to hide' can be retrieved by means of that anaphoric expression, while in (1b) the stative predicate *gustar* 'to like' cannot:

(1) a. El fugitivo se escondió en otro país. Esto tuvo lugar hace muchos años.
the fugitive REFL *hid in another country. this took place ago many years*
'The fugitive hid in another country. This took place many years ago.'
b. A Juan le gustó la película. *Esto tuvo lugar ayer.
to Juan him liked the movie. this took place yesterday
'Juan liked the movie. This took place yesterday.'

Second, events are compatible with both auxiliary verbs *parar* 'to stop' and *dejar* 'to stop, to give up, to cease', while states are only compatible with the latter. Note that, if *parar* is used in (2a), which involves an event, it indicates that a unique event of smoking is interrupted; in contrast, if *dejar* is used, what is interrupted is the habit of smoking. In (2b) a state is involved, so only *dejar* is licensed.

(2) a. María paró/dejó de fumar.
'María stopped/gave up smoking.'
b. Ana *paró/dejó de saber inglés.
'Ana stopped/gave up knowing English.'

Third, events, unlike states, are compatible with celerative modifiers (in the sense of Cinque 1999), like *rápidamente* 'quickly' or *lentamente* 'slowly'. While the event predicate *pintar la*

puerta 'to paint the door' can hold at a particular speed, the stative predicate *parecerse a su hermano* 'to resemble his brother' cannot:

(3) a. Mónica pintó la puerta rápidamente/lentamente.
Mónica painted the door quickly slowly
b. *Raúl se parece a su hermano rápidamente/lentamente.
Raúl REFL *resembles to his brother quickly slowly*
'Raúl resembles his brother quickly/slowly.'

These tests show that events and states differ in that only the former express dynamic properties or properties that involve change over time. Since Vendler (1957), it has been accepted that there are three main types of events: accomplishments, achievements and activities. Accomplishments and achievements are telic or heterogeneous events, so they constitute predicates for which only a non-arbitrary subpart of the eventuality being described satisfies the predicate in question (McNally 2017). Traditionally, (a)telicity has been defined depending on whether the predicate includes a natural final endpoint, in which case it would be telic, or whether the predicate does not include a natural final endpoint, in which case it would be atelic (see Smith 1991 for instance). Even following this definition, telic predicates are heterogeneous, while atelic predicates are homogeneous, so the choice of one definition or the other one does not have critical consequences. As usually noted, telic events combine with aspectual modifiers introduced by *en* 'in'; the difference between accomplishments and achievements is that the former are also durative events. Consider the following sentences:

(4) a. Cuco construyó la casa en dos años.
Cuco built the house in two years
b. Cuco llegó en diez minutos.
Cuco arrived in ten minutes

(4a) expresses an accomplishment, so it means 'It took Cuco two years to build the house'; in contrast, (4b) expresses an achievement, so it does not mean 'It took Cuco ten minutes to arrive', but rather 'Cuco arrived after ten minutes'. When combined with punctual temporal modifiers such as *a las diez* 'at ten', accomplishments trigger an inchoative reading, as in (5a), which means 'Lorena started to build the house at ten', while achievements trigger a terminative reading whereby the whole event has finished, as in (5b).

(5) a. Lorena construyó la casa a las diez.
Lorena built the house at the ten
b. Lorena llegó a las diez.
Lorena arrived at the ten

Regarding activities, they are atelic or homogeneous, since, according to McNally (2017), they constitute predicates for which any arbitrary subpart of the eventuality being described can satisfy the predicate in question, where "any arbitrary subpart" only holds to a certain level of granularity (I will provide a precise definition of homogeneity in section 2.3). As usually noted, activities combine with aspectual modifiers headed by *durante* 'for' and reject *en* 'in':

(6) a. Diego nadó durante/*en varias horas.
Diego swam for in several hours
b. Marta patinó durante/*en varias horas.
Marta skated for in several hours

States show the same pattern as activities, since they can also combine with *durante*-phrases and reject *en*-phrases, so they also constitute atelic or homogeneous eventualities:

(7) a. Juan quiso a María durante/*en muchos años.
Juan loved ACC *María for in many years*
'Juan loved María for/in many years.'
b. Luis poseyó el record durante/*en muchos años.
Luis owned the record for in many years
'Luis owned the record for/in many years.'

As mentioned above, the difference with respect to activities is that states do not involve change in any of their participants over time. The type of change that is related to events is a more complex question than the traditional classification encompasses. The most salient characteristic of the notion of 'change' is that, while certain events like *quemar* 'to burn' and *comer* 'to eat' impact on the constitutive parts of a certain participant, for instance turning a participant into ashes or making it disappear, in other cases the change is mental, as in *engañar* 'to deceive', or spatial, as in *moverse* 'to move'. Even in the case in which the change is of the same type, there exist more specific relevant differences. For example, both *llegar* 'to arrive' and *esconderse* 'to hide' constitute achievements in which certain participant changes its location. As

telic events, they accept aspectual modification of PPs headed by *en* 'in', see (8); as achievements, they start and finish at a temporal point, see (9).

(8) a. Juan llegó a la estación en diez minutos.
Juan arrived at the station in ten minutes
b. Juan se escondió en su casa en diez minutos.
Juan REFL hid at his home in ten minutes
'Juan hid at home in ten minutes.'

(9) a. Juan llegó a las diez.
Juan arrived at the ten
'Juan arrived at ten.'
b. Juan se escondió a las diez.
Juan REFL hid at the ten
'Juan hid at ten.'

However, only *esconderse* 'to hide' gives rise to a result state, which is revealed by its combination with a *durante*-phrase, see (10). Thus, while (10a) is an unacceptable utterance, (10b) is acceptable and means 'Juan hid and remained hidden for several hours'.

(10) a. *Juan llegó durante varias horas.
Juan arrived for several hours
b. Juan se escondió durante varias horas.
Juan REFL hid for several hours
'Juan hid for several hours.'

Analogously, *nadar* 'to swim' and *bailar* 'to dance' are activities that involve the movement of a certain participant. However, only in the former case does the verb encode information with respect to a distance (more technically, the verb lexicalizes a scale of path), which explains why only the former can co-occur with measure phrases, like *doscientos metros* 'two hundred meters':

(11) a. Lucía nadó doscientos metros.
Lucía swam two.hundred meters
b. *Lucía bailó doscientos metros.
Lucía danced two.hundred meters

It is not the goal of this dissertation to present a precise characterization of the notion of 'change'. Rather, what I aim is to show is that events involve a certain type of change in at least one of their participants, while states do not. Some of the most relevant semantic type of changes that are associated with events are explained in Smith (1991), Pustejovsky (1991, 1995), Verkuyl (1993), Tenny (1994), Kennedy & Levin (2008), De Miguel & Fernández Lagunilla (2000), Beavers (2010, 2011, 2013), Levin (1993, 2017), Levin & Rappaport Hovav (2005, 2013), Rappaport Hovav & Levin (1998, 2008, 2012), among many others.[13]

If 'dynamism' or 'change' is the notion that distinguishes events from states, their internal temporal composition or *lexical/inner aspect* (Verkuyl 1972, 1993) is the notion that relates them and, following Bach (1986), we can group events and states under the name of *eventualities*. According to Ramchand (2005: 370), eventualities are "abstract entities with constitutive participants, and with a constitutive relation to the temporal dimension". In other words, eventualities are temporal objects that involve participants. If both events and states constitute objects that are subject to time, it is predicted that both types combine with time-related modifiers, such as temporal, aspectual and frequency modifiers.

For example, in (12a) the temporal modifier *hace muchos años* 'many years ago' locates the state of having a pub at some moment of the past, and in (12b) the temporal modifier *en primavera* 'in spring' locates the queen's arrival at some point of the spring. In relation to (13), as we will show in chapter 4 in more depth, aspectual modification is licit only if the eventuality is perfective, that is, if it includes its boundaries; in that case, the predicate can combine with aspectual modifiers preceded by *durante* 'for' or *en* 'in' depending on whether the eventuality is atelic or telic. Accordingly, in (13a) the atelic state of knowing the truth lasted ten years, while in (13b) the telic event of eating the sandwich lasted twenty minutes. Finally, both events and states can also combine with frequency modifiers if they hold in an appropriate context in which they can re-hold, as in (14). In (14a) the frequency modifier *constantemente* 'constantly' indicates that the state of having a new car holds many times, while in (14b) the frequency modifier *frecuentemente* 'frequently' reports us that the event of forgetting the password hold many times.

[13] A different question, which will not be addressed here, is whether the dynamism associated with events is apparent and arises as a result of a succession of heterogeneous states that may give the false impression that they involve change when transitioning from one state to another one (think about cartoons, for example, in which the succession of heterogeneous images gives the false impression that they move). I include a brief discussion about this issue in chapter 5, but see Leferman (2017) for an argumentation in favor of dispensing with events as ontological objects in this line of reasoning.

(12) a. Rosa tuvo un bar hace muchos años.
Rosa had a bar ago many years
'Rosa had a bar many years ago.'
b. La princesa llegó en primavera.
the princess arrived in spring

(13) a. Su madre supo la verdad durante diez años.
their mother knew the truth for ten years
b. El nene se comió el bocadillo en veinte minutos.
the kid REFL ate the sandwich in twenty minutes
'The kid ate the sandwich in twenty minutes.'

(14) a. Rubén tiene un coche nuevo constantemente.
Rubén has a car new constantly
'Rubén constantly has a new car.'
b. Jose olvida la contraseña frecuentemente.
Jose forgets the password frequently
'Jose frequently forgets the password.'

Concerning gradable adjectives, I argue that they express states according to the tests illustrated above, irrespective of whether they are derived from individual-level, stage-level or Davidsonian states (see Parsons 1990; Landman 2000; Mittwoch 2005; Engelberg 2005; Anderson & Morzycki 2015; Ernst 2016, among others, for adjectives in English). Specifically, individual-level predicates like *(ser) famoso* '(to be) famous', stage-level ones like *(estar) cansado* '(to be) tired' and Davidsonian states like *(ser) amable* '(to be) kind' do not accept anaphoric reference by means of the verb *tener lugar* 'to take place', see (15), although the third type are less unacceptable because they presuppose an event (Martin 2006, 2008, 2015), as we will see in chapter 3; they do not combine with the periphrastic verb *parar de* 'to stop', see (16); and they reject celerative modifiers, see (17). What all these data reveal is that gradable adjectives do not express events. By contrast, they combine with temporal, aspectual and frequency modifiers, see (18), (19) and (20), which reveals that they hold in time, have a duration and can re-hold and, ultimately, that they constitute eventualities, specifically states.

(15) a. Alberto fue famoso durante muchos años. *Esto tuvo lugar en su juventud.
Alberto was famous for many years this took place in his youth
b. Luisa estuvo cansada durante varias horas. *Esto tuvo lugar ayer.
Luisa was tired for several hours this took place yesterday

c. María fue amable con Laura en la reunión. ?Esto tuvo lugar ayer.

María was kind with Laura in the meeting this took place yesterday

'María was kind to Laura in the meeting. This took place yesterday.'

(16) *Lucas paró de ser famoso / estar cansado / ser amable con Manolo.

Lucas stopped of being famous being tired being kind with Manolo

'Lucas stopped being famous / tired / kind to Manolo.'

(17) *Rocío fue famosa / estuvo cansada / fue amable con Lucas rápidamente.

Rocío was famous was tired was kind with Lucas quickly

'Rocío was famous / tired / kind to Lucas quickly.'

(18) a. Ana fue famosa en los años noventa.

Ana was famous in the years ninety

'Ana was famous in nineteen nighties.'

b. Ana fue famosa durante muchos años.

Ana was famous for many years

c. Ana fue habitualmente famosa en aquella época.

Ana was usually famous in that time

(19) a. Teresa estuvo cansada ayer.

Teresa was tired yesterday

b. Teresa estuvo cansada durante varias horas.

Teresa was tired for several hours

c. Teresa está constantemente cansada.

Teresa is constantly tired

(20) a. Lina fue amable con David durante la reunión.

Lina was kind with David during the meeting

'Lina was kind to David during the meeting.'

b. Lina fue amable con David durante varios años.

Lina was kind with David for several years

'Lina was kind to David for several years.'

c. Lina fue frecuentemente amable con David.

Lina was frequently kind with David

'Lina was frequently kind to David.'

In sum, in this section I have provided a specific definition for stativity in the spirit of Vendler (1957) and Dowty (1979): on the one hand, states are eventualities, that is, objects that hold in time (and select for participants); on the other hand, states, unlike events, do not involve

dynamism, that is, their participants do not undergo any changes over time. Finally, I have shown that gradable adjectives do not express events according to the standard tests: they reject anaphoric reference with *Esto tuvo lugar…* 'This took place…' and are incompatible with the periphrastic verb *parar de* 'to stop' and with celerative modifiers. Nonetheless, gradable adjectives express eventualities, specifically states, because they accept time-related modification: temporal, aspectual and frequency modifiers. The fact that gradable adjectives can express states is crucial when examining the nominalizations that they can form, which will be analyzed in chapters 3 and 4. Specifically, we will see that deadjectival nominalizations inherit the core adjectival properties, which constitutes the main argument in favor of positing that they can also express eventualities. In the following subsection, I explain how stativity is represented in the Neo-Davidsonian tradition.

2.1.2. How to represent stativity

In this subsection, I argue that states must contain an eventuality variable *s*, in line with the Neo-Davidsonian semantics and other contemporary authors (Higginbotham 1985; Parsons 1990; Landman 2000; Mittwoch 2005; Engelberg 2005; Wellwood 2014, 2015; Glass 2014, 2019; Baglini 2015). The discussion on whether or not representing stativity by means of a state variable *s* occurs in the context in which it is widely accepted that events must be represented by a variable *e*, so the discussion ultimately boils down to deciding whether or not we must apply the same treatment to states.

Since Davidson (1967), events are formally represented by means of a variable *e* in order to account for the fact that temporal, manner, locative and other types of modifiers do not modify the participants of the event, but rather the event itself. For instance, for the sentence *John buttered the toast slowly in the bathroom with a knife at midnight*, the formal representation according to Davidson is the following one:

(21) ∃*e*[butter(*e*, John, the toast) ∧ slowly(*e*) ∧ in(*e*, the bathroom) ∧ with(*e*, a knife) ∧ at(*e*, midnight)].

The verb *butter* lexicalizes an event *e* and selects for a subject that expresses the agent (*John*) and an object that expresses the theme (*the toast*). Manner (*slowly*), locative (*in the bathroom*), comitative (*with a knife*) and temporal (*at midnight*) modifiers operate over the event encoded by the verb, where prepositions are represented as predicates that select for their own arguments. On the other hand, Davidson claims that stative predicates do not encode an event variable, which accounts for their alleged inability to be modified by those modifiers.

The so-called Neo-Davidsonian authors (mainly, Higginbotham 1985, Parsons 1990 and Landman 2000) propose two modifications on the Davidsonian system: first, thematic roles are introduced as predicates with their own functions. On the basis of passive sentences, where thematic roles are inverted (the agent is realized as the *by*-phrase and the theme is realized as the subject) and the subject does not have to be explicit, as in *The toast was buttered (by John)*, they claim that thematic roles must be introduced independently as predicates. The representation for *John buttered the toast slowly in the bathroom with a knife at midnight* is therefore the following one:

(22) ∃*e*[butter(*e*) ∧ agent(*e*, John) ∧ theme(*e*, the toast) ∧ slowly(*e*) ∧ in(*e*, the bathroom) ∧ with(*e*, a knife) ∧ at(*e*, midnight)].

The representation proposed by Davidson in (21) cannot account for these two phenomena, insofar as it is not flexible enough: first, the verb introduces a function that necessarily associates an event with a subject that is an agent and with an object that is a theme. Second, given that the function *butter* includes two variables that correspond to the two participants, they must appear in the representation in all cases, so there is no place for the optionality of the agent.

Neo-Davidsonian authors make another important contribution: they posit an eventuality variable *s* for states. The first main observation that endorses their analysis is due to Parsons (1990: 188), who notes that some states accept manner and locative modification, as in *Mary believes fervently that John loves her* and *That statue stood on the grass*.[14] The second main observation is due to Landman (2000: 23), who claims that states can be referred to by means of anaphoric elements, as in *Oedipus was in love with Jocasta. It didn't feel good to him*, where *it* can only refer to the state in which Oedipus was in love with Jocasta.

This dissertation incorporates the two contributions proposed by the Neo-Davidsonian approach, in line with other more modern authors like Mittwoch (2005), Engelberg (2005), Wellwood (2014, 2015), Glass (2014, 2019) or Baglini (2015). On the one hand, introducing thematic roles as independent predicates allows for the optionality of the holder of the state, which is crucial to account for state-kind nominalizations like *La honestidad abunda* 'Honesty abounds', where there are no arguments present and the nominalization has a generic interpretation (see the details of the analysis in chapter 4). On the other hand, positing that states encode a state variable *s* allows us to account for the fact that states can be modified by temporal, aspectual, frequency and even manner and locative modifiers. Finally, the most

[14] Certainly, this is not a very powerful example. It could be argued that *on the grass* is a locative argument rather than an adjunct. Nevertheless, there are other clearer cases, as in *Peter was happy in New York*, which are discussed in Ernst (2016) and in this chapter and chapter 3 in this dissertation.

powerful argument in favor of positing an eventuality variable *s* for states is that there are DPs that refer explicitly to states, as in the cases involving mass deadjectival nominalizations (*la belleza del jardín* 'the beauty of the garden')[15] and some deverbal nominalizations (*la pertenencia de María al club* 'María's belonging to the club), which we could not account for unless we make use of a state variable.

Against the Neo-Davidsonian view, Katz (2000, 2003, 2008) argues that states should not be represented by means of an eventuality variable because these deadjectival and deverbal nominalizations do not refer to states, but rather to other more impoverished ontological objects, presumably facts or propositions, which are not subject to time. However, Katz overlooks the fact that deadjectival nominalizations admit, for instance, temporal, frequency and locative modification: *la belleza del jardín durante la tormenta* 'the beauty of the garden during the storm', *la frecuente paciencia de María con Juan* 'María's frequent patience to Juan', *la felicidad de Juan en Vitoria* 'Juan's happiness in Vitoria', which reveals that they express eventualities. (An extensive argumentation that these nominalizations express *imperfective* states is offered in chapter 3).

Katz also claims that there are no adverbial adjuncts that modify states exclusively, which the author calls the *stative adverb gap* (cf. Mittwoch 2005 for two possible candidates for English, namely, *permanently* and *temporarily*). However, if both states and events are subject to time, but only the latter involve dynamism by definition, it is predicted that both of them can combine with time-related modifiers and that the latter can also combine with other modifiers that involve dynamism, like celerative modifiers such as *rápidamente* 'quickly'. It is also predicted that events accept locative modification more easily, since events take place in some place necessarily, while states hold irrespective of their location (Ernst 2016). Ultimately, events are more complex than states, hence their compatibility with more types of modifiers. In sum, the fact that there are no adjuncts that can combine exclusively with states is predicted by their definition, on the one hand, and does not constitute a strong argument against the eventuality nature of states, on the other.

We can conclude that states must be represented by a state variable *s*, which allows us to account for the fact that they can combine with time-related modification and the fact that they can be referred to by means of nominalizations and anaphors. In the following section, I classify the different types of stative predicates depending on their causal properties.

[15] In fact, Parsons (1990) is, to my knowledge, the first author to claim that DPs containing deadjectival nominalizations, like *Brutus's nakedness* and *Agatha's cleverness*, are used for referring explicitly to states, which the author takes as an argument in favor of positing a state variable *s*. However, Parsons (1990: 199) does not offer empirical evidence of that and admits that he cannot prove it: "I think that these refer to states, but I don't know how to prove it".

2.2. The typology of states

In this section, I examine the three different types of stative predicates that the literature on stativity has identified so far, namely, individual-level, stage-level and Davidsonian states (or stative causatives in Leferman 2017). The goal of this chapter is to determine the basic properties of the predicates that serve as the base for deadjectival nominalizations. My investigation is crucially focused on individual-level predicates, which are traditionally defined since Carlson (1977) as properties that an individual has inherently, that is, as atemporal properties that characterize an individual. I concentrate on them because their alleged atemporality could pose the main objection to the analysis defended here according to which deadjectival nominalizations express states. In other words, if individual-level predicates are defined as properties that hold in an individual atemporally, insofar as states are defined as objects that are subject to time, it would be expected that deadjectival nominalizations that are derived from individual-level predicates do not express eventualities.

However, as we will see in this section, temporality does not underlie the individual-level/stage-level distinction, since both types of predicates are actually subject to time, as concluded by Arche (2006, 2012). Rather, I develop an innovative proposal according to which causation is the relevant factor.[16] Although in subsection 3.2.2 I provide a precise definition of *causation* and the three types of stative predicates that it gives rise to, I can advance here an informal characterization: specifically, individual-level states express non-caused properties, while stage-level states express externally caused properties. Finally, based on Leferman (2017), I argue that there is a third type of states called stative causatives that express internally caused properties, which correspond to Davidsonian states in Maienborn (2005a, 2005b, 2007). In chapter 3, I show that deadjectival nominalizations are subject to time regardless of whether they are derived from individual-level states, stage-level states or stative causatives, which is in accordance with the fact that their adjectival bases are also subject to time.

The individual-level/stage-level distinction has attracted the interest of a huge number of linguists (Milsark 1974; Carlson 1977; Schmitt 1992; McNally 1994; Kratzer 1995; Chierchia 1995; Fernández-Leborans 1999; Jäger 2001; Maienborn 2005b; Arche 2006, 2012; Gallego & Uriagereka 2009, 2016; Husband 2010; Marín 2010, 2015; Sassoon & Toledo 2011; Camacho 2012; Gumiel-Molina et al. 2015; Pérez-Jiménez et al. 2015; Silvagni 2017; see Fábregas 2012a for a state of the art). The main goal of the dissertation is not to develop a sophisticated proposal on the topic; rather, what I aim is to show that both individual-level and stage-level predicates are subject to time and, consequently, both predicates and their nominalizations can

[16] Although the notion of 'causation' has already been applied to stative verbs (see García Pardo 2016 and references therein), my proposal is innovative in the sense that I apply it to the domain of adjectives.

express states. Accordingly, I will not scrutinize the specifics of the abundant literature on the distinction, but I will rather group the different proposals depending on their main contributions, showing that they present problems when attempting to account for the empirical phenomena. The proposals will be divided into two big groups: the first group includes the proposals according to which the individual-level/stage-level distinction is based on spatiotemporality or aspect, while the second group includes the proposals according to which the distinction relies on the relative-absolute distinction. In the following subsection, I review the main previous accounts on the individual-level/stage-level distinction.

2.2.1. The individual-level/stage-level distinction

For the moment, I leave Davidsonian states (or stative causatives) aside and will focus exclusively on individual-level and stage-level predicates. Most proposals agree on the idea that individual-level predicates like *(to be) tall* tend to express permanent or stable properties that characterize an individual, while stage-level predicates like *(to be) sad* tend to express transitory or accidental properties that do not characterize an individual. Let us review how these approaches address the phenomenon.

2.2.1.1 Spatiotemporality and aspect

The first group of proposals that I will examine are the ones in which individual-level predicates express properties that hold atemporally or are inherent in an individual, while stage-level predicates express properties that hold at a time and a space. Consequently, only the latter could be considered eventualities, specifically states (the former could be considered qualities or dispositions in Martin's 2006, 2008, 2013 terminology).

The most influential analysis on individual-level and stage-level predicates is due to Carlson (1977), who, based on Milsark (1974), argues that individual-level predicates express properties that are predicated of an individual directly, which means that they are properties inherent in the individual; in contrast, stage-level predicates are predicated of the stage in which the individual is, where stages are defined as spatiotemporal environments:

(23) a. $[\![John\ is\ intelligent]\!] = 1$ iff inteligent(j).

b. $[\![John\ is\ available]\!] = 1$ iff $\exists y[\text{available}(y) \wedge R(y, \text{j})]$.

(Adapted from Carlson 1977: 77)

In (23a) the individual-level predicate *intelligent* is predicated directly of John, while in (23b) the stage-level predicate *available* is predicated of a stage *y*, where the function *R* associates the

individual *John* with a certain stage *y*. Thus, (23a) is true iff there is an individual that is inherently intelligent, while (23b) is true iff there is an individual that is available at a certain stage, that is, at a certain spatiotemporal frame.

This distinction has been very productive in theoretical linguistics, since it allows us to explain the opposite behavior of these two types of adjectives semantically and syntactically. First, if only stage-level predicates, like the ones in (25), are predicated of a spatiotemporal environment, only these are compatible with temporal and spatial modifiers. In contrast, individual-level predicates, see (24), are incompatible with those modifiers (the contrast was originally proposed for English, but it is also applicable to Spanish).

(24) a. *Juan fue alto ayer.
Juan was tall yesterday
b. *María fue hermosa en Madrid.
María was beautiful in Madrid

(25) a. Jaime estuvo triste ayer.
Jaime was sad yesterday
b. Pedro estuvo desnudo en la playa.
Pedro was naked at the beach

According to Kratzer (1995), stage-level predicates, unlike individual-level predicates, are compatible with temporal sentences preceded by the conjunctions *whenever* or *when*. This is explained again because only stage-level predicates are subject to time (again the contrast was originally proposed for English, but it is also applicable to Spanish conjunctions *siempre que* 'whenever' or *cuando* 'when'):

(26) a. *Siempre que Juan es guapo, se hace una foto.
Whenever Juan is handsome REFL *makes a photo*
'Whenever Juan is handsome, he takes a photo of himself.'
b. Siempre que Juan está cansado, se duerme en el sofá.
Whenever Juan is tired REFL *sleeps on the couch*
'Whenever Juan is tired, he sleeps on the couch.'

It has been pointed out that the individual-level/stage-level distinction is crucial to explain the distribution of the Spanish copulas *ser* and *estar* (cf. Camacho 2002). For those adjectives

that can combine with both copulas, it is widely assumed that they can express both types of properties depending on the copula that they co-occur with:

(27) a. La revista es / *está semanal/tecnológica/presidencial.
the journal is.SER is.ESTAR weekly technological presidential
b. Juan *es / está cansado/preocupado/molesto.
Juan is.SER is.ESTAR tired worried upset
c. Juan es / está alto/rubio/débil.
Juan is.SER is.ESTAR tall blond weak

Relational adjectives (in the sense of Bally 1944; see also Bosque & Picallo 1996, Demonte 1999, McNally & Boleda 2004; a.o.), like the ones in (27a), can only combine with the copula *ser* 'to be', which indicates that they express individual-level states. In contrast, resultative adjectives, like the ones in (27b), can only combine with the copula *estar* 'to be', which suggests that they express stage-level states. Other adjectives like the ones in (27c) can combine freely with both copulas, so they have a variable behavior.

Although so far I have exemplified the distinction with adjectives, other NPs, DPs and PPs are sensitive to the individual-level/stage-level distinction:

(28) a. Juan fue / *estuvo (el) presidente.
Juan was.SER was.ESTAR the president
b. Mary es / *está de Mánchester.
Mary is.SER is.ESTAR from Manchester
c. Mary *es / está en Mánchester.
Mary is.SER is.ESTAR in Manchester

Now I turn to my critical review. Despite the advantages of the spatiotemporal-based analysis, some data remain unexplained. Specifically, there are individual-level states that combine with both temporal and locative modifiers, which indicates that spatiotemporality cannot be the property that lies behind the distinction:

(29) a. Mario fue rubio en su juventud.
Mario was.SER blond in his youth

b. Mi vida fue interesante hace muchos años.
my life was.SER interesting ago many years
'My life was interesting many years ago.'

(30) a. Chimo fue famoso en Valencia.
Chimo was.SER famous in Valencia
b. Irene fue celadora en La Paz.
Irene was.SER porter in La Paz

The predicates *rubio* 'blond' and *interesante* 'interesting' in (29) can be considered individual-level predicates, insofar as they combine with the copula *ser* and could describe a property that is inherent in an individual: for instance, in (29a) Mario could be characterized as being blond, while in (29b) my life could be characterized as interesting. However, they can be modified by temporal adjuncts, which indicates that these properties are subject to time. Analogously, in (30) the predicates *famoso* 'famous' and *celadora* 'porter' turn out to describe properties that characterize an individual regardless of their location; however, they admit locative modification, which restricts the validity of the state to a certain location.

It could be argued (see Maienborn 2001 for English and Marín 2013, Jaque 2014 and Silvagni 2017 for Spanish) that these adjuncts are not true locative modifiers, but rather they restrict the topic time of a sentence (in the sense of Klein 1994). In fact, what these authors claim is that true locative modifiers are only compatible with events (and with Davidsonian states, as we will see in subsection 2.2.3). In this respect, Maienborn argues that the alleged locative modifiers that co-occur with states are rather frame-setting modifiers, like adverbs or PPs that typically appear in the left periphery (e.g. *Yesterday/In Chicago, there was a traffic jam*), since (a) they can be paraphrased by temporal clauses preceded by *when* and/or (b) do not give rise to the same entailments as true locative modifiers. However, Ernst (2016) provides empirical evidence for English that Maienborn's analysis is not well motivated; I apply his reasoning to Spanish examples.

Regarding temporal paraphrases, if we assume that *en Valencia* 'in Valencia' in (30a) is rather a temporal frame-setting modifier just because it can be paraphrased by a *when*-clause, as in *Chimo fue famoso cuando estuvo en Valencia* 'Chimo was famous when he was in Valencia', we could not explain why the same adjunct can also be paraphrased by a *when*-clause when modifying an event, as in *María limpió el coche en Valencia / cuando estuvo en Valencia* 'María washed the car in Valencia / when she was in Valencia'. And the same holds for (30b) mutatis mutandis. Regarding entailment patterns, Maienborn observes that sentences including locative modifiers entail the denotation of the sentence without the adjunct, while sentences including

frame-setting modifiers do not (her original observation is for German, but it is also applicable to Spanish):

(31) a. María lavó el coche en su casa. ⊨ María lavó el coche.
María washed the car in her house María washed the car
'María washed the car at home.' ⊨ 'María washed the car.'
b. María es muy silenciosa en su casa ⊭ María es muy silenciosa.
María is very quiet in her house María is very quiet
'María is very quiet at home.' ⊭ 'María is very quiet.'

In (31a), which includes an event, if we omit the adjunct *en su casa* 'in her house, at home', the semantics of the rest of the sentence remains true; in this case, the adjunct is a locative modifier according to Maienborn. In contrast, in (31b), which includes a state, if we omit the adjunct, the semantics of the rest of the sentence does not remain true; in this case, the adjunct would be a frame-setting modifier. However, as Ernst (2016) shows, this argument is misleading, since employing the present tense in (31b) triggers a generic interpretation. If, alternatively, we employ the simple past tense, which induces an episodic interpretation, the entailment is fulfilled:

(32) María fue muy silenciosa en su casa ⊨ María fue muy silenciosa.
María was very quiet in her house María was very quiet
'María was very quiet at home.' ⊨ 'María was very quiet.'

We can conclude with Ernst (2016) that there are no reasons to posit that locative modifiers that appear in post-verbal position are frame-setting modifiers. Consequently, individual-level states can also accept locative modification; hence, this cannot be a fundamental property of these predicates (I will come to this question in chapter 3).

In relation to the test provided by Kratzer (1995) with respect to the incompatibility of individual-level predicates with temporal clauses preceded by *whenever* and *when* (in Spanish *siempre que* and *cuando*, respectively), some authors have already argued that it is not grounded on temporality, but rather on the predicate's ability of re-holding (Hoop & de Swart 1989; Jäger 2001; Arche 2006). In fact, there are individual-level predicates that can take part in this construction:

(33) a. Siempre que Juan era famoso, ganaba mucho dinero.
whenever Juan was famous earnt a.lot.of money
'Whenever Juan was famous, he used to earn a lot of money.'
b. Siempre que Juan ha sido adicto a las drogas, se ha metido en problemas.
whenever Juan has been addicted to the drugs REFL *has put.inside in problems*
'Whenever Juan has been addicted to drugs, he has got into trouble.'
c. Siempre que el Real Madrid es campeón, lo celebran en la Cibeles.
whenever the Real Madrid is champion it celebrate in the Cibeles
'Whenever Real Madrid is the champion, they celebrate it in Cibeles.'

Arche (2006) notes that even individual-level predicates like *rubio* 'blond', which do not take part in that construction in normal circumstances, are acceptable if an appropriate context is provided, as in *En sus reencarnaciones, siempre que Juan era rubio, era admirado por todo el mundo* 'In his reincarnations, whenever Juan was.SER blond, he was admired by everyone'. Nevertheless, arguably most individual-level predicates need a very special context to occur in that construction, which suggests that they must encode a certain property that renders them resistant to it. In this dissertation, I claim that that property is that they express non-caused properties, which makes them prone not to be repeated in time. In contrast, stage-level predicates involve a cause, so they can re-hold in time much more easily, given that the cause can reactivate the eventuality whenever it intercedes. I develop this insight in subsection 2.2.2.

In relation to lexical aspect, both individual-level and stage-level predicates can combine with aspectual modifiers preceded by *durante* 'for' and reject the ones that are preceded by *en* 'in', which demonstrates that both types of predicates are atelic and, therefore, that (a)telicity does not distinguish one type of predicate from the other one:

(34) a. Laura fue hermosa durante/*en muchos años.
Laura was beautiful for in many years
b. Lorena estuvo enferma durante/*en varios días.
Lorena was sick for in several days

It must be noted that it is common in the literature on Spanish to treat individual-level predicates as unbounded or imperfective and stage-level predicates as bounded or perfective (Bosque 1990; De Miguel 1999; Herranz & Suñer 1999; Marín 2010; Gallego & Uriagereka 2009, 2016). In this case, the labels *perfective/imperfective* are not equivalent to the classic notions of 'perfective/imperfective eventualities', which refer to *finished and unfinished eventualities*,

respectively, as we will see in chapter 3. Rather, they are used in a loose sense for characterizing properties that hold at a particular period of time, for stage-level predicates, and properties that characterize an individual irrespective of their duration, for individual-level predicates. However, that opposition is elusive, insofar as it is difficult to conceive why individual-level predicates should express properties that characterize an individual if these can hold only for a delimited period of time. In this respect, for Gallego & Uriagereka (2016) the labels *perfective/imperfective* rather refer to permanent/transient properties, which identifies this notion of 'aspect' with the notion of 'spatiotemporality' in Carlson (1977). We can conclude that characterizing the individual-level/stage-level distinction in aspectual grounds does not offer any significant contributions with respect to the traditional view based on spatiotemporality.

Camacho (2012: 464) claims that individual-level and stage-level predicates do differ with respect to aspect, but, instead of appealing to the end of the eventuality or its (a)telicity properties, the author appeals to the beginning of the eventuality. For Camacho, neither individual-level nor stage-level predicates involve a transition, but the latter are *inchoative* or select for "the beginning boundary of the state". For instance, in *Juan está alegre* 'Juan is.ESTAR happy', "*estar* selects for the inception of the state of being happy". However, there is empirical evidence that there is no contrast between individual-level and stage-level predicates with respect to their beginning boundaries. First, when combined with punctual temporal modifiers, stage-level predicates, unlike true inchoative predicates, do not give rise to an inchoative reading:

(35) a. El cantante se desmayó a las diez.
the singer REFL fainted at the ten
'The singer fainted at ten.'
b. El fugitivo se escondió a las diez.
the fugitive REFL hid at the ten
'The fugitive hid at ten.'

(36) a. Este cantante estuvo enfadado a las diez.
this singer was angry at the ten
'The singer was angry at ten.'
b. El fugitivo estuvo triste a las diez.
the fugitive was sad at the ten
'The fugitive was sad at ten.'

On the one hand, (35) includes true inchoative predicates: (35a) means that the singer started being unconscious at ten and (35b) means that the millionaire started being hidden at ten. On the other hand, (36) includes stage-level predicates, which express inchoative states according to Camacho. However, as incorrectly predicted by the author, (36a) does not mean that the singer started being angry at ten and (36b) does not mean that the millionaire started being sad at ten.

Second, it is not clear to what extent it is correct to postulate a beginning boundary for stage-level predicates, given that both individual-level and stage-level predicates are compatible with adjuncts preceded by *desde* 'since', which provide the temporal point from which the eventuality starts:

(37) a. Ese chico es pobre desde su niñez.
that guy is poor since his childhood
b. Juan fue médico desde 1999.
Juan was doctor since 1999
'Juan was a doctor since 1999.'

(38) a. María estuvo cansada desde las ocho.
María was tired since the eight
'María was tired since eight.'
b. El pianista estuvo borracho desde ayer.
the pianist was drunk since yesterday

What all these data show is that there is no empirical evidence that stage-level states differ from individual-level predicates in that only the former select for the beginning boundary of the state, unlike Camacho defends. We can conclude with Arche (2006, 2012) that neither spatiotemporality nor aspect can be the fundamental property that distinguishes individual-level from stage-level properties.

Before closing this section, it is interesting to reflect on Condoravdi's (1992) and McNally's (1994) hypothesis, according to which individual-level predicates, unlike state-level ones, are associated with an inference of temporal persistence, which can be cancelled if an appropriate context is provided. For example, *John is smart* is used to describe a property that persists in time in principle, but an appropriate context is able to cancel that inference, as in *John was smart until he suffered the accident*. I agree with Condoravdi and McNally on this observation, but the authors do not explain from which semantic property that inference is derived. In other words, that inference must be derived from a certain semantic property that distinguishes both

types of predicates. As shown in the subsection 2.2.2, the inference of temporal persistence is directly accounted for by positing that individual-level states express non-caused properties, which makes them prone to persist in time. Having ruled out the proposals that base the distinction on spatiotemporality or aspect, in the following subsection I review the proposals that link the individual-level/stage-level distinction with the relative-absolute distinction.

2.2.1.2 The relative-absolute distinction

The second group of proposals dealing with the individual-level/stage-level distinction is based on the properties of the gradable adjectives associated with them (Husband 2010; Sassoon & Toledo 2011; McNally 2011; Gumiel-Molina et al. 2015, 2020). Specifically, these authors claim that individual-level predicates are associated with relative interpretations, while stage-level predicates are associated with absolute interpretations. These proposals are, in principle, compatible with the hypothesis of this dissertation according to which both individual-level and stage-level predicates express states. However, they present empirical problems that will be commented on below. In order to understand the machinery that underlies these analyses, it is necessary to describe the differences between relative and absolute interpretations.

According to Kennedy & McNally (2005) and Kennedy (2007), based on Unger (1975), Rusiecki (1985), Yoon (1996) and Rotstein & Winter (2004), there are two types of gradable adjectives: *relative* and *absolute* adjectives. The former lexicalize open scales, which do not include maximal or minimal points; in contrast, absolute adjectives are associated with scales that have maximal, minimal or both points. Degree modifiers like *perfectly* and *slightly* are sensitive to the different endpoints:

(39) a. ??perfectly/??slightly {tall, deep, expensive, likely}.
b. ??perfectly/??slightly {short, shallow, inexpensive, unlikely}.

(40) a. ??perfectly/slightly {bent, bumpy, dirty, worried}.
b. perfectly/??slightly {straight, flat, clean, unworried}.

(41) a. perfectly/??slightly {certain, safe, pure, accurate}.
b. ??perfectly/slightly {uncertain, dangerous, impure, inaccurate}.

(42) a. perfectly/slightly {full, open, opaque}.
b. perfectly/slightly {empty, closed, transparent}.

(From Kennedy 2007: 34)

Gradable adjectives that are associated with open scales, like the ones in (39), reject both maximizers like *perfectly* and minimizers like *slightly*. Adjectives that are associated with upper-

bound scales, like the ones in (41b) and (40a), can only combine with maximizers. Adjectives that are associated with lower-bound scales, like the ones in (41a) and (40b), can only combine with minimizers. Finally, adjectives whose scales are totally closed, like the ones in (42), can combine with both maximizers and minimizers.

Another crucial aspect in which gradable adjectives differ depending on the scale that they lexicalize is with respect to entailment patterns. Observe the following examples:

(43) a. Marc es más alto que Pau. ⊭ Marc es alto.
Marc is more tall than Pau Marc is tall
'Marc is taller than Pau.' ⊭ 'Marc is tall.'
b. La mesa está más sucia que la silla. ⊨ La mesa está sucia.
the table is more dirty than the chair the table is dirty
'The table is dirtier than the chair.'⊨ 'The table is dirty.'
c. La mesa está más limpia que la silla. ⊨ La silla no está limpia.
the table is more clean than the chair the chair not is clean
'The table is cleaner than the chair.' ⊨ The chair is not clean.'

Relative adjectives do not give rise to entailments to the positive form, so (43a) does not entail that Marc is tall. In contrast, gradable adjectives that are associated with lower-closed scales do give rise to entailments to the positive; accordingly, (43b) does entail that the table is dirty. Finally, gradable adjectives that are associated with upper-closed (and totally closed) scales give rise to negative entailments to the positive form; accordingly, (43c) entails that the chair is not clean.

In sum, the relative-absolute distinction is crucial to explain the distribution of maximizers and minimizers and the different entailment patterns that are associated with gradable adjectives. With this in mind, we can review the proposals that link the individual-level/stage-level distinction with relative and absolute interpretations.

Inspired by Bartsch & Vennemann (1973), Cresswell (1976), Klein (1980), von Stechow (1984) Fults (2006), Solt (2009) and van Rooij (2011a, 2011b), who claim that gradable adjectives invoke comparison classes, Sassoon & Toledo (2011; see also McNally 2011 for a similar analysis) argue that individual-level predicates invoke comparisons *between* individuals and are associated with relative interpretations, while stage-level predicates invoke comparisons *within* the same individual and are associated with absolute interpretations. For example, in (44a) *tall* is an individual-level predicate, while in (44b) *dirty* is a stage-level predicate. In addition, *tall* is a relative adjective because its scale does not include minimal or maximal points, so it rejects

minimizers and maximizers. In order to evaluate whether (44a) is true or false, a comparison between individuals is invoked, so the elephant is tall when compared to other similar elephants. In contrast, in (44b) *dirty* is an absolute adjective, since it lexicalizes a lower-closed scale, so it can combine with minimizers but not with maximizers. In order to evaluate whether (44b) is true or false, we do not need to compare the shirt to other similar shirts, but rather we have to compare the situation in which the shirt actually is to other possible indices or stages in which it might be.[17]

(44) a. The elephant is (*slightly/*completely) tall.
b. The shirt is (slightly/*completely) dirty.

This said, Husband (2010) observes that the classification proposed by Sassoon & Toledo is too rigid, inasmuch as there are adjectives of variable behavior. For example, *dry* invokes an open scale when it behaves as an individual-level predicate, while it invokes a close scale when it behaves as a stage-level predicate. Thus, the association of individual-level and relative interpretations, on the one hand, and stage-level and absolute interpretations, on the other, is correct, but it is not lexical; rather, in order to account for cases like *dry*, it is necessary to posit that scales are invoked in the syntax. In (45a) *dry* expresses a property that characterizes an individual and cannot accept maximizers because it is associated with an open scale; in contrast, in (45b) *dry* expresses a property that is not inherent in the individual and accept maximizers because it is associated with an upper close scale.

(45) a. The region is (*completely) dry.
b. The glasses are (completely) dry.

Finally, Gumiel-Molina et al. (2015) argue in line with Husband (2010) that scales are invoked in the syntax and that the proposal can explain the distribution of the two Spanish copulas (*ser* and *estar*). Assuming that the copula *ser* is associated with individual-level interpretations and the copula *estar* is associated with stage-level interpretations, the variable behavior of *seco* 'dry' in (46) with respect to degree modification is explained: in the individual-level interpretation, it combines with the copula *ser* and reject maximizers, so it behaves as a relative adjective; in the stage-level interpretation, it combines with the copula *estar* and accept maximizers, so it behaves as an absolute adjective.

[17] Sassoon & Toledo (2011) equate the notion of 'stages' with the notion of 'counterparts' in Lewis (1986), which are defined as realizations of the individual in different indices.

(46) a. La región es (*completamente) seca.
the región is.SER completely dry
b. Las gafas están (completamente) secas.
the glasses are.ESTAR completely dry

Thus, the proposals reviewed so far connect individual-level predicates with relative interpretations, on the one hand, and stage-level predicates with absolute interpretations, on the other, and differ on whether the distinction is lexically or syntactically encoded. However, there is empirical evidence that the distinction between individual-level and stage-level interpretations does not rely on the relative-absolute distinction. For example, *puro* 'pure', *compatible* 'compatible' and *plano* 'flat' trigger individual-level interpretations, since they combine with the copula *ser*. However, we do not need to invoke a comparison between individuals in order to evaluate their truth conditions and they can combine with maximizers, so they are associated with an absolute interpretation:

(47) a. Este lingote es completamente puro.
this ingot is.SER completely pure
b. Su trabajo es completamente compatible con sus aficiones.
their work is.SER completely compatible with their hobbies
c. Esta superficie es completamente plana.
this surface is.SER completely flat

In order to evaluate whether (47a) is true or false, it is not necessary to compare the ingot to other similar ingots; analogously, in order to evaluate whether (47b) is true or false, it is not necessary to compare the work to other similar works; and, in order to evaluate whether (47c) is true or false, it is not necessary to compare the surface to other similar surfaces. Moreover, the three adjectives can combine with maximizers, so they trigger an absolute interpretation. However, they combine with the copula *ser*, so they are associated with an individual-level interpretation, as incorrectly predicted by these proposals.

Gumiel-Molina et al. (2015: 18) claim that the entailment patterns of adjectives of variable behavior support their analysis. Observe the following examples:

(48) a. Mi hija es más alta que tu hijo, pero mi hija no es alta.
my daughter is more tall than your son but my daughter not is tall
'My daughter is.SER taller than your son, but my daughter is.SER not tall.'

b. #Mi hija está más alta que tu hijo, pero mi hija no está alta.
my daughter is more tall than your son but my daughter not is tall
'My daughter is.ESTAR taller than your son, but my daughter is.ESTAR not tall.'

(From Gumiel-Molina et al. 2015: 18)

According to the authors, the predicate *alto* 'tall' only invokes a lower-closed scale when combined with the copula *estar*, see (48b), in which case it gives rise to entailments to the positive. Hence, only (48b), which includes a discursive continuation that denies that the individual in question is tall, results in an incompatibility. However, the judgment according to which (48b) is anomalous is not clear to me and other native speakers who I have consulted. In this respect, when the predicate *alto* means 'high', it only combines with the copula *estar*, but there is no doubt that it does not give rise to an entailment to the positive, as counterfactually predicted by Gumiel-Molina et al.:

(49) Este cuadro está más alto que ese en la pared, pero ninguno de los dos está alto.
this painting is more high than that on the wall but neither of the two is high
'This painting is.ESTAR higher than that one on the wall, but neither of them is.ESTAR high.'[18]

Finally, another argument against the association of individual-level and relative interpretations, on the one hand, and stage-level and absolute interpretations, on the other, is that this proposal cannot be directly applied to non-gradable predicates:

(50) a. Rosa es (*ligeramente/*completamente/*muy) la camarera.
Rosa is.SER slightly completely very the waitress
b. Rosa está (*ligeramente/*completamente/*muy) en Madrid.
Rosa is.ESTAR slightly completely very in Madrid

[18] In Gumiel-Molina et al. (2020), the authors claim that there is a crucial contrast between predicates of variable behavior like *alto* 'tall' with respect to minimizers like *ligeramente* 'slightly' depending on whether they combine with the copula *ser* or *estar*:

(i) a. *Juan es ligeramente alto/gordo/bajo/delgado.
Juan is.SER slightly tall fat short thin
b. Juan está ligeramente alto/gordo/bajo/delgado.
Juan is.ESTAR slightly tall fat short thin

According to the authors, in (ib) the adjective combines with the copula *estar* and, therefore, invokes a *within* comparison class and triggers an absolute interpretation. However, I find (ib) unacceptable unless an external standard of comparison is implicitly assumed, as in *Juan está ligeramente gordo para pasar por el túnel* 'Juan is.ESTAR slightly fat to get through the tunnel', so the contrast in (i) does not provide clear results.

Put it differently, insofar as these proposals rely on the relative-absolute distinction, which is a characteristic of gradable predicates exclusively, the behavior of non-gradable predicates remains unexplained. We can conclude that the individual-level/stage-level distinction should not be accounted for in terms of relative and absolute interpretations, since there is no any clear correspondence between them.

Although it is not the goal of this dissertation to provide an explanation of how the standard of comparison is calculated, I can show empirical evidence that the existence of relative and absolute interpretations hinges on the endpoints of the scale lexicalized by the adjective and on whether a *between* or *within* comparison class is invoked exclusively, while the individual-level/stage-level distinction is irrelevant. Open-scale adjectives like *alto* 'tall' trigger a relative interpretation in all cases, since they do not encode endpoints on their scales; as a consequence, they do not combine with maximizers or minimizers and do not give rise to entailments to the positive in comparatives, as discussed above.

If upper-close scales are involved, an absolute interpretation arises when they invoke a *within* comparison class, whereas a relative interpretation arises when they invoke a *between* comparison class. Observe the following examples:

(51) a. El suelo está (completamente) limpio.
the floor is.ESTAR completely clean
b. Este suelo es (*completamente) limpio.
the floor is.SER completely clean
c. Las elecciones fueron (completamente) limpias.
the elections were.SER completely clean

In (51a) the adjective *limpio* 'clean' combines with the copula *ser*, which flanks individual-level predicates, and rejects the maximizer *completamente* 'completely'; in contrast, in (51b) the adjective combines with the copula *estar*, which accompanies stage-level predicates, and accepts the maximizer. Regarding (51c), the adjective combines with *ser*, but, crucially, it can combine with the maximizer *completamente* 'completely'. What these data indicate, on the one hand, is that the individual-level/stage-level distinction does not have any impact on determining the standard of comparison, as expected on the basis of my hypothesis. On the other hand, the maximizer can only appear if the adjective invokes a comparison *within* the same individual, see (51a) and (51c), while it is unacceptable if the adjective invokes a comparison *between* similar individuals, see (51b). In other words, while we need to compare the floor to other similar floors in order to truthfully assert (51b), we do not need to compare the

floor to other similar floors in the case of (51a) or to compare the elections to other similar elections in the case of (51c). Thus, upper-close scale adjectives like *limpio* 'clean' trigger an absolute interpretation, and therefore license maximizers, when a *within* comparison class is invoked, while they trigger a relative interpretation when a *between* comparison class is involved. The individual-level/stage-level distinction does not have an influence on determining the standard.

Regarding lower-close scale adjectives, the situation is similar, but minimizers can be licensed if an external comparison class is implicitly assumed. Consider the following data:

(52) a. Las gafas están ligeramente húmedas.
the glasses are.ESTAR slightly humid
b. #Este clima es ligeramente húmedo.
this climate is.SER slightly humid

In (52a) the adjective invokes a *within* comparison class, so we need to compare the situation in which the glasses are to other situations in which the same glasses might be in order to determine whether (52a) is true or false. In contrast, in (52b) the adjective invokes a *between* comparison class, so we need to compare the climate to other similar climates to determine whether the climate is humid or not. In (52b) the minimizer is unlicensed unless there is an implicit standard whereby the climate is slightly humid *for children / to live there*, hence the symbol #. In this line of reasoning, Sassoon (2012) claims that minimizers are not sensitive to scale endpoints, but rather to minimal standards, which accounts for the fact that open-scale adjectives are compatible with minimizers if a standard is specified, as in *slightly tall for her age* and *slightly too short to reach the ceiling*. I will not discuss the licensing of minimizers in depth, since it is beyond the goal of this dissertation; the reader is referred to Sassoon (2012) and Gumiel-Molina et al. (2020) and references therein.

We can conclude that the relative-absolute distinction relies on the adjectival scalar properties and on whether the predicate invokes a comparison *between/within* individuals. The individual-level/stage-level distinction does not have any impact on determining the standard of comparison and, therefore, on triggering absolute or relative interpretations. In the following subsection, I explain my alternative proposal.

2.2.2. Causation

Previously, I have concluded that neither spatiotemporal nor aspectual properties underlie the individual-level/stage-level distinction, and the same holds for the relative-absolute distinction.

In this section, I argue that causation is the relevant factor that distinguishes individual-level states from stage-level states. While the former express non-caused properties, the latter express properties that hold due to an external cause. The intuition that stage-level predicates hold due to an external cause derives from Sanromán's (2003, 2012) study on stative nouns like *respeto* 'respect' and *asombro* 'astonishment'. On the basis of their different combinatory patterns, principally with respect to light verbs, the author concludes that *respeto* 'respect' expresses a property that the subject experiences as a consequence of making an assessment about a certain object or person, while *asombro* 'astonishment' expresses a property that the subject experiences as a reaction to an external factor. Sanromán characterizes the former as internally caused and the latter as externally caused. As I will show below, I do not follow Sanromán in her characterization of individual-level predicates; in my view, these predicates hold with no reference to a cause, while it is Davidsonian states (or stative causatives) that are internally caused (I will explain what an internal cause is in subsection 2.2.3.2). I do follow this author in the characterization of stage-level predicates, which hold due to an external causer.

Inspired by Sanromán's (2003, 2012) study on stative nouns, other authors have put forth similar insights in relation to stage-level predicates:

> [In the case of stage-level predicates], "the speaker predicates the properties of the subject on a particular occasion, linked to external reasons".
>
> (Arche 2006: 239)

> "There is a wide agreement on defining stage-level predicates as those that express characteristics that arise due to an external situation, which is often, although not necessarily, a previous action".
>
> (Fábregas 2016: 232. My translation)

What Arche and Fábregas calls "external reasons" and "external situation", respectively, is formulated here as an external cause, that is, a cause that is not a participant of the state but brings the state about. In this respect, it must be noted that, although Arche (2006, 2012) concludes that neither aspect nor spatiotemporality is behind the individual-level/stage-level distinction, she does not develop an alternative analysis of stage-level predicates as externally caused predicates. Regarding Fábregas (2016), the author posits that causal properties have an impact on aspect, according to which stage-level predicates project an additional aspectual node that is endowed with perfective information (in line with Zagona 2009, 2015; Gallego & Uriagereka 2009, 2016; Brucart 2012; Camacho 2012). Finally, Sanromán (2003, 2012), on the one hand, relates the fact that individual-level predicates are internally caused to the traditional hypothesis that they express properties inherent in an individual and, on the other, she relates

the fact that stage-level predicates are externally caused to the traditional hypothesis that they are predicated of stages as spatiotemporal environments. In sum, none of the three proposals in which stage-level predicates are linked to an external factor/cause develops an analysis based on this property exclusively. The novelty of my proposal is that it takes causal properties as defining properties that do not have any impact on aspect or any other properties. Thus, individual-level and stage-level predicates differ solely in their causal properties.

At this point, it is necessary to explore the data on which my analysis is based. The first hint that stage-level predicates express states that are externally caused comes from the observation that many stage-level adjectival predicates express the result state of their corresponding verbs: for example, *roto* 'broken' is the result state of *romper* 'to break', *preocupado* 'worried' is the result state of *preocupar* 'to worry', *limpio* 'clean' is the result state of *limpiar* 'to clean', etc.

In addition, the data examined in subsection 2.2.1 linked to cancellable inferences of temporal persistence and habitual/iterative contexts receive a natural explanation if we adopt the analysis proposed here. On the one hand, the inference of temporal persistence that individual-level predicates have according to Condoravdi (1992) and McNally (1994) is derived from the fact that they hold with no reference to a specific cause. For example, the individual-level predicate *guapo* 'handsome' in *Daniel es guapo* 'Daniel is.SER handsome' expresses a property that holds in an individual spontaneously, which may create the false impression that the individual has that property inherently or that that property persists in time. In contrast, *triste* 'sad' in *Daniel está triste* 'Daniel is.ESTAR triste' expresses a property that is caused by an external factor; given that that property does not arise spontaneously, the inference of temporal persistence or the impression that the property is inherent in the individual is not activated.

On the other hand, the facility, although not the exclusivity, of stage-level predicates to take part in habitual/iterative contexts, especially the ones that involve temporal clauses preceded by *siempre que* 'whenever' or *cuando* 'when', is also due to the fact that they involve a cause. Specifically, if they are obligatorily associated with an external participant that triggers the state, it is more likely that they can re-hold in time whenever the external cause intercedes. In contrast, non-caused states are able to re-hold too, but they are less prone to that because of the lack of a cause that triggers the eventuality. For example, if the state expressed by *Daniel está triste* 'Daniel is.ESTAR sad' is triggered by an external cause, for example Real Madrid's defeat, that state can re-hold whenever that cause intercedes, e.g. whenever Real Madrid loses a game. In contrast, if the state expressed by *Daniel es guapo* 'Daniel is.SER handsome' holds with no reference to a cause, it is more unlikely that it re-holds because there is no cause that can intercede to bring the state about.

My proposal is also endorsed by the study of certain semantic contrasts that have gone unnoticed in the literature on the individual-level/stage-level distinction, which include causal adjuncts headed by the preposition *de* 'from' and purpose clauses and agentive adverbs that are only compatible with stage-level predicates. Before showing these original data on which I also base my analysis, let us start exploring the semantics of causation in more detail, in particular the distinction between direct and indirect causation, which is crucial in my analysis because I posit that stage-level predicates have an external cause that must be understood as a *direct cause*.

The contrast between *direct* and *indirect* causation has been already observed in the literature (Shibatani 1976; Talmy 1976; Dowty 1979; Wolff 2003; Vecchiato 2011; Copley & Wolff 2014) and is especially retrieved by Maienborn & Herdtfelder (2017) with respect to the difference between German *von* 'from' and *wegen* 'because of' (and English *from* and *because of*). Specifically, these authors claim that German *von* (and English *from*) introduces a direct causer, while German *wegen* (and English *because of*) introduces an indirect causer:

(53) a. *Maria ist müde von dem kaputten Spaten.
Maria is tired from the broken spade
b. Maria ist müde wegen des kaputten Spatens
Maria is tired because.of the broken spade

(54) a. Paul ist müde von der Reise.
Paul is tired from the trip
b. Paul is müde wegen der Reise.
Paul is tired because.of the trip

(From Maienborn & Herdtfelder 2017: 288)

Maienborn & Herdtfelder argue that in (53) it is not possible to conceive that the broken spade made Maria be tired directly, but it is possible to conceive that the broken spade is the indirect cause of that state if Maria used the spade to dig; consequently, only *wegen* is licensed. In contrast, in (54) the trip can be conceived as the direct cause that made Paul be tired, hence both *von* and *wegen* are accepted. Based on Wolff (2003), Maienborn & Herdtfelder (2017: 289) posit that direct causation is subject to the *no-intervening-cause criterion*, whereby "direct causation is present between the causer and the final causee in a causal chain (1) if there are no intermediate entities at the same level of granularity as either the initial causer or final causee, or (2) if any intermediate entities that are present can be construed as an enabling condition rather than an intervening causer". Maienborn & Herdtfelder say nothing in relation to the

(in)compatibility of individual-level predicates with a direct cause either in German or in English. My main contribution with respect to Spanish is that the direct cause is incompatible with individual-level predicates, which I take as evidence that they express non-caused properties. Of course, both individual-level and stage-level predicates might involve an *indirect* cause.

In Spanish, causal adjuncts preceded by *de* 'from' are not, presumably, as productive as in German or in English, but we can posit that the ones that appear in (55)-(58) are true causal adjuncts, since they express a cause that directly triggers the eventuality. Thus, what I argue here is that Spanish causal adjuncts preceded by *de* 'from' introduce a direct causer:

(55) a. Quijote es sabio (*de leer tantos libros de caballería).
Quijote is.SER wise from read so.many books of chivalry
b. Quijote está loco (de leer tantos libros de caballería).
Quijote is.ESTAR crazy from read so.many books of chivalry

(56) a. Juan es moreno (*de tomar el sol).
Juan is.SER tanned from take the sun
b. Juan está moreno (de tomar el sol).
Juan is.ESTAR tanned from take the sun

(57) a. Juan es gordo (*de comer muchas hamburguesas).
Juan is.SER fat from eat so.many burgers
b. Juan está gordo (de comer muchas hamburguesas).
Juan is.ESTAR fat from eat so.many burgers

(58) a. Esta pared es muy sucia (*de tanto manosearla).
this wall is.SER very dirty from so.much touch.it
b. Esta pared está muy sucia (de tanto manosearla).
this wall is.ESTAR very dirty from so.much touch.it

In (55) we deal with two predicates that admit each only one interpretation: *sabio* 'wise' only combines with the copula *ser*, while *loco* 'crazy' only combines with the copula *estar*. The latter, unlike the former, can combine with causal sentences preceded by *de* 'from', which indicates that the state of being crazy is triggered by Quijote's reading chivalric books. Note that wisdom and craziness are properties that could characterize an individual (and actually the case of *loco* 'crazy' is usually used as evidence that the copula *estar* is not always associated with stage-level interpretations), but only the latter can hold as a consequence of an external factor. Consequently, the fact that individual-level or stage-level predicates express properties that can

characterize an individual or not is semantically irrelevant; rather, the distinction lies on causation and only stage-level predicates express properties that are (externally) caused.

(56)-(58) include examples in which the same predicate behaves either as an individual-level or as a stage-level state depending on the copula that it combines with. Crucially, only when the copula *estar* is involved, is the causative sentence headed by *de* 'from' accepted. In (56b) sunbathing triggers the state in which Juan is tanned, in (57b) eating many burgers triggers the state in which Juan is fat and in (58b) touching the wall triggers the state in which the wall is dirty.

Causal adjuncts introduced by *por* 'because of' or *porque* 'because' are compatible with both individual-level and stage-level predicates: the reason why this is the case is that these elements introduce an indirect rather than a direct cause. Observe the following examples:

(59) a. Pipo es gordo por sus padres / porque sus padres también lo son.
Pipo is fat because.of his parents because his parents too it are
'Pipo is.SER fat because of his parents / because his parents are.SER too.'
b. Pipo está gordo por sus padres / porque sus padres también lo están.
Pipo is fat because.of his parents because his parents too it are
'Pipo is.ESTAR fat because of his parents / because his parents are.ESTAR too.'

The fact that the predicate *gordo* 'fat', either when combined with the copula *ser* or with *estar*, as in (59), can co-occur with indirect causal adjuncts preceded by *por* 'because of' or by the conjunction *porque* 'because' is unsurprising. Note that these adjuncts are not triggers of the state in which Pipo is fat, but rather they inform about an indirect cause that explains the existence of that state. In other words, (59a) conveys that that Pipo is fat, for instance, because he inherited his parents' genes or something along these lines rather than because their parents made him be fat. What this means is that the *no-intervening-cause* criterion for direct causes is not met, because there are intermediate entities, for instance Pipo's parents' genes, between the causer, Pipo's parents, and the causee, the state of Pipo's being fat.

We can conclude that direct causal adjuncts are only compatible with stage-level predicates, which provides additional evidence that stage-level predicates express properties that are brought about by an external and direct cause: *external* because the trigger of the state is none of their arguments, although it can be introduced by adjuncts, and *direct* because the cause triggers the state with no any other intervening cause involved. In contrast, individual-level states are incompatible with direct causal adjuncts because they express non-caused properties and, in any case, they express properties that are logically or indirectly caused.

Another set of data that has not been explored in the literature is the combination of individual-level and stage-level predicates with purpose clauses: e.g. *para ganar dinero* '(in order) to earn money'. If it is the case that stage-level predicates make reference to an external cause, it is predicted that we can insert purpose clauses that force the occurrence of an external agentive participant that causes the state. Following standard assumptions (see Dowty 1979; Ramchand 2008; Davis 2011; Williams 2015, and references therein), agents can be taken as *volitional* causers, that is, participants that have intentions that lead them to initiate eventualities. Thus, while *causers* are the generic term referring to just what Ramchand calls *initiators* or are participants that trigger eventualities irrespective of their intentionality (which includes inanimate causers like *the key* in *The key opened the door*), agents are causers that trigger eventualities *intentionally*, which necessarily involves animate individuals. Observe the following data:

(60) a. El nene está sentado para que no moleste.
the toddler is.ESTAR sat to that not bother
'The toddler is sitting in order for him not to bother.'
b. El pájaro está en la jaula para que no se escape.
the bird is.ESTAR in the cage to that not REFL escape
'The bird is in its cage in order for it not to escape.'

In (60a) the purpose clause induces an interpretation in which somebody seated the toddler to prevent him from bothering other people, while in (60b) it induces an interpretation in which somebody put the bird in the cage to prevent it from escaping. Note that, in case in which stage-level predicates combine with purpose clauses, a change of state follows. For example, from (60a) it follows that the kid was not sitting before somebody seated him and from (60b) it follows that the bird was not in the cage before somebody put it there.

In other cases, it is possible to insert an infinitival purpose sentence that induces the interpretation that the holder of the state is also the causer, see (61). In these cases, it is also possible to insert an agentive adverb like *voluntariamente* 'voluntarily' or *deliberadamente* 'deliberately', see (62).

(61) a. Elvira está sentada frente al ayuntamiento para protestar contra los recortes.
Elvira is.ESTAR sat in.front to.the city.hall to protest against the cuts
'Elvira is sitting in front of the city hall to protest against the cuts.'

b. Antonio está en Madrid para firmar un contrato de trabajo.

Antonio is.ESTAR in Madrid to sign a contract of work

'Antonio is in Madrid to sign an employment contract.'

(62) a. Elvira está sentada voluntariamente.

Elvira is.ESTAR sat voluntarily

b. Antonio está en Madrid deliberadamente.

Antonio is.ESTAR in Madrid deliberately

In both (61a) and (62a) Elvira is both the holder and the causer of the state, so it follows that she sat in front of the city hall voluntarily. Analogously, in both (61b) and (62b) Antonio is the holder and the causer of the state, so it follows that he went to Madrid voluntarily too.

Crucially, individual-level predicates cannot combine either with purpose sentences, irrespective of whether the external causer is coincident with the holder of the state or not, or with agentive adverbs:

(63) a. *El actor es famoso para que sus padres vivan bien.

the actor is.SER famous to that his parents live well

b. *El Real Madrid es campeón para que sus fans lo celebren.

the Real Madrid is.SER champion to that their fans it celebrate

c. *Marta es atea para que sus padres no se preocupen.

Marta is.SER atheistic to that their parents not REFL worry

(64) a. *El actor es famoso voluntariamente / para ganar dinero.

the actor is.SER famous voluntarily to earn money

b. *El Real Madrid es campeón deliberadamente / para ganar dinero.

the Real Madrid is.SER champion deliberately to earn money

c. *Marta es atea intencionadamente / para ser feliz.

Marta is.SER atheistic intentionally to be happy

(65) a. *El actor es gordo para representar a Winston Churchill.

the actor is.SER fat to portray ACC Winston Churchill

b. El actor está gordo para representar a Winston Churchill.

the actor is.ESTAR fat to portray ACC Winston Churchill

c. El actor *es / está gordo voluntariamente.

the actor is.SER is.ESTAR fat voluntarily

(63) includes individual-level predicates and purpose clauses that make reference to an external cause, which results in an incompatibility. (64) includes individual-level predicates and an agentive adverb or purpose clauses that make reference to an external cause that is coincident with the holder of the state, which results in an incompatibility as well. In (65) the predicate of variable behavior *gordo* 'fat' is only compatible with an agentive adverb and purpose clauses when combined with the copula *estar*, which accompanies stage-level predicates. Note again that from the co-occurrence of purpose clauses and agentive adverbs with stage-level predicates it follows that there is a change of state. For example, from (65b) it follows that the actor becomes fat in order to portray Winston Churchill.

Certainly, there are apparent exceptions in which individual-level predicates are compatible with purpose clauses:

(66) a. El suelo de este bar es rugoso para que los clientes no resbalen.
the floor of this bar is.SER wrinkled to that the clients not slip
'The floor of this bar is wrinkled in order for the clients do not slip.'
b. En el sur, las casas son blancas para que se mantengan frescas en verano.
in the south the houses are.SER white to that REFL remain cool in summer
'In the south, houses are white in order for them to remain cool in summer.'

However, (66a) does not mean that somebody took a floor and made it wrinkled, but rather than somebody installed a wrinkled floor. Analogously, (66b) does not mean that somebody painted the houses white, but rather that somebody built white houses. In other words, in both (66a) and (66b) there is an external participant that is responsible for the existence of some entities with a certain property, but that participant does not trigger the states. Note that, in these cases, a change of state does not follow: the floor and the houses could have been wrinkled and white, respectively, since the moment they were created. We can conclude that only stage-level predicates are compatible with purpose clauses that are associated with a change of state.[19]

[19] Other apparent counterexamples are the ones that include individual-level nouns that refer to professions or occupations, in which case the adverb *voluntariamente* 'voluntarily', but not *deliberadamente* 'deliberately' or *intencionadamente* 'intentionally', is licensed:

(i) Carlos es estudiante voluntariamente/*deliberadamente/*intencionadamente.
Carlos is student voluntarily deliberately intentionally

However, the interpretation of (i) is not that Carlos is the trigger of the state of being a student, i.e. that Carlos became a student voluntarily, but rather that he can control the persistence of the state. In fact, it is possible to insert a continuation implying that Carlos did not decide to become a student:

Another set of data that supports my analysis is taken from the literature on Spanish, but they were not taken as evidence that the individual-level/stage-level distinction relies on causation. Observe the following sentences:

(67) a. Ricardo tiene preocupada / cansada / distraída / en Madrid a María.
Ricardo has worried tired distracted in Madrid ACC María
b. *Ricardo tiene atea / famosa / campeona / de Madrid a María.
Ricardo has atheistic famous champion from Madrid ACC María

(68) a. Limpio el suelo, nosotros nos fuimos.
clean the floor we REFL went
'Once the floor was clean, we went.'
b. Borrachos los asistentes, se suspendió la conferencia.
drunk the attendants REFL canceled the conference
'Once the attendants were drunk, the conference was canceled.'

(69) a. *Popular María, sus padres se hicieron ricos.
popular María her parents REFL make rich
'Once María was popular, her parents become rich.'
b. *Válido el análisis, los científicos se marcharon.
valid the analysis the scientists REFL went
'Once the analysis was valid, the scientists went.'

(70) a. *Bart es elegante con ese traje.
Bart is.SER elegant with that tracksuit
b. Bart está elegante con ese traje.
Bart is.ESTAR elegant with that tracksuit

(71) a. *Lisa es muy alta con esos tacones.
Lisa is.SER very tall with those heels
b. Lisa está muy alta con esos tacones.
Lisa is.ESTAR very tall with those heels

On the one hand, (67)-(69) show resultative contexts in which only stage-level predicates are licensed. (67) includes sentences with the verb *tener* 'to have' plus a participle or a PP, and (68) and (69) include absolute constructions. In the literature on Spanish, these data have been taken as evidence that stage-level predicates are perfective or bounded in the loose sense that I

(ii) Carlos es estudiante voluntariamente, pero no se hizo estudiante voluntariamente.
Carlos is student voluntarily but not REFL do.3.SG student voluntarily
'Carlos is a student voluntarily, but he did not become a student voluntarily.'

explained above (see Marín 2010 for instance). Alternatively, in assuming that stage-level predicates are externally caused, it is straightforwardly explained that these adjectives can be interpreted as the result of a previous action. In (67a) Ricardo is the direct cause of the state and in (68) there is an external causer that cleaned the floor and got the attendants drunk. In contrast, individual-level predicates, like the ones in (67b) and (69), are unacceptable in those contexts because they do not make reference to an external cause.

Regarding (70) and (71), in (70b) the tracksuit makes Bart be elegant and in (71b) the heels make Lisa be tall. Assuming that those adjuncts are direct causal adjuncts automatically explains why they are illicit in (70a) and (71a), given that the copula *ser* induces an individual-level interpretation in which there is no a direct cause involved.

Finally, the causal analysis also accounts for certain data in which the speaker gives an opinion about their taste:

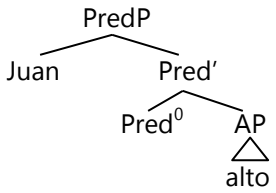
(72) a. *Esta carne es buena cocinada a la plancha.
this meat is.SER good cooked on the griddle
'(Int.) This meat is good if / because it was cooked on the griddle.'
b. Esta carne está buena cocinada a la plancha.
this meat is.ESTAR good cooked on the griddle

The examples in (72) include the so-called evidential use of the copula *estar*, where the term *evidential* is used in a loose sense, according to which the speaker must be considered an experiencer (see Roby 2009 and Gumiel-Molina et al. 2015 and references therein). In this sense, the copula *estar* would be associated with an evidential interpretation that forces the existence of an experiencer that tastes the meat. However, it must be noted that it is not necessary to taste the meat to utter (72b); rather, what differentiates it from (72a) is that there is an external cause that makes the meat be good, which is expressed by the participial adjunct *cocinada a la plancha* '(lit.) cooked on the griddle, grilled'.

The final conclusion for this section is that individual-level and stage-level predicates express states: the former express non-caused states, in the sense that they do not involve a direct cause, while the latter express externally caused states, in the sense that they involve a direct external cause. The reason why individual-level predicates may give the false impression that they express inherent or atemporal properties is that they express non-caused states, which tend to remain stable over time.

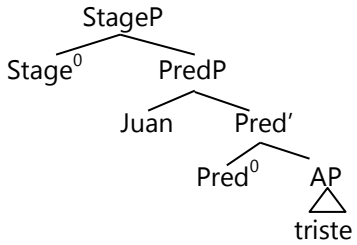
Below I represent a basic syntactic and semantic analysis proposed here for individual-level and stage-level states, leaving out their gradable semantics for convenience sake, which should include DegP. (I flesh out this analysis in chapter 3).

(73)



(74) $[\![Juan\ (es) alto]\!] = \exists s.\,\mathrm{tall}(s) \wedge \mathrm{holder}(s, \mathrm{j})$.

(75)



(76) $[\![Juan\ (está)\ triste]\!] = \exists s \exists c.\,\mathrm{sad}(s) \wedge \mathrm{holder}(s, \mathrm{j}) \wedge \mathrm{stage}(s, c)$.

Individual-level states are the most basic ones: they include PredP, which is the functional node that introduces the holder or external argument (Bowers 1993; Baker 2003); as can be noted, there is not reference to any causal relation. In contrast, stage-level states are syntactically more complex, in line with Zagona (2009, 2015), Gallego & Uriagereka (2009, 2016), Brucart (2012), Camacho (2012) and Fábregas (2016). However, unlike these authors, who claim that stage-level states project a node with aspectual information, I argue that they project a node that introduces the function *stage*, which associates the state *s* with an external direct cause *c*.

The adjectival structure does not include more projections, but the derivation could continue with the attachment of the copula. In this respect, as is widely assumed, the copula does not contribute any semantics, but rather it is a *verbalizer* (I take the term from Schmitt 2005), whose main role is to allow the adjective to bear tense, viewpoint-aspectual and mood morphology. We can place the copula either in the head of VP, where VP dominates the adjectival structure, or we can place it directly in the head of TP, depending on our syntactic assumptions, which are irrelevant here (see Arche et al. 2017 and references therein for the different syntactic analyses proposed for the copula). In Spanish, the copula is spelled out as *estar* if the node StageP is included in the derivation, while it is spelled out as *ser* otherwise (although see next section, which shows that mental state adjectives like *amable* 'kind' project CauseP instead of StageP, which can license both copulas).

We conclude that individual-level and stage-level predicates express states: the former do not make any reference to a cause, while the latter involve an external cause that must be construed as a direct cause. Thus, both individual-level and stage-level predicates express eventualities, although they differ in that they are associated with different causal relations. In the following subsection, I study the third type of stative predicates depending on their causal properties.

2.2.3. Davidsonian states as stative causatives

The third type of stative predicates that remains to be examined are Davidsonian states, which are considered an intermediate category that is placed between pure states and events in Maienborn (2001, 2005a, 2007). Based on Leferman (2017), in this section I argue that Davidsonian states do not constitute such an intermediate category; rather, they are internally caused states. In other words, their holder is also the participant that is responsible for triggering the state. In the following subsection, I review Maienborn's classification of stative predicates.

2.2.3.1 Davidsonian states

Inspired by certain insights in Dowty (1979) and Bach (1986), Maienborn (2001, 2005a, 2005b, 2007) proposes an ontology that includes events, pure or Kimian states and Davidsonian states. According to Maienborn, events are spatiotemporal objects, while Kimian states are just temporal objects. Davidsonian events like *to sit, to stand* and *to sleep* constitute an intermediate category that is endowed with event properties. Specifically, both events and Davidsonian states, which the author groups as eventualities, are (a) perceptible, (b) can be located in space and time and (c) can vary in the way that they are realized. Hence, eventualities

(a) can serve as infinitival complements of perception verbs;
(b) can combine with locative and temporal modifiers; and
(c) can combine with manner adverbials, instrumentals, comitatives, etc.

In contrast, pure states, which are not considered eventualities, (a) are not accessible to direct perception and have no location, (b) are nonetheless accessible to (higher) cognitive operations and (c) can be located in time. As a consequence, pure or Kimian states

(a) cannot serve as infinitival complements of perception verbs and do not combine with locative modifiers;

(b) are accessible for anaphoric reference; and

(c) combine with temporal modifiers.

Maienborn illustrates the contrast between Davidsonian and Kimian states in German. First, the Davidsonian states in (77), unlike the Kimian states in (78), can serve as complements of perception verbs:

(77) a. Ich sah das Buch auf dem Tisch liegen.

I saw the book on the table lie

'I saw the book lie on the table.'

b. Ich sah Bardo schlafen.

I saw Bardo sleep

'I saw Bardo sleep.'

(78) a. ∗Ich hörte das Radio laut sein.

I heard the radio loud be

'I heard the radio be loud.'

b. ∗Ich sah die Tomaten 1 Kg wiegen.

I saw the tomatoes 1 kg weigh

'I saw the tomatoes weigh 1 kg.'

Second, Davidsonian states can combine with locative modifiers, see (79). Again Kimian states show the converse behavior, see (80).

(79) a. Das Auto wartet an der Ampel.

the car waits at the traffic.light

'The car is waiting at the traffic light.'

b. Die Perlen glänzen in ihrem Haar.

the pearls gleam in her hair

'The pearls are gleaming in her hair.'

(80) a. ∗Das Kleid ist auf der Wäscheleine nass.

the dress is on the clothesline wet

'The dress is wet on the clothesline.'

b. ∗Bardo weis (gerade) dort drüben die Antwort.

Bardo knows (at-this-moment) over there the answer

'Bardo knows the answer over there (at this moment).'

Third, Davidsonian states can co-occur with manner and other similar expressions that involve variation, see (81), while Kimian states cannot, as shown in (82).

(81) a. Bardo schläft friedlich / mit seinem Teddy / ohne Schnuller.
Bardo sleeps calmly with his teddy without dummy
'Bardo sleeps calmly / with his teddy bear / without dummy.'
b. Carolin sas reglos / kerzengerade am Tisch.
Carolin sat motionless straight.as.a.die at.the table
'Carolin sat motionless / straight / at the table.'

(82) a ∗Carolin war unruhig / geduldig durstig.
Carolin was restlessly patiently thirsty
'Carolin was restlessly/patiently thirsty.'
b. ∗Bardo besitzt sparsam / spendabel viel Geld.
Bardo owns thriftily generously much money
'Bardo owns a lot of money thriftily/generously.'

Nevertheless, Kimian states are compatible with time-related modifiers:

(83) a. Carolin war gestern / immer / zweimal / tagelang müde.
Carolin was yesterday always twice for.days tired
'Carolin was (always) tired yesterday / twice / for some days.'
b. Carolin kannte immer / nie / wieder letztes Jahr Leonardos Adresse.
Carolin knew always never again last year Leonardo's address
'Carolin (always/never) knew Leonardo's address again / last year.'

In addition, Kimian states can be referred to anaphorically:

(84) a. Carolin ist wütend. Das wird bald vorbei sein.
Carolin is angry. this will soon over be
'Carolin is angry. This will be soon over.'
b. Das Öl kostet 30 $. Das dauert nun schon 3 Monate.
the oil costs 30 $. this lasts already 3 months
'The oil costs 30 $. This already lasts 3 months.'

In sum, Maienborn concludes that Davidsonian states and events are true eventualities, since they can be perceived, spatially located and vary over time; therefore, they must be represented by an event variable *e*. In contrast, Kimian states cannot be perceived, spatially located or vary over time; therefore, they cannot be represented by an event variable *e*. Nonetheless, insofar are they can combine with temporal modification and can be referred to anaphorically, they must contain a poorer stative argument *k*, which is equivalent to our stative argument *s*. In the following subsection, I review Leferman's (2017) analysis of Davidsonian states as stative causatives.

2.2.3.2 Stative causatives

According to Leferman (2017), positing the existence of an intermediate category of states with event properties is contradictory in essence (see also Rothmayr 2009). By studying *mental state adjectives* (I take the term from Stowell 1991) like *honest*, *brave*, *kind*, *modest*, etc., Leferman concludes that they express states, but they differ from other states insofar as they are internally caused or, in other words, their subjects trigger the state (for other proposals on the syntax and semantics of mental state adjectives, see Partee 1977; Kertz 2006; Martin 2006, 2008, 2015; Landau 2009; Demonte 2019). Based on Rappaport Hovav & Levin's (2000) analysis of verbs like *to gleam*, *to shine* and *to stink*, Leferman concludes that mental state adjectives have the same properties as the predicates that are considered Davidsonian states in Maienborn (2005a, 2005b, 2007) and the predicates that Rappaport Hovav & Levin (2000) consider stative causatives.

Leferman claims that mental state adjectives are stative causatives and, like Maienborn proposed for Davidsonian states, accept locative and manner modification, see (85a), and can serve as complements of the verb *see*, see (85b). In addition, they can appear in the progressive, see (85c), property that Maienborn does not mention.

(85) a. Emma was being elegantly modest in the foyer.
b. I saw Emma be brave.
c. Emma is being brave.

(From Leferman 2017: 178, 179, 199)

Based on Rappaport Hovav & Levin (2000), Leferman proposes that stative causatives are lexically causative, so their subject is always interpreted as a causer even though it lacks animate properties. For example, in *The lamp is shining*, the properties of the lamp are responsible for causing the shining.

In sum, Leferman (2017) argues that Davidsonian states do not encode an event argument. Rather, they are stative causatives, that is, states whose subject is responsible for bringing the state about. Stative causatives include the verbs of sound, light and smell emission examined by Rappaport Hovav & Levin, like *to hum*, *to shine* and *to stink*; the verbs considered Davidsonian states by Maienborn, like *to wait*, *to sleep* and *to sit*; and mental state adjectives, like *honest*, *brave* and *kind*. In the following subsection, I study mental state adjectives in Spanish and conclude that they express internally caused eventualities as well.

2.2.3.3 Stative causatives in Spanish

As mentioned in subsection 2.2.1.1, although stative causatives co-occur with locative and manner modifiers more easily than pure states, Ernst (2016) provides good evidence that locative and manner modifiers are also compatible with pure states, as in *Everyone was quiet in the auditorium* or *He resembles a movie star stereotypically*. Consequently, the two most reliable tests for identifying stative causatives are the ones related to the perception verb *to see* and the progressive.

In Spanish, mental state adjectives can serve as complements of the perception verb *ver* 'to see' and accept the progressive, which confirms that the analysis whereby they are stative causatives can be applied to this language, see (86) and (87). To dispel any doubts, (88) and (89) show that they combine easily with locative and manner modification as well.

(86) a. Le vimos ser valiente.
him see.1.PL be brave
'We saw him be brave.'
b. La vimos ser cruel.
her saw.1.PL be cruel
'We saw her be cruel.'

(87) a. Ellos están siendo muy modestos.
they are being very modest
b. Ellas están siendo muy maleducadas.
they are being very rude

(88) a. Luis fue muy amable en la universidad.
Luis was very kind in the university
b. Luis fue violento en su país.
Luis was violent in his country

(89) a. Luisa fue enigmáticamente amable.
Luisa was enigmatically kind
b. Luisa fue discretamente valiente.
Luisa was discreetly brave

Mental state adjectives can combine with both copulas *ser* and *estar* and in principle do not exhibit different restrictions. Regardless of whether a mental state adjective co-occurs with *ser* or *estar*, it can realize an internal argument headed by the preposition *con* 'with' that expresses the participant that experiences, or is affected by, the state and can combine with temporal, aspectual, locative or manner modifiers:

(90) a. Avelina fue / estuvo amable con Julio.
Avelina was.SER was.ESTAR kind with Julio
'Avelina was.SER/was.ESTAR kind to Julio.'
b. Avelina fue / estuvo amable en la reunión.
Avelina was.SER was.ESTAR kind in the meeting
c. Avelina fue / estuvo amable durante varias semanas.
Avelina was.SER was.ESTAR kind for several weeks
d. Avelina fue / estuvo amable en el autobús.
Avelina was.SER was.ESTAR kind in the bus
e. Avelina fue / estuvo extrañamente amable.[20]
Avelina was.SER was.ESTAR strangely kind

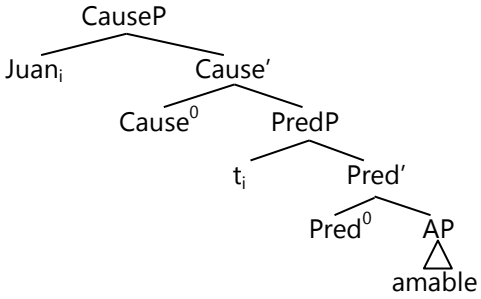
What remains to be shown in this section is a basic composition for mental state adjectives that accounts for their causal properties (see Leferman 2017 for a different implementation that employs two different state variables instead of the node CauseP):

[20] Perhaps, the only contrast between the two Spanish copulas when mental state adjectives are involved is that the copula *ser* can admit an individual-level interpretation as well. Consider the following data:

(i) a. Pablo fue amable.
Pablo was.SER kind
b. Pablo estuvo amable.
Pablo was.ESTAR kind

(ia) can mean either that Pablo had the property of being a kind person, without entailing that he was kind to someone, or that Pablo was kind to someone who is not explicitly mentioned. In contrast, (ib) entails that Pablo was kind to someone. What these data may suggest is that mental state adjectives in Spanish are not lexically causative (as Leferman 2017 claims for English), but rather they can participate in two syntactic configurations: an individual-level and a stative causative configuration, where the copula *estar* can only appear in the latter. Given that this issue is orthogonal for the purposes of this dissertation, I will not solve it here.

(91)



(92) $[\![Juan\ (fue/estuvo)\ amable]\!] = \exists s.\,\mathrm{kind}(s) \wedge \mathrm{holder}(s, \mathrm{j}) \wedge \mathrm{causer}(s, \mathrm{j}).$

The mental state adjective *amable* 'kind' projects an adjectival structure like the individual-level *alto* 'tall' up to PredP. Unlike stage-level predicates, which project StageP, mental state adjectives project CauseP over PredP. This functional node, which I take from Fábregas (2016), introduces the function *causer*, which identifies the holder of the state with a cause. According to Fábregas, CauseP is the adjectival equivalent of the verbal node InitP in Ramchand (2008) and can be used to account for those adjectives whose subjects are also causers. That the holder of the state is also the causer is represented by means of movement of the DP *Juan* to Spec-CauseP, leaving a trace in Spec-PredP. In relation to the copulas, I attribute their licensing to the presence of CauseP, which, I propose, is able to introduce both *ser* and *estar*.

We can conclude that mental state adjectives like *amable* 'kind' and *honesto* 'honest' are stative causatives, that is, their subjects are also responsible for triggering the state, in which case they project the functional node CauseP. In the following section, I provide a summary of the three types of stative predicates depending on their causal properties.

Interim summary

In this section, I have reviewed the three types of states that the literature on stativity had been identified, namely, individual-level, state-level and Davidsonian states. I have provided evidence that the distinction does not rely on spatiotemporality or aspect (or even the relative-absolute distinction), as generally assumed, but rather on causation. First, individual-level states do not involve a cause, either external or internal, and combine with the copula *ser*. Second, stage-level states involve an external cause, which must be a direct cause in the sense of Maienborn & Herdtfelder (2017), and combine with the copula *estar*, which is licensed by the functional node StageP. Third, following Leferman (2017), I have argued that Davidsonian states are stative causative predicates, whose holder is also the causer of the state; stative causatives accept the two copulas, which are licensed by the presence of CauseP. The most attractive point of this analysis is that it offers a unified account for the three types of states with respect to their spatiotemporal and aspectual properties, given that there is empirical evidence that their

differences do not rely on these notions, but rather on the type of causation that they involve. For the purposes of this dissertation, the immediate consequence of this analysis is that we can treat the three types of predicates examined as eventualities, specifically as states. Having examined the notion of 'causation' and its specific relationship with stativity, in the following section I study the relationship of stativity with gradability and homogeneity.

2.3. On gradability and homogeneity

In this section, I provide evidence that, even though stativity is linked to gradability in many cases, namely, gradable adjectives like *tall* and some gradable verbs like *to love*, stativity does not entail gradability. In this respect, in this section I discuss the validity of Baglini's (2015) conception of stativity, which differs from the traditional conception inspired by Vendler (1957) and Dowty (1979) inasmuch as stativity is defined in Baglini's work on the basis of gradability. In addition, based on Dowty (1979) and Rothstein (2004), I also show that, although many states are cumulative and divisible in instants, there are stative predicates that, like activities, are cumulative but divisible in intervals. Specifically, I show that there are two types of stative causatives: the ones that are divisible in intervals and the ones that are divisible in instants. Thus, my contribution in this respect is that neither gradability nor divisibility constitutes defining properties of states, but they play an important role in the configuration of the whole typology of stativity.

Let us examine the relationship between stativity and gradability. Recall from chapter 1 that Baglini (2015; see also Baglini & Kennedy 2019) posits that states are gradable eventualities. Specifically, the author argues that, while events and Davidsonian states are gradable extensively or in time (what Fleischhauer 2016 calls *extent gradation*), states can be graded intensively (what Fleischhauer 2016 calls *degree gradation*). For example, while the event *to run* and the Davidsonian state *to sit* can receive a temporal interpretation in the comparative context of (93), the pure states *to love* and *to be intelligent* can only receive a degree interpretation, see (94):

(93) a. John ran more than Mary. TEMPORAL/*DEGREE

b. Sam sat more than Ben. TEMPORAL/*DEGREE

(94) a. Sam loved Mary more than Ben. *TEMPORAL/DEGREE

b. Mary is more intelligent than Ben.[21] *TEMPORAL/DEGREE

[21] A very similar observation was already made by Maienborn (2005a), who noted that activities and Davidsonian states, unlike pure states, can trigger a temporal interpretation when they are modified by *a little bit*, as in *John sweated / slept / loved Mary a little bit*, where the activity *to sweat* and the Davidsonian state *to sleep* can trigger a temporal interpretation, while the pure state *to love Mary* cannot.

This definition in which stativity is identified with an intensive gradability, while events and Davidsonian states are linked with a temporal or extensive gradability, raises empirical problems that must receive an alternative explanation. First, there are pure states like *to own* and *to belong* that are not gradable, which explains why they cannot trigger either a temporal or a degree reading in gradable constructions, see (95). In other words, Baglini's analysis incorrectly predicts that these predicates are gradable.

(95) a. *Alex owned the house more than Gabi. *TEMPORAL/*DEGREE
b. *Gabi belonged to the club more than Alex. *TEMPORAL/*DEGREE

Arguably, *to own* and *to belong* express states because they express (non-dynamic) properties that are subject to time, as shown in (96) with their combination with time-related modifiers, so the fact that they are not gradable does not impact on their stativity nature.

(96) a. Alex owned the house some years ago.
b. Gabi belonged to the club for several years.

Second, not all Davidsonian states are not gradable in intensity; for example, as argued by Fábregas & Marín (2013), the Spanish verb *brillar* 'to shine' is a Davidsonian state because it accepts the progressive, see (97a), and can be the complement of the perception verb *ver* 'see', see (97b). However, *brillar* 'to shine' is also gradable in intensity and, accordingly, (97c) means 'The lamp is shining in intensity / with a lot of bright'.

(97) a. La lámpara está brillando.
the lamp is shining
b. Vi brillar la lámpara.
Saw.1.SG shine the lamp
'I saw the lamp shine.'
c. La lámpara está brillando mucho.
the lamp is shining a.lot

Third, not all Davidsonian states trigger a temporal interpretation in gradable constructions. For example, mental state adjectives, which were analyzed in the previous section, express Davidsonian states or stative causatives (see also Fábregas et al. 2013 and Leferman 2017). However, they do not trigger a temporal interpretation in gradable constructions:

(98) a. #Matías fue muy amable con Elena.
Matías was very kind with Elena
b. #Matías fue más amable con Elena que Lorena.
Matías was more kind with Elena than Lorena

The symbol # indicates that both (98a) and (98b) are only acceptable in a degree rather than a temporal reading.[22]

We can conclude that states are not defined by being intensively gradable, and Davidsonian states and events are not defined by being extensively or temporally gradable. What the data in (93) and (94) actually show is that activity verbs and *some* Davidsonian states can trigger a temporal interpretation in gradable constructions. In what follows, I will argue that the reason for this behavior is that activities and some stative predicates are *divisible in intervals*. In order to understand this property, a little background on homogeneity, cumulativity and divisibility is necessary.

The most influential proposal on homogeneity (see also Mourelatos 1978; Dowty 1979; Bach 1986; Bosque & Masullo 1998; Rothstein 2004; Wellwood 2014, 2015; among others) is due to Krifka (1989, 1992), who claims that a predicate is homogeneous iff it is cumulative and divisible. On the one hand, according to Krifka, cumulative predicates are as those that, if they are true of their subjects separately, they are also true when collected:

(99) *P* is cumulative iff $\forall x \forall y[P(x) \wedge P(y) \rightarrow P(x \sqcup y)]$.

[22] Moreover, there are verbs expressing Davidsonian states that do not trigger a temporal reading either. This is the case of *dirigir* 'to rule' and *gobernar* 'to govern', among others. As Davidsonian states, they accept the progressive and can serve as complements of the verb *ver* 'to see':

(i) a. Ellos están dirigiendo la empresa adecuadamente.
they are ruling the company properly
b. Ellos están gobernando el país con severidad.
they are governing the country with severity
(ii) a. Le vimos dirigir la empresa adecuadamente.
him saw.1.PL rule the company properly
'We saw him rule the company properly.'
b. La vimos gobernar el país con severidad.
her saw.1.PL govern the country with severity
'We saw her govern the country severely.'

However, they do not give rise to temporal interpretations in gradable constructions (cf. Fábregas & Marín 2013, who do find possible a temporal interpretation for these verbs that other native speakers who I consulted and I do not find possible). If acceptable, the following sentences have a degree rather than a temporal reading, according to which Emilia and Felipe worked hard:

(iii) a. #Emilia dirigió la empresa más que Cándido.
Emilia ruled the company more than Cándido
b. #Felipe gobernó el país mucho.
Felipe governed the country a.lot

In prose, *P* is a cumulative predicate if and only if *P(x)* and *P(y)* can be grouped as a single predicate *P*(*x* ⊔ *y*). For example, two separate entities of water result in water when collected, and two separate events of swimming form one event of swimming when collected. In contrast, two separate books do not result in a single book when collected, and two separate events of reading a book do not form one event of reading a book when collected.

On the other hand, a predicate is divisible iff it is true of its subject and of any of the parts of its subject. The formal expression is provided below:

(100) *P* is divisible iff $\forall x \forall y[P(x) \wedge (y \leq x) \rightarrow P(y)]$.

Informally, *P* is a divisible predicate iff for any *P(x)*, it is also true *P(y)* such that *y* is a part of *x*. For example, any part of the entity water is water,[23] and any part of the state of being on the table is being on the table. In contrast, not any part of a book is a book, and not any part of the event of building a house is building a house.

Although it is often assumed that both activities and states are homogeneous insofar as they are cumulative and divisible, it must be noted that the latter is not exactly the case: while activities and states are cumulative, neither activities nor all stative predicates are divisible stricto sensu. The observation dates back to Dowty (1979), who examined the divisibility properties of eventualities in terms of *strict homogeneity*; in other words, what Dowty (1979) calls strict homogeneity is equivalent to divisibility in Krifka (1989, 1992). In this respect, Dowty (1979: 166) claims that states, as strictly homogeneous predicates, are subject to the subinterval property: "If α is a *stative* predicate, then α(*x*) is true at an interval *I* just in any case α(*x*) is true at all moments within *I*". For example, the sentence *The ball was on the floor for two hours* is true iff the ball was on the floor at every instant of the interval expressed by the aspectual modifier *for two hours*. In contrast, activities are not strictly homogeneous, since they are not valid in all subintervals or instants. For instance, in *Mark ran for two hours*, a single instant within the period of two hours (think of instants as photos, in which movement cannot be captured) does not offer evidence that John ran; rather, we need an interval to evaluate whether the statement is true. Expressing this observation in Krifka's terms, Rothstein (2004) claims that activities are not divisible strictly speaking or, in any case, are divisible in intervals but not in subintervals or instants.

On the other hand, Dowty also notes that verbs like *to sit*, *to stand* or *to wait* express states that, like activities, are valid in intervals, and the author calls them *interval states*. For example, in *Alex waited for Jack for two hours*, a single instant within that period does not offer evidence that

[23] Note that this is a linguistic distinction and does not have to correspond to our world knowledge. For instance, we know that a molecule of water is composed of two atoms of hydrogen and one atom of oxygen, and even atoms are composed of smaller units. However, these divisions are presumably irrelevant for natural languages.

the statement is true or false, so we need an interval to evaluate its truth conditions. Thus, what Dowty concludes is that interval states, and activity predicates, are homogeneous in intervals, while the rest of states are strictly homogeneous or valid in instants. We can articulate this observation in terms of cumulativity and divisibility: activities and states like *to wait* are cumulative but not divisible or, in any case, are divisible in intervals; in contrast, the rest of states are cumulative and divisible.

My contribution is, therefore, that the defining property of states is that they do not involve change in any of their participants over time, and strict homogeneity or divisibility only characterizes one group thereof. Concerning cumulativity, activities and states, in contrast to accomplishments and achievements, are cumulative because they consist of either intervals or instants. In other words, activities and states are cumulative because they involve some kind of homogeneity insofar as they consist in sums of smaller parts (what McNally 2017 formulates as homogeneity to a certain level of granularity); in contrast, accomplishments and achievements constitute heterogeneous events, which are indivisible (either in intervals or instants).

Recall from section 3.1 that dynamism or change is related to the participants of the eventuality, while we have shown here that cumulativity and divisibility are related to the internal composition of the eventuality. Thus, activity verbs express events because at least one of their participants undergoes a change. In contrast, the participants of stative predicates do not undergo any changes. With this in mind, we can explain the following data, which illustrate the different behavior of activities and stative predicates in Spanish and are useful to refute Baglini's (2015) proposal according to which Davidsonian states are gradable extensively or in time, while pure states are gradable in intensity. Consider the following examples, which include activity predicates:

(101) a. Ana caminó varias horas. Esto tuvo lugar ayer.
Ana walked several hours this took place yesterday
b. Lucrecia paró de nadar.
Lucrecia stopped of swim
'Lucrecia stopped swimming.'
c. Pablo bailó lentamente.
Pablo danced slowly

(102) a. Ana caminó mucho.
Ana walked a.lot
b. Lucrecia nadó más que Ambrosio.
Lucrecia swam more than Ambrosio

c. Pabló bailó más que Esteban.
Pablo danced more than Esteban

On the one hand, all the predicates in (101) express events: they accept anaphoric reference by means of the expression *Esto tuvo lugar…* 'This took place', see (101a), and are compatible with the periphrastic verb *parar* 'to stop', see (101b), and with celerative modifiers, see (101c). On the other hand, they can amount to temporal readings in gradable constructions: (102a) can have a reading in which Ana walked for a lot of time, (102b) can have a reading in which Lucrecia swam more time than Ambrosio and (102c) can have a reading in which Pablo danced more time than Esteban. Now consider the following stative predicates:

(103) a. María perteneció a nuestro equipo. *Esto tuvo lugar el año pasado.
María belonged to our team this took place the last year
b. *Jorge paró de dormir.
Jorge stopped of sleep
'Jorge stopped sleeping.'
c. *Lorenzo fue amable con sus sobrinos rápidamente.
Lorenzo was kind with his nephews quickly
'Lorenzo was kind to his nephews quickly.'

(104) a. *María está perteneciendo a nuestro equipo.
María is belonging to our team
a'. *Vi a María pertenecer a nuestro equipo.
saw.1.SG ACC María belong to our team
'I saw María belong to our team.'
b. Jorge está durmiendo.
Jorge is sleeping
b'. Vi a Jorge dormir plácidamente.
saw.1.SG ACC Jorge sleep pleasantly
'I saw Jorge sleep pleasantly.'
c. Lorenzo está siendo amable con sus sobrinos.
Lorenzo is being kind with his nephews
'Lorenzo is being kind to his nephews.'
c'. Vi a Lorenzo ser amable con sus sobrinos.
saw.1.SG ACC Lorenzo be kind with his nephews
'I saw Lorenzo be kind to his nephews.'

(105) a. Jorge durmió mucho.

Jorge slept a.lot

b. #Lorenzo fue más amable con sus sobrinos que su hermana.

Lorenzo was more kind with his nephews than his sister

'Lorenzo was kinder to his nephews than his sister.'

c. *María perteneció al equipo más que Cristina.

María belonged to.the team more than Cristina

All the predicates included in (103) express states, since the participants involved do not undergo any changes, so they reject the tests that are usually employed to identify events. The predicates *dormir* 'to sleep' and *(ser) amable* '(to be) kind' in (104b, c), unlike *pertenecer* 'to belong' in (104a), express stative causatives or Davidsonian states according to the tests shown in subsection 2.2.3.3, namely, they accept the progressive and can serve as complements of the perception verb *ver* 'see'. On the other hand, only the Davidsonian state *dormir* 'to sleep', which is cumulative and divisible in intervals, can trigger a temporal interpretation in gradable constructions, see (105a). In contrast, the Davidsonian predicate *(ser) amable* '(to be) kind' is divisible in subinterval or instants, so it lacks constitutive temporal intervals and cannot be temporally measured, see (105b), where the symbol # indicates that a degree reading is acceptable. Finally, the pure state *pertenecer* 'to belong' is not gradable, so it cannot participate in gradable constructions, see (105c).

All these data show that Baglini's (2015) analysis according to which activities and Davidsonian states are gradable in time, while pure states are gradable in intensity, must be refined, given that not all Davidsonian states give rise to temporal readings in gradable constructions and not all states are gradable. The reason why only some Davidsonian states are gradable in time is that, like activities, they are divisible in intervals.

In conclusion, in this section I have refuted the association between stativity and gradability and concluded that not all states are gradable. I have also shown that only activities and a certain group of stative causatives or Davidsonian states prompt temporal interpretations in gradable constructions. Based on Dowty (1979) and Rothstein (2004), I claim that the ones that do are cumulative but not divisible (or are divisible in intervals in any case), while the ones that do not are cumulative and divisible. We conclude that neither gradability nor divisibility constitutes defining properties of states, but they allow us to classify different types of stative predicates. Below, I offer a table that sums up my typology of eventualities and their fundamental properties:

Table 1: Typology of eventualities

<table>
<tr><td colspan="7">Eventualities (temporal objects)</td></tr>
<tr><td colspan="3">Events (dynamic)</td><td colspan="4">States (non-dynamic and atelic)</td></tr>
<tr><td rowspan="2">Atelic</td><td colspan="2">Telic</td><td rowspan="2">Non-caused</td><td colspan="3">Caused</td></tr>
<tr><td>Durative</td><td>Punctual</td><td>Externally</td><td colspan="2">Internally</td></tr>
<tr><td>Activities (cumulative, divisible in intervals)</td><td>Accomplishments (heterogeneous)</td><td>Achievements (heterogeneous)</td><td>Individual-level (cumulative, divisible in instants)</td><td>Stage-level (cumulative, divisible in instants)</td><td colspan="2">Stative causatives (cumulative)</td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td>Divisible in intervals</td><td>Divisible in instants</td></tr>
<tr><td>nadar ‘to swim’</td><td>leer un libro ‘to read a book’</td><td>llegar ‘to arrive’</td><td>alto ‘tall’</td><td>cansado ‘tired’</td><td>esperar ‘to wait’</td><td>amable ‘kind’</td></tr>
</table>

2.4. Representing gradability

Having offered a precise characterization of stativity and its relation to causation, homogeneity and gradability, in this section I describe my model about the representation of gradability in the stative domain. Adopting a well-founded model of gradability is essential for the purposes of this dissertation, since deadjectival nominalizations are derived from gradable adjectives.[24] Specifically, I will briefly review degree-less theories, degree-based theories and the state-kind-based theory devised by Anderson & Morzycki (2015), who assume an intermediate stance: like degree-based approaches, the authors make use of degrees, although they do not consist in numerical representations, but rather equivalence classes of states; like degree-less approaches, they dispense with degrees as ontological objects of type *d*.

2.4.1 Degrees as kinds

The different approaches on gradability can be divided into two big groups: the ones that make use of degrees of type *d*, which can be called *degree-based* approaches, and the ones that do not, which are called here *degree-less* approaches. On the one hand, in degree-less approaches (Kamp 1975; Klein 1980; van Rooij 2011a, 2011b; Doetjes 2008; Doetjes et al. 2011; Burnett 2014; a.o.), both gradable and non-gradable adjectives are predicates of individuals of type <e,t>. Gradable predicates are context-dependent and associated with a domain that is partitioned

[24] In this dissertation, I assume that deadjectival nominalizations are derived from gradable adjectives, but I include possible counterexamples and offer a brief discussion in chapter 5.

into three subdomains: the first one is the positive subdomain, which contains individuals for which the adjectival property is true; the second one is the negative subdomain, which contains individuals for which the adjectival property is false; and the third one is an extension gap, which contains borderline cases or individuals for which the adjectival property is neither true nor false.

The warhorse and great advantage of degree-less approaches is that they do not need to postulate the existence of a null morpheme (usually POS, from Cresswell 1976, or EVAL, from Rett 2008) to account for the semantics of the positive construction: for example, *Mary is tall* is true in a context *c* iff Mary belongs to the positive subdomain in *c*. A theory on gradability that does not make use of additional adjectival morphology in the positive construction is in principle preferable, since there is cross-linguistic evidence that the positive form of the adjective is morphologically simpler than the comparative or the equative forms (Bobalijk 2012).

However, as Kennedy (1997, 2011) notes (see also Bochnak 2013 and Morzycki 2015 for discussion), in dispensing with that null morpheme, we must face several empirical problems that do not have an easy solution; specifically, Kennedy (2011) focuses on explicit and implicit comparatives. Explicit comparatives include degree morphology, as in *The box is bigger than the jeweler*, while implicit comparisons do not, as in *The box is big compared to the jeweler*. Explicit comparatives allow for crisp judgments, that is, expressions that are used for expressing differences of a very small degree: for example, if the box is just 0.5 cm bigger than the jeweler, it is possible to utter *The box is bigger than the jeweler*. In contrast, implicit comparisons do not allow for crisp judgments; in the same context, it is not possible to utter #*The box is big compared to the jeweler*. However, degree-less approaches do not predict such a contrast, insofar as implicit comparatives, like explicit ones, do not include POS or, in other words, these approaches predict that both structures should be equivalent.

van Rooij (2011b) tackles the contrast by means of constraints: based on Klein (1980), the author posits that implicit comparatives are evaluated with respect to a context that only includes the two objects compared, the box and the jeweler, and are subject to a similarity constraint, which excludes the possibility of comparing entities with a similar size. In contrast, explicit comparatives are evaluated with respect to a context that includes other objects in addition to the box and the jeweler and are subject to a *witness* constraint, according to which some of the other objects are necessarily just a bit bigger and smaller than the two compared objects. However, as Kennedy (2011) points out, the existence of these objects need not correspond to actual objects in the world that the sentence is about and introduces abstract units of measurement in a different guise, which undermines the essence of degree-less approaches. In conclusion, in the light of the contrast between explicit and implicit comparatives, it is evinced that the cost for degree-less approaches in dispensing with the null

morpheme POS is considerable, given that they need to resort to specific semantic constraints in order to cover the empirical phenomena with respect to the positive form of the adjective, which supposes an additional complexity that make them lose their main attractive points.

On the other hand, degree-based theories (Seuren 1973; Cresswell 1976; von Stechow 1984; Bierwisch 1989; Schwarzschild & Wilkinson 2002; Kennedy 1997, 2007, 2011; Kennedy & McNally 2005; Fults 2006; Rett 2008; Morzycki 2008, 2009, 2015; a.o.) posit that gradable adjectives, which are traditionally of type <d,<e,t>> (or also <e,d> or <e,<d,t>>), invoke totally ordered sets of degrees or scales. In assuming a scalar ordering, they offer a thorough explanation for explicit and implicit comparisons. Explicit comparisons include an explicit degree modifier, while implicit comparisons include a null morpheme that introduces a standard of comparison. Thus, although degree-based approaches are more complex than degree-less ones insofar as they include a null morpheme to account for the positive form of the adjective, they are simpler insofar as they do not have to resort to specific constraints to cover all empirical phenomena.[25]

However, neither degree-less nor traditional degree-based approaches makes use of an eventuality variable *s* for states, which is crucial to capture the eventuality properties of gradable adjectives and their nominalizations. In line with the Neo-Davidsonian semantics, Anderson & Morzycki (2015) design a model that captures the advantages of both degree-based and degree-less theories using an eventuality variable *s* for states and deriving degrees from so-called state-kinds.[26] The authors start from the observation made in Landman & Morzycki (2003) that, in certain languages, the same functional element is used for anaphorically referring to kinds, manner and degrees. This is the case of the Polish particle *tak(i)*:

(106) a. taki pies. KIND
such.M dog
'such a dog, a dog of that kind'
b. tak się zachowywać. MANNER
such REFL behave
'behave that way'

[25] The debate between the two approaches is vast and concerns other arguments that I ignore here. I refer the interested reader to the sources for the detailed picture.

[26] Specifically, the authors claim that gradable adjectives express Davidsonian states in the sense of Maienborn (2005a, 2005b, 2007), given that they can combine with manner and locative modification. I do not follow the authors in this respect, since manner and locative modification is not useful to identify Davidsonian states, given that pure (or Kimian in the sense of Maienborn) states accept it too: *Peter loves Adam passionately*; *Jose was famous in Rome* (see Ernst 2016 for an extensive argumentation). Davidsonian states, which are taken as stative causatives in this dissertation following Leferman (2017), can occur in the progressive and serve as infinitival complements of the verb *see*, as in *John is being honest (to Paul)*; *I saw Mary be rude (to Paul)*, where *honest* and *rude* are mental state adjectives. However, not all gradable adjectives express Davidsonian states: for instance, this is the case of *tall* and *sad*: **John is being tall*, **I saw Mary be sad*. In conclusion, gradable adjectives are predicates of states and only one group thereof, namely, mental state adjectives, constitute Davidsonian states or stative causatives.

c. tak wysoki. DEGREE

such tall

'that tall'

In order to account for the similarities among kinds, manner and degrees, the authors develop a model that includes kinds as ontological objects, and derive manner and degrees from them. As already mentioned in chapter 1, since Carlson (1977, 2003), the kind-token dichotomy has acquired a great relevance in theoretical linguistics (Zamparelli 1995; Chierchia 1998a; Landman & Morzycki 2003; Dayal 2004; McNally & Boleda 2004; Landman 2006; Castroviejo & Schwager 2008; Espinal & McNally 2011; Gehrke 2011, 2015, 2017; Umbach & Gust 2014; Gehrke & McNally 2015; Espinal & Borik 2015; Zhang 2020; a.o.). A kind consists in all objects that share a certain property in any given world, while a token is simply one of those objects in a certain world. For example, this dichotomy allows us to explain the semantic difference between a DP when referring to a specific individual, e.g. a token, and the same DP when referring to the class of individuals, e.g. a kind. Observe the following contrast:

(107) a. La jirafa se comió las ramas.

the giraffe REFL *ate the branches*

'The giraffe ate the braches.'

b. La jirafa es común.

the giraffe is common

'Giraffes are common.'

In (107a) the DP *la jirafa* 'the giraffe' refers to a specific giraffe that ate the branches, while in (107b) the DP refers to the natural class of giraffes. In the kind-token tradition, the basic reading is the generic or kind reading, while the token reading is derived by means of an additional functional projection in the syntax. For example, in Espinal & Borik (2015), with respect to the domain of entities, the token reading is obtained by means of the functional projection NumberP (I flesh out this proposal in chapter 4).

Anderson & Morzycki claim that the kind-token dichotomy is also applicable to manner and degrees. Based on Chierchia (1998a), the authors treat kinds as functions from worlds into pluralities. For example, the kind RABBIT consists of all pluralities of rabbits in any given world, and being a realization of that kind, e.g. a token, is just to be one of its members. In addition, they identify event-kinds with manner, on the one hand, and state-kinds with manner and degrees, on the other; specifically, they identify *degree*-state-kinds with degrees and state-kinds

with manner, as will be explained below. With respect to events and manner, for example the event-kind CLUMSY consists of all possible events that are performed clumsily, and a particular clumsy event is the realization of the event-kind CLUMSY.

Regarding state-kinds, they follow Cresswell (1976) in taking degrees as equivalence classes. Nevertheless, while for Cresswell degrees are equivalence classes of individuals (for instance, the degree SIX-FEET-TALL would consist of all individuals that are precisely that tall), for Anderson & Morzycki degrees are equivalence classes of states. For example, the degree-state-kind SIX-FEET-TALL consists of all possible states of being that tall. Hence, as Anderson & Morzycki point out, measuring a state amounts to determining what degree-state-kind it realizes. In dispensing with degrees as ontological objects, the authors explain why there are many adjectival modifiers that prompt a manner rather than a degree reading:

(108) a. Clyde is visibly happy.
b. Clyde is strangely beautiful.

Although there have been attempts to harmonize data such as (108) with degree-based theories (Morzycki 2008; Nouwen 2011), these analyses require an undesirable complexity that can be avoided by positing that degrees are derived from state-kinds. As the authors note, the most natural reading for the statements in (108) is 'Clyde is happy in a visible way' and 'Clyde is beautiful in a strange way', which cannot be explained under an account in which degrees are just points or intervals on a scale. In other words, as advanced in chapter 1, insofar as degrees are defined as numerical representations, their value cannot be *visible* or *strange*. In Anderson & Morzycki's account, *visibly* and *strangely* are state-kinds, but they are not *degree*-state-kinds because they do not constitute equivalence classes, which are inherently ordered; in other words, the state-kind *a height of two meters*, unlike the state-kind *an incredible height*, occupies the same place on the scale of height in all circumstances. Thus, Anderson & Morzycki (2015) posit that gradable adjectives can combine with degree modifiers, which denote states that realize state-kinds that are inherently ordered, and with manner modifiers, which denote states that realize state-kinds that are not inherently ordered. In chapter 4, I provide an additional argument in favor of excluding degrees from the ontology of semantic objects, which is based on morphological considerations that I have not explained yet.

Going back to Anderson & Morzycki's proposal, we can move on to the technical details. The authors claim that gradable adjectives denote relations between states and individuals of type <e,<s,t>>. Given that degrees are state-kinds, a measure phrase like *six feet* denotes a property

of states that realizes the degree-state-kind SIX-FEET-TALL. The semantic composition for *Floyd (is) six feet tall* works as follows:

(109) a. $[\![tall]\!] = \lambda x \lambda s.\, \text{tall}(s, x)$.

b. $[\![Floyd\ tall]\!] = \lambda s.\, \text{tall}(s, \text{Floyd})$.

c. $[\![six\ feet]\!] = \lambda s.\ {}^{\cup}\text{SIX FEET}(s)$.

d. $[\![[six\ feet]\ [Floyd\ tall]]\!] = \lambda s.\, \text{tall}(s, \text{Floyd}) \wedge {}^{\cup}\text{SIX FEET}(s)$. by PM

Once the state argument is existentially bound, the statement is true iff Floyd is in the state of having a height that realizes the degree-state-kind SIX-FEET-TALL. Note that *Floyd tall* and *six feet* are composed intersectively by Predicate Modification (PM), and the up operator $^{\cup}$ represents the realization relation (from Chierchia 1998a).

In cases where there are no explicit degree modifiers, as in *Floyd is tall*, Anderson & Morzycki assume that the null morpheme EVAL (from Rett 2008), reminiscent of POS (Cresswell 1976; von Stechow 1984; Kennedy 1997; a.o.),[27] rescues the derivation from having the trivial meaning 'Floyd has some height'. The occurrence of this morpheme captures the intended meaning, namely, 'Floyd has a certain degree of height that surpasses a contextual standard of comparison':

(110) a. $[\![Floyd\ tall]\!] = \lambda s.\, \text{tall}(s, \text{Floyd})$.

b. $[\![EVAL]\!] = \lambda s.\, \exists k \in \text{degree.state.kinds(s)}[{}^{\cup}k(s) \wedge k > st_c]$.

c. $[\![EVAL\ [Floyd\ tall]]\!] = \lambda s.\, \exists k \in \text{degree.state.kinds(s)}[{}^{\cup}k(s) \wedge k > st_c \wedge \text{tall}(s, \text{Floyd})]$.

by PM

Once the state argument is existentially bound, this statement is true iff Floyd is in the state of having a height that realizes a degree-state-kind k above the standard st_c. In sum, Anderson & Morzycki's (2015) approach is appealing because it captures gradability by making use of a system that includes degrees as units of representation that do not constitute ontological objects in our semantic ontology, but rather they are derived from state-kinds. In this sense, the model is placed on an intermediate position between degree-based and degree-less theories, since it makes use of degrees as derived notions.

[27] As Anderson & Morzycki (2015) themselves point out, it would also be possible to use the null morpheme POS instead of EVAL. In principle, the difference between the two null morphemes has more theoretical than empirical implications: POS is restricted to the positive construction, whereas EVAL is supposed to appear in evaluative contexts, since, otherwise, the structure would provide a trivial meaning, and can appear in other constructions rather than the positive one. For example, for Rett (2008) EVAL must appear in *How short is John?*, because that sentence entails, she argues, that John is short (cf. *How tall is John?*, which does not entail that John is tall). For the purposes of this dissertation, the choice of EVAL over POS is irrelevant.

Finally, it is important to note that, in principle, there are no theoretical reasons to exclude the possibility that degrees can be built out of event-kinds too. However, Anderson & Morzycki show that there is empirical evidence that this is not the case. The activity predicate *to run*, even assuming that it is associated with a scale of path that measures out the traversed distance, trigger a manner rather than a degree reading when combined with kind modifiers such as the similative *as*, see (111a); and the same holds for the degree achievement *to cool* in (111b) even assuming that it inherits a scale of coolness from its base adjective.

(111) a. Floyd ran six miles/for two hours, and Clyde ran as Floyd did.
b. Floyd cooled his coffee 5 degrees, and Clyde cooled his coffee as Floyd did.
(Anderson & Morzycki 2015: 810)

Ultimately, what this data illustrate is that events are not gradable or, at least, are not gradable in the same sense as states are.[28] Recall from section 2.3 that activities, unlike (subinterval) states, license temporal readings in gradable constructions (what Fleischhauer 2016 calls extent gradation versus degree gradation), which is in accordance with the fact that events are not gradable or are not gradable in the same sense as states. Note that the degree of distance that is associated with Floyd in (111a) or the degree of coolness that is associated with Floyd's coffee in (111b) increases over the course of the events. In contrast, degrees remain stable when stative predicates are involved; for instance, stative verbs like *to cost* are associated with a scale of price in which there is a degree that does not change over the course of the state.

The comparison of the event predicate *to run* with the stative predicate *to cost* is telling: for example, in *John run six miles yesterday*, we cannot associate the degree *six miles* with the whole event of swimming, given that this degree is only reached at the end of the event (in fact, note that the occurrence of the measure phrase forces a telic and, therefore, heterogeneous interpretation: *John swam six miles #for/in an hour*). In contrast, in *The book cost ten euros yesterday*, we can actually associate the degree *ten euros* with the whole state of costing. In short, if events are not gradable in the relevant sense, that is, in what Fleischhauer (2016) calls degree gradation, there is no reason to posit that degrees can be built out of event-kinds.[29]

[28] In fact, Gehrke & Castroviejo (2016), based on the study of the English modifier *well* (and their counterparts in German and Catalan), provide empirical evidence that degree readings can only arise if a stative predicate or, in any case, a stative phase, typically a result state, is involved in the predication. In this dissertation, I do not deal with gradability in complex predicates that involve an event plus a result stative phase; the reader is referred to Gehrke & Castroviejo (2016) and references therein.

[29] Exceptionally, the Spanish verb *correr* 'to run', unlike English *to run*, can also amount to a degree reading in similative contexts; for instance, *Juan corre como María* 'Juan runs like María', in addition to a manner reading, can also mean 'Juan is as fast as María'. This is an idiosyncratic property of this specific Spanish verb that the rest of activity verbs do not

In sum, Anderson & Morzycki capture the eventuality nature of gradable adjectives by including a state variable *s* in their denotation. On the one hand, they incorporate one of the main attractive points of degree-less theories in dispensing with degrees as ontological objects. On the other hand, as in degree-based theories, they make use of units of representations or degrees, but they are derived from equivalence classes of states. In the following section, I present the model of gradability on which my proposal is based, which includes one modification to Anderson & Morzycki's (2015) model, namely, that gradable adjectives are rather predicates of state-kinds.

2.4.2. Gradable adjectives as predicates of kinds

In this section, I propose that gradable adjectives denote in the domain of state-kinds rather than the domain of state-tokens and express state-tokens when they are predicated of a specific individual. In that case, an aspectual node AspP attaches to the adjectival structure to realize a state-token.

Although Anderson & Morzycki's (2015) model is appealing insofar as it allows us to account for the eventuality nature of gradable adjectives and their combination with manner modifiers, a model in which gradable adjectives denote in the domain of state-tokens predicts that their corresponding deadjectival nominalizations operate in the same domain. However, as we will see in chapter 4, deadjectival nominalizations can operate in the kind domain too (for example, in *Honesty abounds*), so it is necessary to modify the model slightly.

Above we have seen that the kind-token distinction has usually been applied to the domain of entities. Nonetheless, the distinction has also been applied to the domain of events. In this respect, Gehrke (2011, 2015, 2017) proposes an analysis in which German eventive verbs are not predicates of event-tokens, but rather predicates of event-kinds. This movement allows the author to account for the behavior of adjectival passives in German, which reject temporal and locative modifiers. According to Gehrke, if verbs denoted event-tokens and, therefore, adjectival participles expressed event-resulting states (cf. Kratzer 2000; cf. Koontz-Garboden 2010 for English), it would be expected that locative and temporal modification related to that event is accepted. However, this is not the case:

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display; for example, *Juan nada / patina / camina / baila / gatea / vuela como María* 'Juan swims / skates / walks / dances / crawls / flies like María' cannot amount to a degree reading. Given that the behavior of *correr* 'to run' is exceptional, there are no reasons to posit that events are gradable in the relevant sense, so we can maintain that degrees must not be built out of event-kinds.

(112) a. *Der Computer ist vor drei Tagen repariert.
the computer is before three days repaired
'The computer is repaired three days ago.'
b. #Die Reifen sind in der Garage aufgepumpt.
the tires are in the garage inflated
'The tires are inflated in the garage.'

(From Gehrke 2015: 6)

In (112a) the temporal modifier *vor drei Tagen* 'three days ago' cannot access the underlying event of repairing the computer. Analogously, in (112b) the locative modifier *in der Garage* 'in the garage' cannot access the underlying event of inflating the tires; the symbol # indicates that there is a possible reading in which the locative modifier locates the state of being inflated.

Gehrke argues that the insertion of temporal and locative modification is not acceptable in adjectival passives because the state does not entail an event-token, but rather an event-kind. Thus, in (112a) *repariert* 'repaired' is the resulting state of the event-kind *reparieren* 'to repair', while in (112b) *aufgepumpt* 'inflated' is the resulting state of the event-kind *aufpumpen* 'to inflate'. For example, for the adjectival passive *Die Tür ist geschlossen* 'The door is closed', Gehrke proposes the following denotation:

(113) $[\![Die\ Tür\ ist\ geschlossen]\!] = \lambda s.\exists e_k, x_k[\text{close}(e_k) \wedge \text{become}(s)(e_k) \wedge \text{closed}(\text{the door}, s) \wedge \text{Initiator}(x_k, e_k)]$.

(From Gehrke 2015: 23)

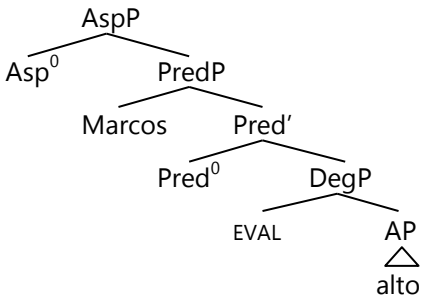
In positing that eventive verbs are predicates of event-kinds rather than event-tokens, the fact that the adjectival passive *Die Tür ist geschlossen* 'The door is closed' denotes the set of resultant states *s* of an event-kind e_k is straightforwardly explained. As Gehrke claims, in case the verb triggers an event-token reading, an aspectual node attaches to the structure to associate an event-kind from the set of event-kinds with an event-token.[30]

In a parallel fashion as Gehrke's analysis for eventive verbs, in this dissertation I argue that gradable adjectives are predicates of state-kinds rather than state-tokens. This movement allows us to capture the existence of state-kind deadjectival nominalizations, which will be analyzed in chapter 4. Specifically, what I propose is that gradable adjectives are predicates of state-kinds of type $<s_k,t>$. If arguments are present, an aspectual node AspP attaches to the structure to

[30] Ramchand (2018) does not employ a technical apparatus that includes kinds, but in the same spirit the author implements a proposal in which eventualities are cognitive abstractions that cannot be located in time or space until an aspectual node attaches to the derivation.

instantiate a state-kind from the set of state-kinds. For *Marcos (es) alto* 'Marcos (is) tall', I propose the following analysis:

(114)



(115) a. $[\![AP]\!] = \lambda s_k.\,\text{tall}(s_k).$

b. $[\![EVAL]\!] = \lambda G_{<sk,t>}\lambda s_k.\,G(s_k) \wedge s_k > st_c.$

c. $[\![DegP]\!] = \lambda s_k.\,\text{tall}(s_k) \wedge s_k > st_c.$

d. $[\![Pred^0]\!] = \lambda G_{<sk,t>}\lambda x\lambda s_k.\,G(s_k) \wedge \text{holder}(s_k, x).$

e. $[\![Pred']\!] = \lambda x\lambda s_k.\,\text{tall}(s_k) \wedge s_k > st_c \wedge \text{holder}(s_k, x).$ by EI

f. $[\![PredP]\!] = \lambda s_k.\,\text{tall}(s_k) \wedge s_k > st_c \wedge \text{holder}(s_k, \text{m}).$

g. $[\![Asp^0]\!] = \lambda G_{<sk,t>}\lambda s.\,G(s_k) \wedge R(s_k, s).$

h. $[\![AspP]\!] = \lambda s.\,\exists s_k[\text{tall}(s_k) \wedge s_k > st_c \wedge \text{holder}(s_k, \text{m}) \wedge R(s_k, s)].$

The starting point of the derivation is the adjective, which denotes a set of state-kinds of type <s_k,t> and projects AP. I propose that this set of state-kinds is totally preordered (see chapter 4 for a detailed explanation of total preorders and empirical argumentation), which means that all states-kinds denoted by the gradable adjective can be ordered with respect to one another; therefore, the distinction between degree-state-kinds *k*, which are inherently ordered, and state-kinds s_k, which are not, need not be captured that way, so I do not make use of the variable *k*. Accordingly, I posit that the null morpheme EVAL is of type <<s_k,t>,<s_k,t>> and restricts the adjectival domain to those state-kinds that exceed a contextual standard of comparison state-kind st_c.[31] An alternative analysis more in line with Anderson & Morzycki (2015) in which EVAL is of type <s_k,t> and combines intersectively with the adjective could have been easily implemented too; this is irrelevant for the purposes of this section.

[31] Zhang (2020) adopts an intermediate stance according to which our semantic ontology must include both degrees as state-kinds, as in Anderson & Morzycki (2015), and degrees as numerical representations, as in degree-based theories. According to Zhang (2020: 504), "comparatives typically encode comparisons resulting in differences and their semantics potentially involves measurable differences", so they need to be based on scales with numbers. However, by positing that there are state-kinds that are inherently ordered, like the ones denoted by measure phrases, and other state-kinds that are not, like the ones denoted by manner adjectives like *extraño* 'strange', the existence of degrees as numerical representations becomes unnecessary, so I do not follow Zhang's analysis in this dissertation.

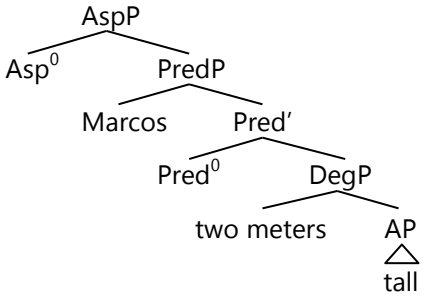
On the other hand, I assume with Wellwood (2014, 2015) that adjectives are a defective category that needs the assistance of a functional node, which we can call PredP (Bowers 1993; Baker 2003), to introduce its external argument. Alternatively, Anderson & Morzycki propose that the holder is introduced in the denotation of the adjective, which is of type <e,<s,t>>, but this means that the holder is an internal argument that is base-generated before the insertion of the degree modifier, which does not receive syntactic support. Semantically, we can posit that the external argument is introduced via the rule Eventuality Identification (EI, from Kratzer's 1996 and Wellwood's 2014 Event Identification rule, see chapter 1), which introduces the individual variable *x* and demotes the state-kind variable s_k to second position. The function *holder* simply associates the state-kind s_k with the individual *x*. Subsequently, Spec-PredP saturates the individual.

So far, the adjectival structure operates in the state-kind domain. In order to express a state-token, the aspectual node AspP attaches to the structure and introduces the realization function *R* (from Carlson 1977), which associates the state-kind s_k with a state-token *s*. The movement from the state-kind to the state-token domain is not unrestricted, but it is rather triggered by the occurrence of the adjectival arguments. As shown in chapter 4, the state-kind interpretation only holds when the adjectival arguments are absent, as in *La honestidad es hermosa* '(lit.) The honesty is beautiful, Honesty is beautiful'), so there is a tight connection between the token interpretation and the presence of arguments. In other words, the functional node AspP can only operate when PredP, which is the functional node that introduces a subject, appears in the derivation. Once the state argument *s* is bound (presumably in TP), the statement is true iff there is a state(-token) of having a height *s* that is associated with a state-kind s_k whose holder is Marcos, and that state-kind s_k is above a contextual state-kind st_c.

Finally, note that, unlike Chierchia (1998a), I do not take kinds to be functions from worlds into pluralities, but rather, like Carlson (1977, 2003), Gehrke (2011, 2015, 2017) and Espinal & Borik (2015), as undivided ontological objects with their own semantic type. Thus, although kinds are the result of generalizing over various instances, e.g. the kind *rabbit* consists in all rabbits in any given world, the result of this generalization is a segregated object, so we can take the kind *rabbit* as an integral object. Consequently, unlike Chierchia (1998a) and Anderson & Morzycki (2015), I do not employ the up operator $^{\cup}$ to represent the realization relation; rather, my analysis includes the realization function *R*, from Carlson (1977), which associates a state-kind from the set of the state-kinds denoted by the adjective with a state-token.

With respect to measure phrases, we can take them as predicates of state-kinds of type $<s_k,t>$. Given that the co-occurrence of measure phrases with adjectives in Spanish is extremely constrained (see Sawada & Grano 2011), I illustrate the composition in English:

(116)



(117) a. $[\![AP]\!] = \lambda s_k.\,\text{tall}(s_k)$.

b. $[\![two\ meters]\!] = \lambda s_k.\,\text{two.meters}(s_k)$.

c. $[\![DegP]\!] = \lambda s_k.\,\text{tall}(s_k) \wedge \text{two.meters}(s_k)$. by PM

d. $[\![Pred^0]\!] = \lambda G_{<sk,t>} \lambda x \lambda s_k.\, G(s_k) \wedge \text{holder}(s_k, x)$.

e. $[\![Pred']\!] = \lambda x \lambda s_k.\,\text{tall}(s_k) \wedge \text{two.meters}(s_k) \wedge \text{holder}(s_k, x)$. by EI

f. $[\![PredP]\!] = \lambda s_k.\,\text{tall}(s_k) \wedge \text{two.meters}(s_k) \wedge \text{holder}(s_k, \text{m})$.

g. $[\![Asp^0]\!] = \lambda G_{<sk,t>} \lambda s.\, G(s_k) \wedge R(s_k, s)$.

h. $[\![AspP]\!] = \lambda s.\, \exists s_k[\text{tall}(s_k) \wedge \text{two.meters}(s_k) \wedge \text{holder}(s_k, \text{m}) \wedge R(s_k, s)]$.

Once the state argument *s* is existentially bound, the statement is true iff there is a state(-token) of having a height that is associated with a state-kind s_k whose holder is Marcos and that state-kind is two meters.

Before closing this section, it is important to reflect on manner modifiers and the problem that they raise. Specifically, Anderson & Morzycki note that manner modifiers give rise to entailments to the positive: for example, *Floyd is strangely tall* entails that Floyd is tall, and the same holds for Spanish, hence the following contradiction:

(118) #Floyd es extrañamente alto, pero no es alto.
Floyd is strangely tall but not is.3.SG tall
'Floyd is strangely tall, but he is not tall.'

Anderson & Morzycki (2015: 823) claim that the most natural way of accounting for the entailment is to insert the null morpheme EVAL, but the authors are not completely convinced of this movement because in that case "this couldn't be driven by a need to avoid fatally weak truth conditions". In other words, the null morpheme EVAL is supposed to rescue the derivation from having the trivial meaning 'Floyd has some height' only in the absence of an explicit modifier, but the manner modifier should prevent a trivial meaning if, like degree modifiers, it introduces state-kinds. Moreover, manner and degree modifiers are in complementary distribution, so there is no structural place for EVAL, see (119) for English and (120) for Spanish,

where the symbol # indicates that there is an acceptable reading in which *extrañamente* 'strangely' functions as a propositional rather than a manner modifier, in which case it would mean 'It is strange to me that Floyd is very tall / taller than Clyde':

(119) a. *Floyd is strangely six feet tall.
b. *Floyd is strangely very/really tall.
c. ??Floyd is strangely taller than Clyde.

(Anderson & Morzycki 2015: 822)

(120) a. #Floyd es extrañamente muy/poco alto.
Floyd is strangely very little tall
b. #Floyd es extrañamente más alto que Clyde.[32]
Floyd is strangely more tall than Clyde

I cannot provide a satisfactory solution to this empirical problem, but I can point to two possible analyses. The first analysis consists in positing that adverbs like *extrañamente* 'strangely', like degree modifiers, have a gradable semantics and introduce a contextual standard of comparison state-kind in their denotation; in prose, manner modifiers would be degree modifiers that entail the semantics of EVAL:

(121) a. $[\![extra\tilde{n}amente]\!] = \lambda G_{<sk,t>}\lambda s_k.\, G(s_k) \wedge \text{strange}(s_k) \wedge s_k > st_{c\,G}.$
b. $[\![extra\tilde{n}amente\ alto]\!] = \lambda s_k.\, \text{tall}(s_k) \wedge \text{strange}(s_k) \wedge s_k > st_{c\,tall}.$

This analysis has the advantage of offering a unified treatment for degree and manner adverbs, but it cannot offer a unified account for both manner adverbs and adjectives, since the latter do not give rise to entailments to the positive. For instance, (122a) does not entail that the dunes are tall: the height of the dunes might be strange because it is extremely low or because

[32] In Spanish, open scale adjectives like *alto* 'tall' do not license measure phrases, so there is no adjectival structure equivalent to *Floyd is six feet tall*. According to Sawada & Grano (2011), only lower-closed scale adjectives are compatible with measure phrases, which must appear is post-adjectival position:

(i) Esta varilla está doblada noventa grados.
this rod is bent ninety degrees
'This rod is ninety degrees bent.'

(From Sawada & Grano 2011: 196)

If adverbs like *extrañamente* 'strangely' co-appear with the measure phrase, as in (ii), the unique interpretation available is the one in which *extrañamente* 'strangely' functions as a propositional rather than a manner modifier, as correctly predicted if manner and degree modifiers are in complementary distribution:

(ii) #La varilla está extrañamente doblada noventa grados.
the rod is strangely bent ninety degrees

it is variable (I will come back to this issue in chapter 3). In this case, we would have to articulate an analysis in which the adverbial morpheme *-mente* contributes a standard of comparison when attaching to adjectives to form adverbs. However, more problematic would be to account for the behavior of manner adverbs when modifying non-gradable predicates, as in (122b), where the eventive verb *comportarse* 'to behave' is not gradable (in the relevant sense). In this case, we would need to posit that the degree modifier *extrañamente* 'strangely' is formed out of its homonymous manner modifier, which would complicate the system in introducing additional complexity.

(122) a. La altura de las dunas es extraña.
the height of the dunes is strange
a. Floyd se comportó extrañamente.
Floyd REFL behaved strangely
'Floyd behaved strangely.'

The second possible analysis would be to insert the null morpheme EVAL in the computation, in line with what Anderson & Morzycki (2015) point out:

(123) a. $[\![alto]\!] = \lambda s_k.\,\text{tall}(s_k)$.
b. $[\![EVAL]\!] = \lambda G_{<sk,t>} \lambda s_k.\, G(s_k) \wedge s_k > st_c$.
c. $[\![EVAL[alto]]\!] = \lambda s_k.\,\text{tall}(s_k) \wedge s_k > st_c$.
d. $[\![extrañamente]\!] = \lambda s_k.\,\text{strange}(s_k)$.
e. $[\![extrañamente\ [EVAL[alto]]]\!] = \lambda s_k.\,\text{tall}(s_k) \wedge s_k > st_c \wedge \text{strange}(s_k)$. by PM

This analysis has the advantage of offering a unified treatment for manner adverbs and adjectives, but raises two problems: the former is syntactic, namely, that manner and degree modifiers are in complementary distribution, as shown above, so the presence of EVAL would be an annoying exception. The second problem is to find out a semantic justification for its occurrence, given that the equivalent nominal structure is acceptable:

(124) Las dunas tienen una altura extraña.
the dunes have a height strange
'The dunes have a strange height.'

If the null morpheme EVAL has to appear when manner modifiers are involved to avoid fatally weak truth conditions, it would be predicted that (124), which does not entail that the dunes are tall, is ungrammatical, but this is not the case. Nonetheless, we can validate the insertion of EVAL in the adjectival structure by positing that, in contrast to the nominal structure, the adjectival structure demands a degree modifier that introduces a standard of comparison. Accordingly, *Floyd is strangely tall* demands the presence of EVAL for the same reason as *Floyd is tall*, that is, because both adjectival structures do not include an explicit degree modifier (like *very*, *too*, *enough*, etc.). In that case, what we would need to explain is why the adjectival structure must be evaluated with respect to a standard of comparison in all cases, especially taking into account that degree modifiers are adjuncts or unselected constituents. In conclusion, the two possible analyses present their own advantages and drawbacks.

I cannot add anything else in relation to this issue; I analyze manner adjectives in combination with deadjectival nominalizations in chapter 3 and with possessive structures that involve the verb *tener* 'to have', as the one in (124), in chapter 4, providing evidence that these contexts do not give rise to entailments to the positive or, applying the previous reasoning, that deadjectival nominalizations need not be evaluated with respect to a standard of comparison in the absence of an explicit mass quantifier or measure phrase. Thus, I will show that manner adjectives, unlike their corresponding manner adverbs, do not pose such a problem.

To sum up, in this chapter I have proposed one specific refinement to Anderson & Morzycki's (2015) model of gradability, namely, that gradable adjectives denote in the domain of state-kinds rather than state-tokens; gradable adjectives can express state-tokens when they are predicated of a specific individual, in which case the aspectual node AspP attaches to the syntactic structure to instantiate a state-kind from the set of state-kinds. In the following section, I summarize the main insights of the chapter.

2.5. Summary of the chapter

Given that 'stativity' is the fundamental notion that articulates the semantics of deadjectival nominalizations, this chapter is devoted to disentangling the intricacies of stative predicates. In section 2.1, I have provided evidence that gradable adjectives express states and have offered an exhaustive characterization of stativity: inspired by Vendler (1957) and Dowty (1979), states are defined as temporal objects that do not involve dynamism or change, in contrast to events, which do involve dynamism or change. The notion of 'change' is applicable to the participants of the eventualities: if any of the participants undergo a change, that eventuality is an event; by contrast, if none of the participants undergoes a change, that eventuality is a state.

In section 2.2, I have shown that the difference among individual-level, stage-level and stative causative predicates is not based on spatiotemporality, aspect or the relative-absolute distinction. Rather, I have argued that they differ as to how causation is manifested in each case: individual-level states express non-caused properties, and the adjectives that express them combine with the copula *ser*. Stage-level states introduce stages as external causes, where the cause must be taken as a direct cause in the sense of Maienborn & Herdtfelder (2017); stage-level adjectives combine with the copula *estar*. Finally, stative causatives are not states endowed with event properties (cf. Maienborn 2005a, 2005b, 2007), but rather they are states that are internally caused (Leferman 2017). Stative causative adjectives can license the two copulas. In short, the notion of 'causation' is relevant to compose the typology of stative predicates.

In section 2.3 I have argued that, although many stative predicates are gradable, stativity does not entail gradability. There are gradable states like *alto* 'alto' and *querer* 'to love', while there are non-gradable states like *pertenecer* 'to belong' or *poseer* 'to own'. On the other hand, certain stative causatives like *esperar* 'to wait' and *dormir* 'to sleep' are, like activities, divisible in intervals, while other stative causatives like *valiente* 'brave' and pure states like *querer* 'to love' are divisible in instants; accordingly, only the former yield temporal interpretations in gradable constructions. Both activities and states are homogenous insofar as they are cumulative and divisible either in intervals or instants, while accomplishments and achievements are heterogeneous insofar as they are neither cumulative nor divisible. In brief, the notions of 'gradability' and 'strict homogeneity' are, like 'causation', relevant to configure the whole typology of stative predicates.

Finally, in section 2.4 I have presented Anderson & Morzycki's (2015) model, according to which gradable adjectives encode a state argument *s* and degrees are built out of state-kinds. The most important advantage of this model is that it allows us to correctly capture the fact that gradable adjectives are subject to time. In addition, it assumes an intermediate stance between degree-based and degree-less theories, insofar as it includes units of measurement or degrees, but these are derived from state-kinds rather than constituting ontological objects, thus making the model simpler. This said, drawing on Gehrke's (2011, 2015, 2017) insights, I have proposed a slight refinement according to which gradable adjectives are predicates of state-kinds rather than state-tokens; the state-token reading holds when the adjectival property is predicated of their arguments, in which case an aspectual node instantiates a state-kind from the set of state-tokens.

Having offered a precise characterization of stativity and its interaction with causation, homogeneity and gradability, in the following chapter I tackle the analysis of deadjectival nominalizations that denote in the token domain, providing empirical evidence that they express

imperfective states and explaining their main morphosyntactic and semantic properties when combined mainly with temporal, frequency, aspectual and manner modifiers and measure phrases.

Chapter 3

Deadjectival nominalizations in the state-token domain

In the previous chapter, I have offered a precise characterization of states as non-dynamic properties that are subject to time, where the term *non-dynamic* means that the participants of states do not undergo any changes. In addition, I have argued that notions like 'causation', 'strict homogeneity' and 'gradability' do not constitute defining properties of states, but they play an essential role when classifying the different types of stative predicates. Designing a thorough model of gradability is of especial importance, since deadjectival nominalizations are derived from gradable predicates. Drawing on Anderson & Morzycki (2015) and Gehrke (2011, 2015, 2017), I have designed a model of gradability in which gradable adjectives are predicates of state-kinds, but they can express state-tokens if they are predicated of a specific individual.

In this chapter, I address the first part of the analysis, where I delve into the morphology-semantics interface of state(-token) deadjectival nominalizations, providing evidence that they express *imperfective* states, since they express non-dynamic properties that are subject to time and do not include their temporal boundaries. Following Fábregas (2016), in section 3.1 I show that Spanish deadjectival nominalizations can convey two readings in the absence of an explicit mass quantifier or measure phrase: a quality reading, which involves the semantics of the null morpheme EVAL, and a degree reading, which does not. However, contra Fábregas (2016), for whom deadjectival nominalizations express qualities in the quality reading and degrees in the degree reading, I argue that deadjectival nominalizations express states in both cases. Furthermore, the existence of degree readings is taken as evidence that deadjectival nominalizations, unlike their base adjectives, do not have to be assessed with respect to a standard of comparison.

In section 3.2 I examine the combination of state-token deadjectival nominalizations with event, temporal, frequency, aspectual, locative and manner modifiers. The fact that these nominalizations do not pass the standard tests that are used for identifying events is an indication that they do not express events. On the other hand, the fact that these nominalizations accept temporal, frequency and even locative and manner modifiers, but they reject aspectual modifiers headed by *durante* 'for' even though they are atelic, reveals that they express imperfective eventualities.

In section 3.3, I focus on the individual-level, stage-level and stative causative distinction in the nominal domain and provide evidence that the readings that deadjectival nominalizations can convey are the same as the ones expressed by their base adjectives.

In section 3.4, I show that deadjectival nominalizations inherit the scalar properties of the base adjective and invoke the same type of comparison classes (*between* or *within* comparison class).

In section 3.5 I discuss the semantic role of deadjectival nominalizers, providing evidence that they can take as their input either the whole domain of state-kinds denoted by the nominalization, which is the most common situation, or a proper subset thereof, which accounts for the phenomenon of semantic narrowing.

Finally, section 3.6 summarizes the main ideas of the chapter.

3.1. Quality vs. degree readings

Following Fábregas (2016), in this section I show that deadjectival nominalizations can express either a quality or a degree reading in the absence of an explicit mass quantifier, such as *mucho* 'a lot of, much' or *poco* 'little', or a measure phrase.[33] I must say that I use the terms *quality* and *degree* readings as mere labels, but I do not assume the existence of qualities or degrees as ontological objects, unlike Fábregas. Instead, I argue that deadjectival nominalizations express states in both cases. The quality reading arises when EVAL is involved in the nominal structure, while the degree reading arises when this null morpheme is not involved. My contribution in this respect is twofold: on the one hand, I argue that deadjectival nominalizations express states in both the quality and degree readings. On the other hand, I take the existence of the degree reading, in which there is no element that provides a standard of comparison, as evidence that deadjectival nominalizations differ from their base adjectives in that the former do not have to be assessed with respect to a standard of comparison.

Let us first examine the two readings. According to Fábregas (2016), most Spanish deadjectival nominalizations can trigger either a quality or a degree reading (with very few exceptions, which will be analyzed in subsection 3.2.3.2 for expository purposes). In order to identify the two readings, the author proposes the use of *no es suficiente* 'is not enough' as a diagnostic. For example, imagine a context in which a committee interviews several candidates for a role for a movie and, after interviewing Juan, they utter (1) and decide not to hire him.

(1) La belleza de Juan no es suficiente para ese papel.
the beauty of Juan not is enough for that role
R1: 'Juan's degree of beauty is not enough for that role.'
R2: 'Juan's quality of being beautiful is not enough for that role.'

[33] Fábregas (2016) talks about *scale* rather than *degree* readings, but I prefer to use the latter term because it is more transparent insofar as it gives rise to paraphrases that involve the word *degree*, as will be shown below. The choice of one term or the other one is irrelevant for other semantic considerations.

In uttering (1), we do not know whether the committee did not hire Juan because he is not beautiful enough or because the only relevant property that Juan has is actually that he is beautiful. In the degree reading, (1) expresses that Juan's degree of beauty is not enough to get the role; in other words, for that role it is necessary to have a higher degree of beauty, i.e. to be more beautiful. In contrast, in the quality reading (1) expresses that Juan is beautiful, but that property is not enough to get the role (for example, it is also necessary to be a singer).

Let us examine the example of *profundidad* 'depth, deepness', for which the English translation is very useful, since the two readings are expressed by means of different words:

(2) La profundidad de esta piscina no es suficiente para nadar bien.
the depth/deepness of this pool not is enough to swim well
R1: 'The depth of this pool is not enough to swim well.'
R2: 'The deepness of this pool is not enough to swim well.'

In the degree reading, where *profundidad* is translated as *depth*, (2) conveys that the pool is not deep enough to swim well or, in other words, that the pool's degree of depth is not high enough to swim well. In contrast, in the quality reading, where *profundidad* is translated as *deepness*, (2) conveys that the pool is deep, but that property is not the only one required to swim well (for instance, we also need the pool to be completely clean). As shown in chapter 1, Moltmann (2009) and Baglini (2015) had already noted this contrast in English: DPs containing underived nouns like *Mark's height/weight* do not entail the semantics of the corresponding adjectival structures *Mark is tall/heavy*; in contrast, *Mark's tallness/heaviness* do entail that semantics. In contemporary Spanish, there are no contrasts like the ones in English (perhaps the pair *peso* 'weight' / *gordura* 'fatness' < *gordo* 'fat' is an exception): instead, deadjectival nominalizations can trigger both readings.

I will show next syntactic contexts in which only one reading is available. On the one hand, predicates like *es una de sus propiedades/cualidades* 'is one of its properties/qualities' induce a quality reading. The rationale behind this test is the following one: assuming that being in the state of having some height, hardness, beauty, etc. is trivial insofar as all entities are endowed with a certain degree of height, hardness, beauty, etc., the predicate *es una de sus propiedades/cualidades* 'is one of its properties/qualities' forces an interpretation whereby a standard of comparison is entailed. On the other hand, as shown by Fábregas (2016), predicates like *es mínimo/máximo* 'is minimal/maximal' and measure phrases in predicative position induce a degree reading, since they pick up a specific degree on the scale. Let us observe how these tests work:

(3) a. La dureza de este mineral es una de sus propiedades.
the hardness of this mineral is one of its properties
b. La dureza de este mineral es mínima / máxima / de 7 (en la escala de Mohs).
the hardness of this mineral is minimal maximal of 7 in the scale of Mohs
'The hardness of this mineral is minimal / maximal / 7 in Mohs scale.'

(3a) has a quality reading according to which one of the properties of the mineral is that it is hard; the degree reading whereby one of its properties is that it has some hardness is extremely odd and trivial insofar as all physical objects are associated with some degree of hardness. In contrast, (3b) has a degree reading according to which the mineral's degree of hardness is associated with a certain specific degree, and that the mineral is hard only follows if the modifier *máxima* 'maximal' occurs; the quality reading in which the mineral's being hard is minimal/maximal/7 does not make any sense.

Deadjectival nominalizations show an interesting contrast with respect to their base adjectives, since they license degree readings, in which no standard of comparison is entailed. The reason why nominalizations license degree readings is that, in contrast to their base adjectives, the former do not have to be evaluated with respect to a standard of comparison in the absence of an explicit mass quantifier / measure phrase or, in other words, the former do not combine obligatorily with the null morpheme EVAL. In chapter 4, by analyzing possessive structures that involve the verb *tener* 'to have', I provide more empirical evidence that deadjectival nominalizations need not be assessed with respect to a standard of comparison.

We can conclude with Fábregas (2016) that Spanish deadjectival nominalizations can trigger either a quality or a degree reading in the absence of an explicit mass quantifier or measure phrase, where only the quality reading includes the semantics of EVAL. Unlike Fábregas, though, I do not assume the existence of degrees or qualities as ontological objects; rather, in both the quality and degree readings the DP containing a deadjectival nominalization denotes a state, but in the degree reading a standard of comparison is not entailed. The fact that deadjectival nominalizations allow for a degree reading is explained because the obligatory occurrence of EVAL does not hold.[34] In the following subsection, I provide the technical details of the analysis.

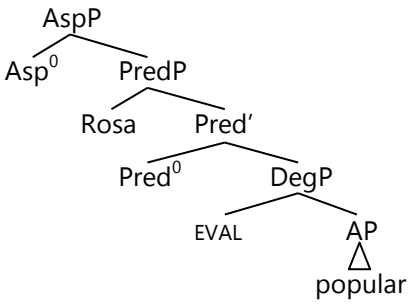
[34] As advanced in chapter 2, I must admit that I cannot provide a thorough explanation as to why deadjectival nominalizations, in contrast to their base adjectives, are not necessarily evaluated with respect to a standard of comparison, so in this dissertation I can just show the empirical observation and postpone that explanation for a future research.

3.1.1. Technical implementation

In this section I offer a morphosyntactic and semantic composition of deadjectival nominalizations, showing how a model that includes kinds and tokens can account compositionally for their composition and for both the quality and degree readings.

The starting point is the derivation of an adjectival structure, which is the input for deadjectival nominalizations. Specifically, I offer an analysis of the individual-level predicate *popular* 'popular' in *Rosa (es) popular* 'Rosa is popular':

(4)



(5) a. $[\![AP]\!] = \lambda s_k.\,\text{popular}(s_k).$

b. $[\![EVAL]\!] = \lambda G_{<sk,t>}\lambda s_k.\,G(s_k) \wedge s_k > st_c.$

c. $[\![DegP]\!] = \lambda s_k.\,\text{popular}(s_k) \wedge s_k > st_c.$

d. $[\![Pred^0]\!] = \lambda G_{<sk,t>}\lambda x\lambda s_k.\,G(s_k) \wedge \text{holder}(s_k, x).$

e. $[\![Pred']\!] = \lambda x\lambda s_k.\,\text{popular}(s_k) \wedge s_k > st_c \wedge \text{holder}(s_k, x).$ by EI

f. $[\![PredP]\!] = \lambda s_k.\,\text{popular}(s_k) \wedge s_k > st_c \wedge \text{holder}(s_k, \text{r}).$

g. $[\![Asp^0]\!] = \lambda G_{<sk,t>}\lambda s.\,\exists s_k[G(s_k) \wedge R(s_k, s)].$

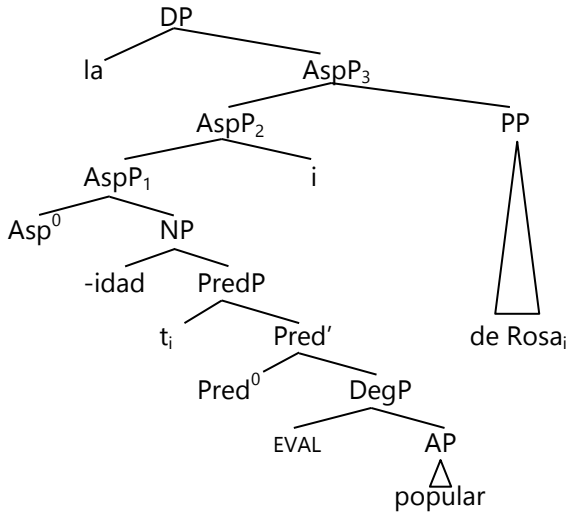
h. $[\![AspP]\!] = \lambda s.\,\exists s_k[\text{popular}(s_k) \wedge s_k > st_c \wedge \text{holder}(s_k, \text{r}) \wedge R(s_k, s)].$

The details of the adjectival structure are offered in chapter 2, so I only highlight two important aspects here: first, the adjectival structure invokes a standard of comparison in the absence of an explicit degree modifier or, in other words, the null morpheme EVAL must appear in the positive construction. Second, when the adjectival property is predicated of its subject, i.e. when PredP is included in the derivation, the adjectival structure acquires an episodic qua token interpretation, so the functional node AspP attaches to the structure to instantiate a state-kind from the set of state-kinds. Once the state-token argument *s* is bound, the result of the derivation is a proposition that is true iff there is a state that is associated with a state-kind of popularity whose holder is Rosa, and that state-kind exceeds a contextual state-kind st_c.

Now let us examine the composition of deadjectival nominalizations. In order to capture the quality and degree readings, I propose that only the derivation of the former must include the null morpheme EVAL, which projects DegP. This analysis is in accordance with the one in

Fábregas (2016), where only the quality reading includes DegP. The node PredP is present in both types of nominalizations, which accounts for their ability to take a subject/holder (Roy 2010; Fábregas 2016). For the quality reading of *la popularidad de Rosa* 'the popularity of Rosa' (i.e. 'the state in which Rosa is popular'), I propose the following composition:

(6)



(7) a. $[\![AP]\!] = \lambda s_k.\,\text{popular}(s_k).$

b. $[\![EVAL]\!] = \lambda G_{<sk,t>}\lambda s_k.\,G(s_k) \wedge s_k > st_c.$

c. $[\![DegP]\!] = \lambda s_k.\,\text{popular}(s_k) \wedge s_k > st_c.$

d. $[\![Pred^0]\!] = \lambda G_{<sk,t>}\lambda x\lambda s_k.\,G(s_k) \wedge \text{holder}(s_k, x).$

e. $[\![Pred']\!] = \lambda x\lambda s_k.\,\text{popular}(s_k) \wedge s_k > st_c \wedge \text{holder}(s_k, x).$ by EI

f. $[\![PredP]\!] = \lambda s_k.\,\text{popular}(s_k) \wedge s_k > st_c \wedge \text{holder}(s_k, x).$

g. $[\![-idad]\!] = \lambda G.\,G.$

h. $[\![nP]\!] = [\![NP]\!] = \lambda s_k.\,\text{popular}(s_k) \wedge s_k > st_c \wedge \text{holder}(s_k, x).$

i. $[\![Asp^0]\!] = \lambda G_{<sk,t>}\lambda s.\,\exists s_k[G(s_k) \wedge R(s_k, s)].$

j. $[\![AspP_1]\!] = \lambda s.\,\exists s_k[\text{popular}(s_k) \wedge s_k > st_c \wedge \text{holder}(s_k, x) \wedge R(s_k, s)].$

k. $[\![AspP_2]\!] = \lambda x\lambda s.\,\exists s_k[\text{popular}(s_k) \wedge s_k > st_c \wedge \text{holder}(s_k, x) \wedge R(s_k, s)].$ by λ-A

l. $[\![AspP_3]\!] = \lambda s.\,\exists s_k[\text{popular}(s_k) \wedge s_k > st_c \wedge \text{holder}(s_k, \text{r}) \wedge R(s_k, s)].$

m. $[\![DP]\!] = \iota s.\,\exists s_k[\text{popular}(s_k) \wedge s_k > st_c \wedge \text{holder}(s_k, \text{r}) \wedge R(s_k, s)].$

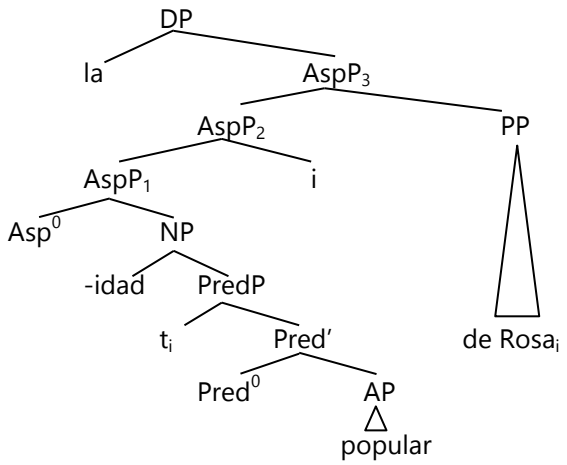
The starting point of the derivation is the adjective, which denotes a property of state-kinds and combines with EVAL, which introduces a contextual standard of comparison. I assume with von Stechow (2012) and references therein that the movement of arguments can be captured by means of lambda abstraction (λ-A), which accounts for argument structure inheritance. Thus, the holder *Rosa* is base-generated in Spec-PredP and, when the nominalizer attaches to the structure, it moves out of NP and leaves a trace *t*, by convention interpreted as a variable. The

PP, in turn, will be assigned interpretation in its landing site. On the other hand, the preposition *de* 'of' is just required because of categorial reasons, but it does not play any role in the semantic computation. With respect to the incorporation of the adjective into NP, it can be considered head to head movement, which can be captured by reconstruction in the Logical Form according to von Stechow (2012) and references therein; for convenience sake, I leave the adjective in its base position.

The nominalizer, *-idad*, can be taken as an affix that simply changes the category to which it attaches, from an adjective to a noun in this case, so we can posit that it denotes an identity function (although see section 3.5 for discussion). Once the nominalization is formed, the aspectual node AspP operates over NP to associate a state-kind from the set of state-kinds with a state-token.[35] The holder of the state is bound at this point by Lambda Abstraction (λ-A); finally, the determiner attaches to $AspP_3$ and introduces the iota operator *ι*, which picks up the unique relevant state from a set of states. The result of the derivation is the unique state that is associated with a state-kind of popularity whose holder is Rosa and that state-kind is above a contextual standard state-kind.

The composition for the degree reading is offered below. Specifically, the degree reading of *la popularidad de Rosa* 'the popularity of Rosa' must denote the state in which Rosa has some degree of popularity:

(8)



(9) a. $[\![AP]\!] = \lambda s_k.\,\text{popular}(s_k)$.

b. $[\![Pred^0]\!] = \lambda G_{<sk,t>}\lambda x\lambda s_k.\,G(s_k) \wedge \text{holder}(s_k, x)$.

c. $[\![Pred']\!] = \lambda x\lambda s_k.\,\text{popular}(s_k) \wedge \text{holder}(s_k, x)$. by EI

d. $[\![PredP]\!] = \lambda s_k.\,\text{popular}(s_k) \wedge \text{holder}(s_k, x)$.

e. $[\![-idad]\!] = \lambda G.\,G$.

f. $[\![nP]\!] = [\![NP]\!] = \lambda s_k.\,\text{popular}(s_k) \wedge \text{holder}(s_k, x)$.

[35] AspP is a nominal projection here (like e.g. NumberP in other proposals), so it can be embedded by a DP.

g. $[\![Asp^0]\!] = \lambda G_{<sk,t>} \lambda s. \exists s_k [G(s_k) \wedge R(s_k, s)]$.

h. $[\![AspP_1]\!] = \lambda s. \exists s_k [\text{popular}(s_k) \wedge \text{holder}(s_k, x) \wedge R(s_k, s)]$.

i. $[\![AspP_2]\!] = \lambda x \lambda s. \exists s_k [\text{popular}(s_k) \wedge \text{holder}(s_k, x) \wedge R(s_k, s)]$. by λ-A

j. $[\![AspP_3]\!] = \lambda s. \exists s_k [\text{popular}(s_k) \wedge \text{holder}(s_k, \text{r}) \wedge R(s_k, s)]$.

k. $[\![DP]\!] = \iota s. \exists s_k [\text{popular}(s_k) \wedge \text{holder}(s_k, \text{r}) \wedge R(s_k, s)]$.

The sole difference with respect to the quality reading is that the null morpheme EVAL, which projects DegP, does not appear in the derivation. This analysis is in accordance with the syntactic analysis provided in Fábregas (2016), according to which the degree reading does not include DegP in the derivation. The result of the derivation is the unique state that is associated with a state-kind of popularity whose holder is Rosa. Note that, in contrast to the adjectival structure, which demands the presence of EVAL in the absence of an explicit degree modifier, the nominal structure allows for a degree reading that does not entail a standard of comparison. In other words, in the degree reading any degree on the scale can be associated with the holder of the state.

The analysis proposed here for both the quality and degree readings accounts compositionally for the fact that deadjectival nominalizations inherit stativity and argument structure from their base adjectives. The analysis also captures the fact that they express imperfective states; as will be shown in section 3.2.4 in detail, adjectives trigger an imperfective interpretation by default and, only when they combine with the copula, they can trigger a perfective interpretation. Deadjectival nominalizations do not include the copula in their derivation, so they cannot contain information related to perfective aspect; as a consequence, we can posit that the variable *s* actually stands for 'imperfective state' unless additional perfective information is involved.

In this section, I have taken for granted that deadjectival nominalizations express imperfective states. In the following section, I provide the corresponding empirical evidence that this is actually the case.

3.2. Identifying states in the nominal domain

In this section, I argue that deadjectival nominalizations express imperfective states: on the one hand, they express states because they reject event modifiers and accept temporal and frequency (and even locative and manner) modifiers, which reveals that they are subject to time and do not involve change in any of their participants. On the other hand, they are imperfective because they reject aspectual modifiers headed by *durante* 'for' even though they are atelic, which indicates that they express eventualities that do not include their boundaries.

As shown in chapter 1, the literature on deadjectival nominalizations has employed different semantic notions in order to explain their core semantics. In particular, it has been claimed that DPs containing deadjectival nominalizations denote states (Roy 2010; Villalba 2013; Borer 2013; Baglini 2015; Glass 2019); qualities (Levinson 1978, 1980; Nicolas 2004, 2010; Villalba 2009; Alexiadou 2011b; Francez & Koontz-Garboden 2015, 2017a, 2017b; Fábregas 2016 with respect to quality readings); states with respect to stage-level predicates and qualities with respect to individual-level ones (Martin 2013; Jaque & Martín 2019); degrees (Bochnak 2013; Baglini 2015 with respect to English underived nouns like *height*; Fábregas 2016 with respect to degree readings); or tropes (Moltmann 2004, 2009, 2015; Richtarcikova 2017).

In this chapter, I provide empirical evidence that state-based accounts are superior to the other ones, since they capture the eventuality nature of deadjectival nominalizations. However, although this characterization seems to be adequate, it is also insufficient, insofar as there are principled reasons to posit that deadjectival nominalizations express *imperfective* states, where imperfective means that they do not include their temporal boundaries, as explained in subsection 3.2.4. By examining Spanish nominalizations carefully, I show that they accept temporal and frequency modification naturally, but they reject aspectual modifiers headed by *durante* 'for', which delimit the duration of atelic eventualities. The distinction between temporal and aspectual modifiers has gone almost unnoticed in the literature on deadjectival nominalizations, but it is crucial to reach a better understanding of their constitutive properties.

Thus, what I argue here is that, while the licensing of temporal modification reveals that a predicate is subject to time, i.e. it is an eventuality, the licensing of aspectual modifiers indicates that the predicate can trigger a perfective interpretation. Spanish is very illustrative in this respect, since verbs, including the copulas *ser* and *estar*, can bear either perfective or imperfective morphology in the past tense. Crucially, only perfective interpretations license aspectual modifiers headed by *durante* 'for', for atelic predicates, and headed by *en* 'in', for telic predicates (García Fernández 1999, 2000). Given that deadjectival nominalizations do not include the copula in their morphological structure and that adjectives cannot bear perfective information without the assistance of the copula, deadjectival nominalizations cannot trigger perfective interpretations. As a consequence, they express imperfective eventualities.

In the following subsection, I start developing my analysis with the examination of deadjectival nominalizations that co-occur with event modifiers.

3.2.1. Event modification

In this subsection, I provide evidence that deadjectival nominalizations do not express events, since they do not pass the standard tests that are used for identifying events in the nominal

domain (see Picallo 1991, 1999; Bosque 1999; RAE & ASALE 2009; Fábregas & Marín 2012; Marín 2013; Jaque 2014; Arche & Marín 2015; Fábregas 2016 for Spanish). I am not aware of any proposals according to which deadjectival nominalizations express events, so we do not need to dwell on this.

First, deadjectival nominalizations do not co-occur with the predicate *tener lugar* 'to take place' regardless of whether they are derived from individual-level adjectives, as in (10a), stage-level adjectives, as in (10b), or mental state adjectives, as in (10c). In contrast, simple event nouns like *reunión* 'meeting' and event nominalizations like *construcción* 'building' show an opposite behavior, see (11).

(10) a. *La pureza del agua tuvo lugar ayer.
the purity of.the water took place yesterday
b. *La tristeza del payaso tuvo lugar ayer.
the sadness of.the clown took place yesterday
c. *La honestidad de María con Juan tuvo lugar ayer.
the honesty of María with Juan took place yesterday
'María's honesty to Juan took place yesterday.'

(11) a. La reunión / construcción del puente tuvo lugar ayer.
the meeting building of.the bridge took place yesterday

Second, deadjectival nominalizations, unlike event nouns, do not accept celerative modifiers like *rápido* 'fast' and *lento* 'slow':

(12) a. *la rápida pureza del agua
the fast purity of.the water
b. *la lenta tristeza de Juan
the slow sadness of Juan
c. *la rápida honestidad de Juan con María
the fast honesty of Juan with María

(13) la rápida reunión / construcción del puente
the fast meeting building of.the bridge

In sum, deadjectival nominalizations do not pass the standard tests that are used for identifying events in the nominal domain.[36] We can conclude that deadjectival nominalizations do not express events. In the following subsection, I analyze the combination of deadjectival nominalizations with temporal modifiers.

3.2.2. Temporal modification

In this subsection, I show that deadjectival nominalizations can co-occur with temporal modifiers, which provides evidence that they can be located in time and, therefore, that they do not express atemporal properties or qualities. Before that, I will describe the general properties of temporal modifiers briefly in order to attain a better understanding of their syntax and semantics.

Syntactically, temporal modifiers are unselected constituents or adjuncts that mainly take the form of PPs, like *en este momento* 'at this moment'; adverbs, like *mañana* 'tomorrow'; DPs, like *aquel día* 'that day'; verbal phrases headed by *hacer* '(lit.) to do, ago', like *hace muchos años* '(lit.) it does many years, many years ago'; and adverbial clauses preceded by *cuando* 'when', like *cuando Juan fue al cine* 'when Juan went to the movies', *antes* 'before' or *después* 'after', etc. Semantically, temporal modifiers locate eventualities in the temporal line, informing about whether the eventuality holds in the past, the future or the present. Thus, time is a deictic category that locates eventualities in relation to the speech time (see García Fernández 1999, 2000; Demirdache & Uribe-Etxebarria 2000, 2004, 2007, 2014).[37] In (8) I illustrate some temporal

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[36] Another test that is usually employed to identify events in the nominal domain is the predicate *presenciar* 'to witness', but it does not give rise to clear contrasts when nominalizations derived from mental state adjectives are involved. Consider the following data:

(i) a. *El hombre presenció la honestidad de María con Juan.
the guy witnessed the honesty of María with Juan
b. Los vecinos presenciaron la violencia de los manifestantes.
the neighbors witnessed the violence of the protestors
'The neighbors witnessed the protestors' violence'

Both *honestidad* 'honesty' and *violencia* 'violence' are derived from mental state adjectives, which presuppose an event according to Martin (2006, 2008, 2015): for example, in order for the speaker to claim that someone was honest/violent, it is necessary that that the individual involved in the predication did something. However, the nominalization *violencia* 'violence' shows an unexpected behavior in accepting the predicate *presenciar* 'to witness', given that deadjectival nominalizations derived from mental state adjectives express internally caused states, as argued in chapter 2. The explanation of this contrast may be that the event presupposed by *violencia* 'violence' is more salient than the one presupposed by *honestidad* 'honesty', so it is more easily perceived by sight.

[37] Temporal modifiers are usually classified into three categories as well depending on their referential nature: deictic modifiers are oriented to the speech time; anaphoric modifiers are oriented to a temporal point that is not the speech time; and variable modifiers are oriented to no matter what temporal point:

(i) a. Juan llegará mañana.
Juan arrive.FUT tomorrow
b. Juan llegará al día siguiente.
Juan arrive.FUT at.the day following
'Juan will arrive the following day'

modifiers that refer to a moment of the past, the present or the future with respect to the speech time:

(14) a. El profesor llegó ayer / el mes pasado / hace unos años / el lunes.
the teacher arrived yesterday the month last ago several years the Monday
'The teacher arrived yesterday / last month / several years ago / on Monday.'
b. El profesor está llegando ahora / en este momento.
the teacher is arriving now at this moment
c. El profesor llegará mañana / después / el próximo viernes / el lunes.
the teacher arrive.FUT tomorrow after the next Friday the Monday
'The teacher will arrive tomorrow / after / next Friday / on Monday.'

The temporal modifiers that appear in (14a) locate the eventuality of arriving in some moment of the past; the ones that appear in (14b) locate the eventuality in the present; and the ones that appear in (14c) locate the eventuality in some moment of the future. Note that *el lunes* '(lit.) the Monday, on Monday' can refer to a day that is located either in the past or in the future, and only the context helps us determine its reference.

At this point, it is important to distinguish temporal modifiers headed by the prepositions *durante* 'during' and *en* 'in' from aspectual modifiers headed by *durante* 'for' and *en* 'in', which are examined in subsection 3.2.4. The former establish a temporal frame within which the eventuality holds, while the latter inform about the duration of the eventuality. In addition, while aspectual modifiers like *durante* 'for' and *en* 'in' are reserved for atelic and telic interpretations, respectively, temporal modifiers do not show any analogous restrictions:

(15) a. Los niños estuvieron tristes durante/en el funeral.
the kids were sad during in the funeral
'The kids were sad during/in the funeral.'
b. Joni bebió agua durante/en la carrera.
Joni drank water during in the race
'Joni drank water during/in the race.'

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c. Juan llegará después.
Juan arrive.FUT after

In (ia), *mañana* 'tomorrow' has a deictic reference and refers to the day after the day in which (ia) is uttered; in (ib) *al día siguiente* 'the following day' has an anaphoric reference and refers to the day after a different day in which (ib) is uttered; and in (ic) *después* 'after' has either a deictic or an anaphoric reference and refers to a moment that is located either after (ic) is uttered or after a different moment in which (ic) is uttered. Given that this classification is not crucial for the purposes of this dissertation, I do not make use of it in the remainder.

(16) a. El bebé nació durante/en la fiesta.
the baby was.born during in the party
'The baby was born during/in the party.'
b. El estudiante leyó un libro durante/en la reunión.
the student read a book during in the meeting
'The student read a book during/in the meeting.'

On the one hand, (15) includes examples of atelic predicates. In (15a) the state *(estar) triste* '(to be) sad' and in (15b) the activity *beber agua* 'to drink water' are compatible with the temporal modifiers irrespective of whether these are headed by *durante* 'during' or *en* 'in'. On the other hand, (16) includes examples of telic predicates. In (16a) the achievement *nacer* 'to be born' and in (16b) the accomplishment *leer un libro* 'to read a book' are also compatible with the temporal modifiers headed by *durante* and *en*.

The sole semantic difference that I observe between temporal *durante*-phrases and *en*-phrases is that the latter also convey a locative component; accordingly, the verbal eventuality is temporally and spatially situated by the temporal adjunct. For example, in (15a) with *durante* 'during' the kids were sad within the period of time that the funeral took place, but they did not necessarily attend the funeral (for instance, they might have been sad at home); in contrast, with *en* 'in' the kids were sad within the period of time that the funeral took place and they were necessarily present in the funeral. The same holds for the rest of examples mutatis mutandis.

Now let us examine how deadjectival nominalizations interact with temporal modifiers: if it is the case that deadjectival nominalizations express eventualities, it is expected that they can combine with temporal modifiers that situate the eventuality in the temporal line. The following data confirm this hypothesis:

(17) a. Ahora están hablando de la belleza del jardín durante la tormenta de nieve.
now are.3.PL talking of the beauty of.the garden during the storm of snow
'Now they are talking about the beauty of the garden during the snowstorm.'
b. Ahora están hablando de la amplitud del mar de Aral en 1970.
now are.3.PL talking of the wideness of.the sea of Aral in 1970
'Now they are talking about the Aral Sea's wideness in 1970.'

(18) a. La tristeza de Juan en el funeral de María impresionó a todos ayer.
the sadness of Juan in the funeral of María impressed ACC all yesterday
'Juan's sadness in María's funeral impressed everyone yesterday.'

b. La perplejidad de Juan durante la reunión fue tema de debate ayer.
the perplexity of Juan during the meeting was topic of debate yesterday
'Juan's perplexity during the meeting was topic for discussion yesterday.'

(19) a. La amabilidad de Álex con Gabi aquel día es inexplicable.
the kindness of Álex with Gabi that day is unexplainable
'Álex's kindness to Gabi that day is unexplainable.'

b. La crueldad de Álex con Gabi cuando eran amigos es inexplicable.
the cruelty of Álex with Gabi when were.3.PL friends is unexplainable
'Álex's cruelty to Gabi when they used to be friends is unexplainable.'

In (17a) the beauty of the garden is temporally located during the snowstorm, in (17b) the wideness of the Aral Sea is temporally located in 1970, in (18a) Juan's sadness is temporally located in María's funeral, in (18b) Juan's perplexity is temporally located during the meeting, in (19a) Álex's kindness to Gabi is temporally located in some specific day and in (19b) Álex's cruelty is temporally located when Gabi and he used to be friends. What all these data show is that deadjectival nominalizations do not express properties inherent in an individual or atemporal properties, but rather properties that are subject to time. Moreover, contra what is claimed by Fábregas (2016), the combination of deadjectival nominalizations with temporal modifiers is a regular rather than an exceptional phenomenon, as advanced in chapter 1. In this respect, the attentive reader may have noted that (17) includes nominalizations derived from individual-level predicates, (18) includes nominalizations derived from stage-level predicates and (19) includes nominalizations derived from mental state adjectives, which proves that this three-way distinction is irrelevant with respect to their eventuality properties.

In sum, deadjectival nominalizations are naturally compatible with temporal modifiers because they express eventualities or properties that are subject to time. In the following subsection, I provide evidence that deadjectival nominalizations also accept frequency modification.

3.2.3. Frequency adjectives

In this section, I show that deadjectival nominalizations are compatible with frequency modifiers, which provides additional evidence that they express eventualities. Specifically, I will show that frequency adjectives can trigger two readings: a temporal reading, in which they inform about the number of times a state holds, or a non-temporal reading, in which they inform about the number of times a certain degree holds. To capture the two readings, I adapt this insight to the state-kind system in the spirit of Gehrke & McNally (2015), and posit that frequency modifiers

operate over state-tokens in the temporal reading, while they operate over state-kinds in the non-temporal reading. In addition, I show that frequency modifiers can trigger a temporal reading in both prenominal and post-nominal position, while they can only trigger non-temporal readings in post-nominal position. Thus, an analysis based on the kind-token distinction is appealing, since it can capture both the semantics and distribution of frequency modifiers when flanking deadjectival nominalizations.

In Spanish, like in English, adjectives can appear in attributive or in predicative position. However, unlike in English, in Spanish many adjectives in attributive position can appear either in prenominal or in post-nominal position. According to Demonte (1999, 2008), the prenominal position is the marked one and is usually related to non-restrictive and subjective meanings, while the post-nominal position is the unmarked one and is related to restrictive and objective meanings. In this respect, as Masià (2017) points out, the literature on this topic has noted that there is a myriad of factors that determine the position of adjectives in Spanish, including stylistic and rhetorical factors; rhythmic ones; syntactic ones, such as the occurrence of PPs or adverbs; the definiteness of the determiner; the nature of the noun, for example whether the adjective is a predicate of entities or events; and the type of adjective, for example whether it is an adjective of veracity or a modal adjective (see Masià 2017 and references therein for more details). In this section, I study the distribution and semantics of frequency adjectives, providing evidence that they trigger a temporal reading in prenominal, post-nominal and predicative position, while they can trigger a non-temporal reading only in post-nominal position.

The point of departure of the study on the combination of deadjectival nominalizations with frequency adjectives is Roy's (2010) seminal work, where the author notes that there is a critical contrast between what she calls state and quality nominalizations (see Villalba 2013 for Spanish and Borer 2013 for English). Specifically, only the former are compatible with frequency adjectives. Roy's observation is for French, but it is also applicable to Spanish:

(20) a. La popularité constante *(de ses chansons) m'impressionne.
the popularity constant of his songs me.impresses
b. La popularité (*constante) est une qualité qui lui fait défaut.
the popularity constant is a quality that to.him does default

(From Roy 2010: 146)

(21) a. La (frecuente) honestidad de Leandro con sus padres me impresiona.
the frequent honesty of Leandro with his parents me impresses
'Leandro's frequent honesty to his parents impresses me'

b. La (*frecuente) honestidad abunda.
the frequent honesty abounds

According to Roy, in (20a) the DP *la popularité constante de ses chansons* 'the constant popularity of his songs' denotes a state, which is able to re-hold and, consequently, the DP can combine with the frequency modifier *constante* 'constant'. In contrast, in (20b) the DP *la popularité* '(lit.) the popularity' denotes a quality, which is atemporal by definition and, consequently, the DP cannot combine with the frequency modifier. Note that the contrast hinges on the presence or absence of the argument *de ses chansons* 'of his songs'; thus, (20a) is unacceptable if the PP *de ses chansons* 'of his songs' does not appear.

Following an analogous reasoning, in (21a) the DP *la honestidad de Leandro* 'Leandro's honesty' denotes a state, so it can combine with the frequency modifier; in contrast, in (21b) the DP *la honestidad* '(lit.) the honesty' denotes a quality, so it does not accept the frequency modifier. In this dissertation, I claim that the contrast must be expressed in terms of the kind-token dichotomy: in (21a) there is a state-token in which Leandro is honest to his parents that re-holds in time, while in (21b) there is a state-kind that cannot re-hold insofar as kinds do not occur in time. Let us leave state-kind nominalizations aside in this subsection, since they will be studied in chapter 4, where I also provide arguments in favor of expressing the contrasts in (20) and (21) in terms of state-tokens and state-kinds rather than states and qualities.

Going back to the data, Roy does not discriminate among nominalizations derived from individual-level, stage-level and mental state adjectives, so we have to find out whether this three-way distinction of stative predicates is relevant or not with respect to frequency. As concluded in chapter 2, individual-level predicates are not prone to re-hold in time; however, if an appropriate context is provided, nothing prevents them from co-occurring with frequency adjectives. For example, in a context in which the water of a certain lake is pure in winter many times, it is possible to utter (22a), which includes a nominalization derived from the individual-level predicate *puro* 'pure'. In (22b) I show an example of a nominalization derived from a stage-level predicate and in (22c) an example of a nominalization derived from a mental state adjective:

(22) a. la habitual pureza del lago
the usual purity of.the lake
b. la frecuente tristeza de ese cantante
the frequent sadness of that singer

c. la constante amabilidad de Ángel (con sus primos)
the constant kindness of Ángel with his cousins
'Ángel's constant kindness (to his cousins)'

Frequency adjectives can also appear in post-nominal and predicative position, conveying the same meaning:

(23) a. la pureza habitual del lago
the purity usual of.the lake
b. La pureza del lago es habitual.
the purity of.the lake is usual

(24) a. la tristeza frecuente del cantante
the sadness frequent of.the singer
b. La tristeza del cantante es frecuente.
the sadness of.the singer is frequent

(25) a. la amabilidad constante de Ángel (con sus primos)
the kindness constant of Ángel with his cousins
'Ángel's constant kindness (to his cousins)'
b. La amabilidad de Ángel (con sus primos) es constante.[38]
the kindness of Ángel with his cousins is constant
'Ángel's kindness to his cousins is constant.'

We can conclude that deadjectival nominalizations accept frequency adjectives regardless of whether they are derived from individual-level, stage-level or mental state adjectives, which provides additional evidence that they express eventualities.

At this point, it is necessary to introduce Gehrke & McNally's (2015) analysis on frequency modifiers according to which they can trigger temporal readings, in which case frequency modifiers operate in the token domain, and non-temporal readings, in which case these modifiers operate in the kind domain. Observe the following data, which include eventive predicates:

[38] The adjective *constante* 'constant' can also mean 'stable, immutable', in which case it is not a frequency adjective.

(26) a. a frequent downdraft

b. We attended a(n) ??frequent/??infrequent/??sporadic/??periodic/??daily party.

c. We attended frequent/infrequent/sporadic/periodic/daily parties.

(Gehrke & McNally 2015: 854)

Gehrke & McNally (2015) claim (for English and German) that one single event only takes place once and, if it is the case that it takes place more times, that is because different events are involved. The authors also claim that some frequency modifiers can trigger either a temporal or a non-temporal interpretation depending on whether they modify either event-tokens or event-kinds, respectively. Putting the pieces together, when frequency modifiers are involved, the plural marking on the noun is linked to event-token and temporal interpretations, while the singular is linked to event-kind and non-temporal interpretations.[39]

As the authors note, assuming that one specific event-token takes place only once, the only interpretation for (26a), where the event noun appears in singular and is inserted in a DP headed by the indefinite determiner *a*, is the non-temporal one: there is a sub-kind of downdraft that is frequent. (26b) is not licensed because it would mean that we attended a sub-kind of party that is frequent/infrequent/etc., which is extremely odd; in other words, *attended* induces an event-token reading, but the DP *a frequent/infrequent/etc. party* denotes in the kind domain, hence the semantic clash. Finally, in (26c) the event noun *party* appears in plural and can co-occur with frequency modifiers because there are different event-tokens involved.

In general, I assume Gehrke & McNally's (2015) analysis. However, although morphological pluralization is useful in the event domain assuming that events can be counted, when states are at stake, the situation is different. In this dissertation, I put forth that state-token deadjectival nominalizations constitute mass nouns and, therefore, do not admit pluralization (although see chapter 4, where I describe certain factors that allow stative nominalizations to pluralize). Specifically, the deadjectival nominalizations that occur in (22)-(25) appear in singular, but the frequency adjectives that accompany them trigger a temporal interpretation. Accordingly, the only possible interpretation for (22a) is that the lake is usually in the state of purity, for (22b) that the singer is frequently in the state of sadness and for (22c) that Ángel is constantly in the state of kindness. The non-temporal interpretation whereby what is usual is a certain degree that is associated with an individual does not obtain.

However, the situation changes when frequency adjectives appear in post-nominal position, where they can also trigger non-temporal interpretations:

[39] Gehrke & McNally (2015) assume that so-called simple event nouns are predicates of event-kinds that can express event-tokens when functional material is added, as I assume here.

(27) a. la densidad habitual de este metal en invierno
the density usual of this metal in winter
b. la profundidad frecuente del lago en invierno
the depth frequent of.the lake in winter

The examples in (27) include nominalizations that are derived from dimensional adjectives, which are associated with conventionalized units of measurement (Bierwisch 1989; Kennedy 2013; Bylinina 2014; McNally & Stojanovic 2017). For example, density can be measured in kg/m^3 and depth can be measured in kilometers. On the other hand, note that the nominalizations involved express state-tokens rather than state-kinds, hence the occurrence of the temporal modifier *en invierno* 'in winter', the definite determiner *la* 'the' and the arguments *de este metal* 'of this metal' and *del lago* 'of the lake'. However, the frequency modifier can contribute different meanings.

Both (27a) and (27b) are ambiguous: if the frequency modifier triggers a temporal interpretation, (27a) means that the metal is usually dense in winter; in contrast, if the frequency modifier triggers a non-temporal interpretation, (27a) means that the metal is usually associated with a certain degree of density in winter. Analogously, (27b) means that the lake is frequently deep in winter if the frequency modifier triggers a temporal interpretation, while it means that the lake is frequently associated with a certain degree of depth in winter if the frequency modifier triggers a non-temporal interpretation. The non-temporal interpretation is the only one available if we insert a measure phrase in predicative position, which provides a specific degree:

(28) a. La densidad habitual de este metal en invierno es de 8000 kg/m^3.
the density usual of this metal in winter is of 8000 kg/m^3
'The usual density of this metal in summer is 8000 kg/m^3.'
b. La profundidad frecuente del lago en invierno es de veinte kilómetros.
the depth frequent of.the lake in winter is of twenty kilometers
'The frequent depth of the lake in winter is twenty kilometers.'

Thus, in (28a) there is a degree of density that is usual, while in (28b) there is a degree of depth that is frequent. In contrast, in prenominal position frequency modifiers cannot trigger non-temporal interpretations, so the structures equivalent to (28) prompt ungrammatical sentences:

(29) a. *La habitual densidad de este metal en invierno es de 8000 kg/m^3.

the usual density of this metal in winter is of 8000 kg/m^3

'The usual purity of this metal in summer is 8000 kg/m^3.'

b. *La frecuente profundidad del lago en invierno es de veinte kilómetros.

the frequent depth of.the lake in winter is of twenty kilometers

'The frequent depth of the lake in winter is twenty kilometers.'

The analysis whereby frequency modifiers can modify degrees in terms of kinds rather than tokens in post-nominal position is corroborated by the existence of state-kind nominalizations that can combine with frequency modifiers only in post-nominal position:

(30) a. una profundidad (habitual) de veinte kilómetros

a depth usual of twenty kilometers

b. una (*habitual) profundidad de veinte kilómetros

a usual depth of twenty kilometers

As will be argued extensively in chapter 4, the nominalizations in (30), which are inserted in DPs headed by the indefinite determiner *una* 'a' and are not accompanied by their arguments, denote in the kind rather than the token domain. If this is the case, frequency modifiers in post-nominal position can only trigger a non-temporal reading, like in (30a), which means that there is a degree or state-kind of depth that is usual. (30b) is unacceptable: the temporal interpretation is blocked because the nominalization expresses state-kinds rather than state-tokens, and the non-temporal interpretation is blocked because frequency modifiers cannot trigger that reading in prenominal position.

When nominalizations that are derived from evaluative adjectives are involved, the non-temporal reading does not arise even in post-nominal position. According to Bierwisch (1989), Kennedy (2013), Bylinina (2014) and McNally & Stojanovic (2017), evaluative adjectives, unlike dimensional ones, are not associated with conventionalized units of measurement. Therefore, we cannot measure sadness or beauty in meters, kilograms, etc. Consider the following data:

(31) a. #la belleza habitual del jardín

the beauty usual of.the garden

b. #la tristeza frecuente de este cantante

the sadness frequent of this singer

(32) a. *una belleza habitual
a beauty usual
b. *una tristeza frecuente
a sadness frequent

In (31) the only acceptable readings are the temporal ones according to which the garden is usually beautiful and the singer is frequently sad, hence the symbol #. (32) includes state-kind nominalizations, which in this case reject frequency modifiers in post-nominal position because they are derived from evaluative adjectives, which cannot trigger non-temporal readings; in other words, the sentences in (32) are not licensed because it is difficult to conceive the existence of a degree of beauty that is usual and a degree of sadness that is frequent if beauty and sadness are not associated with conventionalized units of measurement.

Exceptionally, the nominalization *altura* 'height', and other nouns that will be examined separately in subsection 3.2.3.2 due to their particular properties, admits frequency adjectives in post-nominal position, but it rejects them in prenominal and predicative position:

(33) a. La altura frecuente de las dunas es de mil metros.
the height frequent of the dunes is of one.thousand meters
'The frequent height of the dunes is one thousand meters.'
b. *la frecuente altura de las dunas
the frequent height of the dunes
c. *La altura de las dunas es frecuente.
the height of the dunes is frequent

On the one hand, in (33a) it is expected that the frequency adjective is licensed in post-nominal position in a non-temporal interpretation; however, it is unexpected that it cannot trigger a temporal interpretation. On the other hand, in (33b, c) it is also unexpected that the frequency adjective cannot trigger a temporal interpretation either. In subsection 3.2.3.2 I will show that this behavior is not as exceptional as it appears to be and is related to the fact that nominalizations like *altura* 'height' cannot trigger quality readings in the absence of mass quantifiers or measure phrases and the fact that temporal interpretations require quality readings.

In sum, deadjectival nominalizations are compatible with frequency adjectives. In the domain of deadjectival nominalizations, frequency adjectives can trigger a temporal interpretation irrespective of what position they appear in, while they can trigger a non-temporal

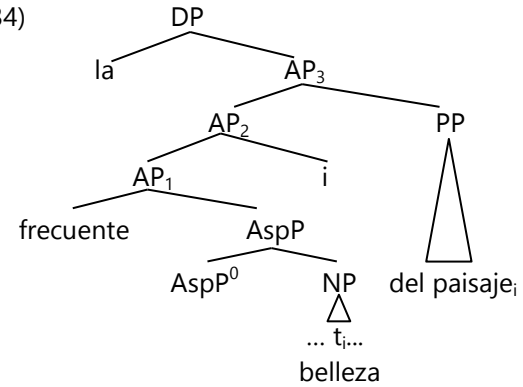
interpretation only in post-nominal position. Following Gehrke & McNally (2015), the temporal interpretation holds when the frequency adjective operates in the token domain, while the non-temporal interpretation holds when the adjective operates in the kind domain. The importance of this analysis is twofold, since it accounts for both the semantics and syntactic distribution of frequency adjectives when accompanying deadjectival nominalizations without the introduction of any undesirable complexity. In the following subsection, I offer a technical implementation of the analysis.

3.2.3.1. Technical implementation

In this subsection, I offer a technical implementation for the analysis of frequency adjectives and the nominalizations that they accompany. For convenience sake and in order to show the contrast between temporal and non-temporal interpretations, I focus on frequency adjectives when functioning as adnominal modifiers. Recall that, following Gehrke & McNally (2015), the temporal reading is captured by positing that frequency modifiers operate at the token domain, while the non-temporal reading is captured by positing that frequency modifiers operate at the kind domain. And recall that I have argued that the non-temporal reading is only available when frequency modifiers appear in post-nominal position flanking nominalizations derived from dimensional adjectives.

Let us start with the analysis of frequency modifiers when they trigger temporal readings. For *la frecuente belleza del paisaje* 'the frequent beauty of the landscape', in which the adjective occurs in prenominal position, I propose the following composition:

(34)



(35) a. $[\![NP]\!] = \lambda s_k.\,\text{beautiful}(s_k) \wedge s_k > st_c \wedge \text{holder}(s_k, x)$.

b. $[\![Asp^0]\!] = \lambda G_{<sk,t>} \lambda s.\,\exists s_k[G(s_k) \wedge R(s_k, s)]$.

c. $[\![AspP]\!] = \lambda s.\,\exists s_k[\text{beautiful}(s_k) \wedge s_k > st_c \wedge \text{holder}(s_k, x) \wedge R(s_k, s)]$.

d. $[\![A]\!] = \lambda s.\,\text{frequent}(s)$.

e. $[\![AP_1]\!] = \lambda s.\,\exists s_k[\text{beautiful}(s_k) \wedge s_k > st_c \wedge \text{holder}(s_k, x) \wedge R(s_k, s) \wedge \text{frequent}(s)]$. by PM

f. $[\![AP_2]\!] = \lambda x \lambda s. \exists s_k[\text{beautiful}(s_k) \wedge s_k > st_c \wedge \text{holder}(s_k, x) \wedge R(s_k, s) \wedge \text{frequent}(s)]$. by λ-A

g. $[\![AP_3]\!] = \lambda s. \exists s_k[\text{beautiful}(s_k) \wedge s_k > st_c \wedge \text{holder}(s_k, \text{the landscape}) \wedge R(s_k, s)$
$\wedge \text{frequent}(s)]$.

h. $[\![DP]\!] = \iota s. \exists s_k[\text{beautiful}(s_k) \wedge s_k > st_c \wedge \text{holder}(s_k, \text{the landscape}) \wedge R(s_k, s)$
$\wedge \text{frequent}(s)]$.

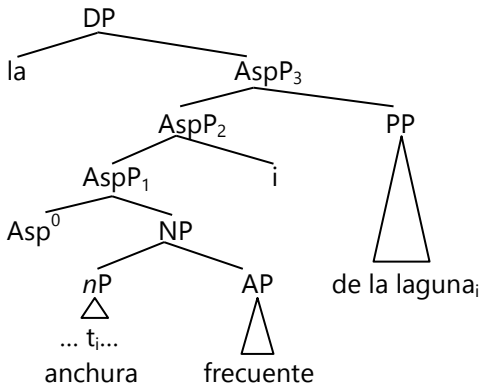
The starting point of the derivation depicted in (34) is the nominalization, whose denotation is taken from (7). Subsequently, the node AspP attaches to the structure in order to associate a state-kind from the set of state-kinds with a state-token. Based on Gehrke & McNally (2015), I propose that frequency adjectives can denote in the kind or the token domain, so I posit that they denote properties of either type <s,t> or type <s_k,t>. In this case, I posit that they denote properties of state-tokens, which accounts for the occurrence of the temporal reading. Accordingly, the frequency modifier attaches to the nominal structure and combines with it intersectively. Afterwards, the individual variable *x* is bound by λ-A and saturated by the PP. Finally, the determiner introduces the iota operator *ι*. The result of the derivation is the unique state of beauty that is associated with a state-kind above a contextual standard and whose holder is the landscape, and that state is frequent.

The reader may wonder about the technical details of the syntax of adjectives. In this dissertation I assume that, when adjectives combine with nouns in attributive position, they are base-generated in the position in which they are phonologically realized. The fact that Romance languages accept adjectives in post-nominal position can be accounted for by means of the movement of the noun to a higher position, assuming that the basic structure is the one in which the adjective appears in prenominal position (Demonte 2008; Cinque 2010). However, to avoid complicated details that are irrelevant for the purposes of this dissertation, I propose that the adjective is base-generated where it is phonologically realized. The crucial phenomenon to which I want to draw attention is that there are two domains of modification that involve frequency adjectives, namely, the kind and the token domains.

On the other hand, the existing syntactic analyses of adjectives that appear in prenominal position differ predominantly on whether the adjective occupies the specifier position of an NP or rather projects an AP that selects for an NP as its complement (see Fábregas 2017 for a review of arguments for and against these and other proposals). In this dissertation, I do not bring the discussion to the syntactic point of view and, although I assume that adjectives occurring in prenominal position project APs for convenience sake, I do not justify the choice, because it does not lead to relevant consequences for the semantic composition.

Now let us examine how frequency modifiers compose when triggering non-temporal readings in post-nominal position. For *la anchura frecuente de la laguna* '(lit.) the width frequent of the pond', I propose the following composition:

(36)



(37) a. $[\![nP]\!] = \lambda s_k.\,\text{width}(s_k) \wedge \text{holder}(s_k, x)$.

b. $[\![AP]\!] = \lambda s_k.\,\text{frequent}(s_k)$.

c. $[\![NP]\!] = \lambda s_k.\,\text{width}(s_k) \wedge \text{holder}(s_k, x) \wedge \text{frequent}(s_k)$. by PM

d. $[\![Asp^0]\!] = \lambda G_{<sk,t>} \lambda s.\,\exists s_k[G(s_k) \wedge R(s_k, s)]$.

e. $[\![AspP_1]\!] = \lambda s.\,\exists s_k[\text{width}(s_k) \wedge \text{holder}(s_k, x) \wedge \text{frequent}(s_k) \wedge R(s_k, s)]$.

f. $[\![AspP_2]\!] = \lambda x \lambda s.\,\exists s_k[\text{width}(s_k) \wedge \text{holder}(s_k, x) \wedge \text{frequent}(s_k) \wedge R(s_k, s)]$. by λ-A

g. $[\![AspP_3]\!] = \lambda s.\,\exists s_k[\text{width}(s_k) \wedge \text{holder}(s_k, \text{the pond}) \wedge \text{frequent}(s_k) \wedge R(s_k, s)]$.

h. $[\![DP]\!] = \iota s.\,\exists s_k[\text{width}(s_k) \wedge \text{holder}(s_k, \text{the pond}) \wedge \text{frequent}(s_k) \wedge R(s_k, s)]$.

As can be observed, the frequency modifier, which denotes in the kind domain, attaches to the nominalization before the attachment of AspP. Consequently, what is frequent in this case is the state-kind rather than the state-token. At the end of the derivation, we obtain the desired interpretation: the unique state of width that is associated with a state-kind of width whose holder is the pond, and that state-kind holds frequently. Note that, although the frequency modifier operates over state-kinds, the whole DP denotes a state-token, which correctly captures the fact that it accepts temporal modification, as shown in the previous subsection.

In the following subsection, I study nominalizations like *altura* 'height' and other non-deadjectival nouns separately because of their particular properties.

3.2.3.2. Exceptional nominalizations

In this section, I study the semantics of certain deadjectival nominalizations and other non-deadjectival nouns that are exceptional because they only trigger a degree reading in the absence of an explicit mass quantifier or measure phrase. Recall from section 3.1 that most

deadjectival nominalizations in Spanish can trigger either a quality or a degree reading: in the quality reading, the nominalization entails the semantics of the positive form of the base adjective, which is captured by the inclusion of EVAL in the derivation; in contrast, in the degree reading, the nominalization expresses a property that holds to a certain degree, which is captured by not including EVAL in the derivation. In short, in this section I review certain exceptional deadjectival nominalizations whose derivation cannot include EVAL, which has decisive consequences with respect to their combination with frequency adjectives. In addition to their particular combinatorics with frequency adjectives, I argue that the analysis proposed here based on the kind-token dichotomy can explain the so-called *temperature paradox*.

To my knowledge, the only examples of exceptional deadjectival nominalizations are *altura* 'height' (< *alto* 'tall'), *anchura* 'width' (< *ancho* 'wide') and *longitud* 'length' (< (obs.) *longo* 'long'). Observe the following data:

(38) a. La altura/anchura del túnel no es suficiente para que pase el camión.
the height width of.the tunnel not is enough for that pass the truck
'The height of the tunnel is not enough for the truck to get through.'
b. *La altura/anchura del túnel es una de sus propiedades.
the height width of.the tunnel is one of its properties
c. La altura/anchura del túnel es mínima / de cinco metros.
the height width of.the tunnel is minimal of five meters

(38a) expresses that the tunnel's degree of height/width is not high enough for the truck to get through; the quality reading according to which the tunnel is tall/wide but that property is not enough for the truck to get through the tunnel is unavailable. (38b) shows that the DPs including these nominalizations are incompatible with the predicate *es una de sus propiedades* 'is one of its properties', which induces a quality reading. Finally, (38c) shows that these DPs are actually compatible with the predicate *mínimo* 'minimal' and measure phrases, which induce a degree reading. In accordance with what is argued in section 3.1, the degree reading is captured by positing that the null morpheme EVAL is not present in their syntactic structure, but the DPs containing these nominalizations denote a state: for example, *la altura del túnel* 'the height of the tunnel' denotes the state in which the tunnel has a certain degree of height.

Alternatively, we could think that DPs containing these exceptional nominalizations denote degrees rather than states (Bochnak 2013; Baglini 2015; Fábregas 2016), as shown in chapter 1. According to these analyses, *la altura del túnel* 'the height of the tunnel' denotes the degree of height that is associated with the tunnel. In order to verify whether these DPs denote either

states or degrees, we need to examine them when predicated of entities whose height/width might change over time. Their combination with temporal modifiers reveals that they do denote states:

(39) a. Ahora están hablando de la altura de Juan en su infancia.
now are.3.PL talking of the height of Juan in his childhood
'Now they are talking about Juan's height in his childhood.'
b. Ahora están hablando de la anchura del mar de Aral durante el estalinismo.
now are.3.PL talking of the width of.the sea of Aral during the Stalinism
'Now they are talking about the Aral Sea's width during Stalinism.'

Thus, in (39a) what is temporally located in Juan's childhood is the state of John's having some degree of height, not the degree itself; analogously, in (39b) what is temporally located during Stalinism is the state of the Aral Sea's having some degree of width, and not the degree itself. As argued in chapters 1 and 2, degrees, either as numerical representations or as equivalence classes (of individuals or states), cannot be temporally located because they do not constitute eventualities or lack any temporal dimension.

Now let us go back to the combination of *altura* 'height' with frequency adjectives, which was postponed from subsection 3.2.3. Recall that we concluded that frequency adjectives trigger a temporal reading regardless of what position they appear in, while they can trigger a non-temporal reading in post-nominal position. Apparently, nominalizations like *altura* 'height' show an exceptional behavior:

(40) a. *la frecuente altura de las dunas
the frequent height of the dunes
b. la altura frecuente de las dunas
the height frequent of the dunes
c. *La altura de las dunas es frecuente.
the height of the dunes is frequent

The only expected pattern is found in (40b), where the frequency modifier triggers a non-temporal reading in post-nominal position according to which there is a degree of height that is frequent, for example a height of one hundred meters. However, neither of the examples in (40) can trigger a temporal interpretation, which is unexpected in principle assuming that deadjectival nominalizations express states, which can re-hold. The explanation resides in the

fact that nominalizations like *altura* 'height' only have a degree reading in the absence of an explicit mass quantifier or measure phrase; accordingly, the temporal reading would mean that the dunes frequently have some height, which is odd because it implies that there are cases in which the dunes lack any degree of height.[40]

My analysis complies with Jaque's (2014), who argues that DPs containing non-deadjectival nouns like *coste* 'cost', *peso* 'weight', etc. denote states rather than degrees because they accept temporal modifiers, which indicates that they are subject to time:

(41) a. el (elevado) coste/valor/peso de los libros durante esta temporada
the high cost value weight of the books during this season
b. la (elevada) estatura de Juan en su infancia
the high height of Juan in his childhood
c. el (elevado) precio de los libros esta temporada
the high price of the books this season
d. la (baja) temperatura del mar el verano pasado
the low temperature of.the sea the summer last
(From Jaque 2014: 464, 471. Parentheses and translations mine)

The reason why I have introduced parentheses in Jaque's examples is that the absence of explicit modifiers does not affect the temporal properties of these nouns, which provides evidence that they express states regardless of whether or not they are accompanied by explicit modifiers. Crucially, these nouns do not trigger a quality reading in the absence of an explicit mass quantifier or measure phrase either and reproduce the same pattern as nominalizations like *altura* 'height' with respect to their combination with frequency adjectives:

(42) a. *El coste/peso del libro es una de sus propiedades.
the cost weight of.the book is one of its properties

[40] As a curiosity, *altura* 'height' can trigger a quality reading when used in a figurative sense in (semi-)lexicalized expressions such as *altura de miras* 'high-mindedness' or *altura política/moral* '(lit.) political/moral height':

(i) a. Su altura de miras es una de sus cualidades.
their height of sights is one of their qualities
'Their high-mindedness is one of their qualities'
b. Su altura política / moral es una de sus cualidades.
their height political moral is one of their qualities
'Their political vision / morality is one of their qualities'
(ii) a. su frecuente altura de miras.
their frequent height of sights
b. su frecuente altura política / moral.
their frequent height political moral

b. El coste del libro es de diez euros.
the cost of.the book is of ten euros
c. El peso del libro es de dos kilos.
the weight of.the book is of two kilos

(43) a. *el frecuente coste/peso de los libros
the frequent cost weight of the books
b. el coste/peso frecuente de los libros
the cost weight frequent of the books

(44) a. *La temperatura de Vitoria es una de sus propiedades.
the temperature of Vitoria is one of its properties
b. La temperatura de Vitoria es de quince grados.
the temperature of Vitoria is of fifteen degrees
c. *la frecuente temperatura de Vitoria
the frequent temperature of Vitoria
d. la temperatura frecuente de Vitoria
the temperature frequent of Vitoria

In (42a) the nouns *peso* 'weight' and *coste* 'cost' do not accept the predicate *es una de sus propiedades* 'is one of its properties' because this predicate induces a quality reading, which is unavailable for this type of nouns. (42b, c) show that they admit measure phrases in predicative position and (43) shows that they only accept frequency modification in post-nominal position in a non-temporal reading. Finally, (44) shows that the noun *temperatura* 'temperature' reproduces the same pattern.

If the DPs containing the noun *temperatura* 'temperature' denote a state rather than a degree, we can naturally explain the *temperature paradox* (see Lasersohn 2005 and Romero 2008 for alternative explanations):[41]

(45) a. La temperatura de Tres Cantos es la misma que la temperatura de Colmenar Viejo.
the temperature of Tres Cantos is the same that the temperature of Colmenar Viejo
'The temperature of Tres Cantos is the same as the temperature of Colmenar Viejo'
b. La temperatura de Colmenar Viejo está aumentando.
the temperature of Colmenar Viejo is increasing
'The temperature of Colmenar Viejo is increasing.'

[41] The temperature paradox is attributed to Barbara Partee.

c. La temperatura de Tres Cantos está aumentando.
the temperatura of Tres Cantos is increasing
'The temperature of Tres Cantos is increasing.'

From (45a) and (45b), (45c) does not necessarily follows. However, if DPs like the ones appearing in (45) denoted degrees, (45c) should follow from (45a) and (45b), since two degrees that occupy the same position on the scale are identical. My explanation for this apparent paradox resides in the fact that both DPs *la temperatura de Tres Cantos* 'the temperature of Tres Cantos' and *la temperatura de Colmenar Viejo* 'the temperature of Colmenar Viejo' denote states that are associated with the same degree of temperature according to (45a), but the states themselves are different because they involve different holders.

The phenomenon called *temperature paradox* is equivalent to what Francez & Koontz-Garboden call *identity conditions*. Recall from chapter 1 the examples provided by Lucas Champollion in Francez & Koontz-Garboden (2017a) in personal communication: in a context in which Kim and Sandy have the same weight and Kim's weight broke a chair, it is false to affirm *Sandy's weight broke the chair*, as incorrectly predicted if we posit that the DPs involved denote degrees. The authors claim that these DPs have different identity conditions even though the individuals are associated with the same degree of weight. Again, under the analysis defended here, these data receive a natural explanation: *Kim's weight* and *Sandy's weight* denote states that are associated with the same degree, but the states themselves are different because they involve different holders (see Moltmann 2009 for an analogous reasoning in terms of tropes).

We can conclude that deadjectival nominalizations like *altura* 'height', and other non-deadjectival nouns like *coste* 'cost' and *temperatura* 'temperature', express states that can only trigger a degree reading in the absence of an explicit mass quantifier or measure phrase, which accounts for their apparent peculiar behavior with respect to their combination with frequency adjectives and for the so-called *temperature paradox*. The fact that they can only express a degree reading does not mean that they do not express states (cf. Bochnak 2013; Baglini 2015), since, in light of the empirical evidence provided in this section, they also express properties that are subject to time. In the following subsection, I study the combination of deadjectival nominalizations with aspectual modifiers.

3.2.4. Aspectual modification

In this subsection, I provide evidence that the fact that deadjectival nominalizations do not accept aspectual modifiers headed by *durante* 'for' even though they are atelic does not mean that they do not express eventualities (cf. Fábregas 2016). As in Zato (2020), I argue that what

this really suggests is that they cannot express perfective eventualities. This proposal provides empirical evidence, against Fábregas & Marín (2012), that Spanish nominalizations can encode certain viewpoint aspect-related information. The analysis defended here has important consequences for our understanding of lexical/inner and viewpoint/outer aspect and their relation to time, the precise delimitation of these concepts and their interaction with eventuality predicates. In order to understand the proposal, a little bit of background on lexical/inner and viewpoint/outer aspect is necessary.

In chapter 2, I illustrated the difference between atelic and telic eventualities, which is a matter of lexical or inner aspect insofar as (a)telicity is a property that characterizes predicates. An eventuality is atelic if it is homogeneous (at least to certain level of granularity), while it is telic if it is heterogeneous (McNally 2017). The former eventualities combine with aspectual PPs headed by *durante* 'for', while the latter combine with aspectual PPs headed by *en* 'in':

(46) a. El perrito estuvo asustado durante/*en varias horas.
the puppy was scared for in several hours
b. El pastor caminó durante/*en varios días.
the shepherd walked for in several days

(47) a. La bomba explotó *durante/en varios segundos.
the bomb exploded for in several seconds
b. El tornado destruyó la ciudad #durante/en una hora.
the tornado destroyed the town for in one hour

Atelic predicates, like the state *(estar) asustado* '(to be) scared' and the activity *caminar* 'to walk' can only combine with aspectual modifiers headed by *durante* 'for', see (46). In contrast, telic predicates, like the achievement *explotar* 'to explode' and the accomplishment *destruir la ciudad* 'to destroy the town', accept aspectual modifiers headed by *en* 'in', see (47). Note that in (47b) the *durante*-phrase is also licensed because accomplishments are durative, but, when this phrase occurs, it is entailed that the tornado does not destroy the whole town.

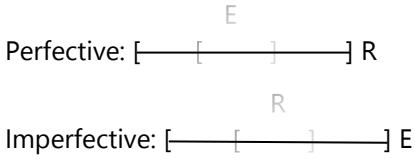
If lexical or inner aspect is related to the internal properties of eventualities, viewpoint or outer aspect is related to how the eventuality is presented, mainly, in progress, concluded or repeated in time. Viewpoint aspect allows us to differentiate between two types of eventualities: perfective and imperfective (Verkuyl 1972, 1993, 2012; Comrie 1976; Smith 1991; Klein 1994; Kratzer 1998; Carrasco 1999, 2017; Borik 2006; Demirdache & Uribe-Etxebarria 2000, 2004, 2007, 2014; de Swart 2012; Arregui et al. 2014; Deo 2015; a.o.). Before offering the formal details, we can characterize perfective eventualities as the ones that include their boundaries or are shown

as finished, while imperfective eventualities do not include their boundaries or are shown as unfinished. It is important to take into consideration that viewpoint aspect operates over lexical aspect, so both telic and atelic predicates can enter into perfective or imperfective interpretations. For example, *Lois cleaned the car* expresses a telic event that is presented as finished, that is, the event of Lois' cleaning the car concluded in the past. In contrast, *Lois was cleaning the car* expresses a telic event that is shown as unfinished, so it did not have to conclude in the past; in fact, we can add a continuation that denies the completion of the event, as in *Lois was cleaning the car when she got tired and stopped cleaning it*. Analogously, *Peter had a good time* expresses a state (which is, therefore, atelic) that is presented as finished, while *Peter was having a good time* expresses a state that is presented as unfinished.

Note that viewpoint aspect does not inform about whether an eventuality holds in the past, in the present or in the future, which is the task of time; as shown in section 3.2.2, time is a deictic category that locates an eventuality in the past, the present or the future with respect to the speech time. An eventuality can be either perfective or imperfective in both the past and the future: for example, *Peter was walking yesterday* expresses an imperfective eventuality that holds in the past, while *Peter will be walking tomorrow* expresses an imperfective eventuality that holds in the future. In contrast, *Lois walked two kilometers yesterday* expresses a perfective eventuality that holds in the past, whereas *Lois will have walked two kilometers tomorrow* expresses a perfective eventuality that holds in the future.

In order to account for perfective and imperfective interpretations, the literature has traditionally based their analyses on Reichenbach (1947). According to the author, temporal and aspectual relations include three fundamental elements: the *utterance time* or the time at which the statement is uttered, the *eventuality time* or the time at which the eventuality is supposed to hold and the *reference time*, which establishes a relevant reference point. For example, in *Lois had arrived*, there is a time at which the sentence is uttered, let's say the present; a time at which the eventuality holds, namely, when Lois arrived; and there is a reference time that is situated after Lois arrived. For example, if we say *Lois had arrived when Peter entered the house*, the event of Lois' arriving holds before the event of Peter entering the house, which is the reference time, and both events hold before the utterance time. Building on Smith (1991), Klein (1994) and Kratzer (1998), and García Fernández (2000) and Carrasco (2017) for Spanish, I assume that in perfective eventualities the eventuality time *E* is included in the reference time *R* ($E \subset R$), while in imperfective eventualities the reference time *R* is included in the eventuality time *E* ($R \subset E$). The following diagram shows the inclusion relations in question:

Figure 1: Perfective and imperfective aspect



In figure 1, the perfective interpretation is represented as a segment *R* that includes an interval *E*, that is, the eventuality time is included in the reference time. In contrast, the imperfective interpretation is represented as a segment *E* that includes an interval *R*, that is, the reference time is an interval of the eventuality time. The goal of this section is not to elaborate a meticulous analysis of the perfective-imperfective distinction, but rather to explain why aspectual modifiers headed by *durante* 'for' and *en* 'in' are only licensed when a perfective interpretation is available. For other more exhaustive analyses of the perfective/imperfective opposition in Spanish, the reader is referred to García Fernández (1999, 2000), Carrasco (1999, 2017), Demirdache & Uribe-Etxebarria (2000, 2004, 2007, 2014), Arregui et al. (2014) and references therein.

Let us illustrate how aspectual modifiers interact with viewpoint aspect. In Spanish, there are two past tenses: the perfective and the imperfective one.[42] Spanish verbs, including the copulas *ser* and *estar*, can bear either perfective or imperfective morphology, but only perfective interpretations license aspectual modification (García Fernández 1999, 2000):

(48) a. El perrito *estaba / estuvo asustado durante varias horas.
the puppy was.IPFV was.PFV scared for several hours
b. El pastor *caminaba / caminó durante varias horas.
the shepherd walked.IPFV walked.PFV for several hours

(49) a. La bomba *explotaba / explotó en una hora.
the bomb exploded.IPFV exploded.PFV in one hour
b. El tornado *destruía / destruyó la ciudad en una hora.
the tornado destroyed.IPFV destroyed.PFV the town in one hour

In (48) the atelic predicates *estar asustado* 'to be scared' and *caminar* 'to walk' can combine with the aspectual modifier *durante varias horas* 'for several hours' only when the verb bears perfective morphology. Analogously, in (49) the telic predicates *explotar* 'to explode' and

[42] The Spanish imperfective past tense is not always characterized as an imperfective tense. Some authors consider that its fundamental property is that it is relative or referentially dependent on another past tense (see for instance Rojo & Veiga 1999 based on Bello 1847). This is not the place to discuss the different analyses for the imperfective tense; the reader is referred to RAE & ASALE (2009: 1744 et seq.) for discussion.

destruir la ciudad 'to destroy the town' can combine with the aspectual modifier *en una hora* 'in one hour' only when the verb bears perfective morphology. The explanation of why imperfective interpretations do not license aspectual modifiers follows from the analysis sketched above: in imperfective interpretations the eventuality time is presented without their boundaries; in other words, the reference time is an interval taken from the eventuality time. Accordingly, if the eventuality is presented as unfinished, aspectual modifiers, which delimit the duration of eventualities, cannot occur. In contrast, in perfective interpretations the eventuality time is presented completed or with its boundaries; in other words, the eventuality time is an interval taken from the reference time. If the eventuality is presented as finished, then aspectual modifiers can occur to inform about its duration.

It must be noted that imperfective morphology is also compatible with aspectual modification in certain contexts:

(50) a. Cuando Lidia era joven, bailaba durante varias horas antes de dormir.
when Lidia was young danced.IPFV for several hours before of sleep
'When Lidia was young, he used to dance for several hours before sleeping'
b. El mes pasado, Lidia limpiaba la casa en una hora gracias al robot.
the month last Lidia cleant.IPFV the house in one hour thanks to.the robot
'Last month, Lidia used to clean the house in one hour thanks to the robot'

As García Fernández (2000) points out for other similar examples, the co-occurrence of aspectual modification and imperfective morphology is licensed in habitual contexts, which include many instantiations of perfective events. Accordingly, the habit of dancing in (50a) and the habit of cleaning the house in (50b) constitute macro-eventualities that are imperfective, since we do not know whether the habit extends in the future. In addition, each macro-eventuality is composed of different micro-eventualities of dancing and cleaning the house, which are perfective. Crucially, the aspectual modifier measures out each of these micro-eventualities, and not the whole macro-eventuality. Thus, we can maintain the hypothesis according to which the licensing of aspectual modifiers is due to the existence of a *perfective interpretation*.

With this in mind, we can explore the semantics of deadjectival nominalizations in relation to viewpoint aspect. When combined with aspectual modifiers headed by *durante* 'for', they give rise to anomalous sentences:

(51) a. *La pureza del lago durante muchos siglos es sorprendente.
the purity of.the lake for many centuries is surprising
b. *La tristeza del preso durante muchos años es sorprendente.
the sadness of.the prisoner for many years is surprising
c. ?La honestidad de Pepe con Pepa durante varios años es sorprendente.
the honesty of Pepe with Pepa for several years is surprising
'Pepe's honesty to Pepa for several years is surprising.'

Deadjectival nominalizations are incompatible with aspectual modifiers regardless of whether they are derived from individual-level predicates, as in (51a), stage-level predicates, as in (51b), or mental state adjectives, as in (51c), although the latter are marginally acceptable for some speakers (I will come back to this issue below). The fact that deadjectival nominalizations are incompatible with aspectual modifiers has gone inexplicably unnoticed in the literature of deadjectival nominalizations, with the exception of Fábregas (2016). For this author, for whom the combination of deadjectival nominalizations with temporal modifiers is not systematic, contra what was shown in section 3.2.2, data like the ones in (51) prove that deadjectival nominalizations are not subject to time and, consequently, express a more impoverished object, namely, qualities. However, as shown in chapter 1 and section 3.2.2, this analysis could not explain why deadjectival nominalizations can combine with temporal and frequency modifiers if we posit that they are not subject to time. Moreover, an extension of this analysis would incorrectly predict that the predicates occurring in (48) and (49) do not express eventualities when they bear imperfective morphology, since aspectual modifiers are unlicensed in that case.

If deadjectival nominalizations accept temporal and frequency modifiers, but they do not accept aspectual ones, the most natural explanation is that they express imperfective states. Adjectives constitute a defective category that cannot bear tense, viewpoint aspect or mood information without the assistance of the copula. Given that deadjectival nominalizations do not include the copula in the derivation, they cannot bear perfective information and, therefore, cannot express perfective states (actually, I argue that their base adjectives trigger imperfective interpretations by default in the absence of the copula, as will be shown below). Now the parallelism between deadjectival nominalizations and imperfective states becomes clear:

(52) a. El estudiante *estaba / estuvo triste durante varios años.
the student was.IPFV was.PFV sad for several years
b. *la tristeza del estudiante durante varios años
the sadness of.the student for several years

In (52a), the aspectual modifier is licensed only when the copula carries perfective morphology; that the copula carries perfective morphology indicates that the state in which the student was sad is already finished, so we can measure its duration. If the copula carries imperfective morphology, the state is presented as unfinished, so we cannot measure its duration and, consequently, the aspectual modifier cannot appear. Regarding (52b), it shows that the corresponding deadjectival nominalization patterns with the imperfective reading in being incompatible with aspectual modifiers. The conclusion that can be drawn is that deadjectival nominalizations express imperfective states.

Now let us go back to (51c), where we saw that deadjectival nominalizations that are derived from mental state adjectives like *honestidad* 'honesty' do not prompt as clear ungrammatical results as the other types of nominalizations. In fact, Villalba (2013) provides an example that he considers acceptable:

(53) la brutalidad de al-Assad durante meses
the brutality of al-Assad for months
'Al-Assad's brutality for months'

(From Villalba 2013: 247)

It must be noted that Villalba does not differentiate among temporal, frequency and aspectual modifiers, but rather he gathers them in a macro-category of temporal modifiers, as most authors do. Moreover, Villalba does not distinguish the nominalizations derived from mental state adjectives from the others. Regardless, although I do not consider this type of data to be fully acceptable, it is necessary to provide an explanation as to why they are more easily interpretable than the ones that include deadjectival nominalizations that are not derived from mental state adjectives, such as (51a, b). Recall that mental state adjectives like *honesto* 'honest' and *brutal* 'brutal' presuppose an event (Martin 2006, 2008, 2015). In other words, *Mark fue honesto con David* 'Mark was honest to David' presupposes that Mark did something in order for the speaker to evaluate Mark as honest. Assuming this, we can postulate that, for those speakers for whom (51c) and (53) are acceptable, there is an identification of the state expressed by the nominalization with the presupposed event. Hence, the temporal delimitation of the state of honesty/brutality holds, in any case, via the temporal delimitation of the presupposed event. In other words, for those speakers for whom (51c) and (53) are acceptable, the presupposed event is salient enough to license aspectual modifiers.

The analysis presented here according to which deadjectival nominalizations express imperfective states relies on the assumption that their base adjectives trigger an imperfective

interpretation by default in the absence of the copula. I provide empirical evidence that this is the case. First, in small clauses (SC), in which the copula does not appear, aspectual modification is not admitted even if the verb of the main clause bears perfective morphology. Observe the following examples, where the aspectual modifiers cannot take narrow scope:

(54) a. *María se imaginó [al monstruo desnudo durante varias horas]$_{SC}$.
María REFL imagined ACC.the monster naked for several hours
'María imagined the monster naked for several hours.'
b. *María encontró [a su hermano dormido durante varias horas]$_{SC}$.
María found ACC her brother asleep for several hours
'María found her brother asleep for several hours.'

In (54a) an interpretation in which the monster was naked for several hours is impossible and in (54b) an interpretation in which María's brother was asleep for several hours is impossible too. This phenomenon holds because adjectives trigger an imperfective interpretation by default when additional morphology is not involved, which explains why deadjectival nominalizations, which do not include the copula in their derivation, express imperfective states.

In contrast, temporal modifiers can actually take narrow scope in the same contexts, which shows that gradable adjectives are subject to time in the absence of the copula, that is, they express eventualities:

(55) a. María se imaginó [al monstruo desnudo durante/en la reunión]$_{SC}$.
María REFL imagined ACC.the monster naked during in the meeting
'María imagined the monster naked during/in the meeting.'
b. María encontró [a su hermano dormido durante/en el funeral]$_{SC}$.
María found ACC her brother asleep during in the funeral
'María found her brother asleep during/in the funeral.'

Another piece of evidence that adjectives display an imperfective interpretation by default in the absence of the copula is provided by depictives, which introduce a secondary predication that is simultaneous with the main predication (what McNally 1994 calls the *simultaneity condition*; see also Rothstein 2011 for English and Demonte 1999 and Demonte & Masullo 1999 for Spanish):

(56) a. El actor llegó cansado.
the actor arrived.PFV tired
b. El sonámbulo caminó dormido.
the sleepwalker walked.PFV asleep

Following Vlach (1981a, 1981b), two different eventualities, one of which is perfective, occur simultaneously only if the other eventuality is imperfective. Otherwise, there should be a sequential reading in which one eventuality follows the other one or the structure should be ungrammatical. Vlach (1981a, 1981b) bases his analysis on *when*-clauses, which I adapt to Spanish here for convenience sake (see also Carrasco 1999, 2017):

(57) a. Cuando el actor llegó, los periodistas cruzaban / cruzaron la calle.
when the actor arrived the journalists crossed.IPFV crossed.PFV the street
'When the actor arrived, the journalists were crossing / crossed the street.'
b. Cuando la abuela llegó a casa, sonaba / sonó el teléfono.
when the grandmother arrived to home rang.IPFV rang.PFV the phone
'When the grandmother arrived home, the phone was ringing / rang.'

(58) a. Cuando el actor llegó, estaba / *estuvo cansado.
when the actor arrived was.IPFV was.PFV tired
b. Cuando el sonámbulo caminó, estaba / *estuvo dormido.
when the sleepwalker walked was.IPFV was.PFV asleep

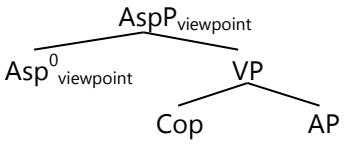
On the one hand, in (57a) the occurrence of the imperfective induces an interpretation in which the actor arrived at the same time as the journalists crossed the street; in contrast, the occurrence of the perfective induces an interpretation in which the journalists crossed the street after the actor arrived. Analogously, in (57b) the occurrence of the imperfective induces an interpretation in which the phone was ringing at the same time as the grandmother arrived home, while the occurrence of the perfective induces an interpretation in which the phone rang after the grandmother arrived home. On the other hand, the situation changes partially when atelic predicates are involved. In both (58a) and (58b) the imperfective induces a simultaneous reading again, according to which the actor was tired at the same time as he arrived and the sleepwalker was asleep at the same time as he walked. However, the perfective does not license, unlike in (57), a sequential reading in which the actor was tired after arriving and the sleepwalker was asleep after walking. According to Vlach, atelic predicates like *estar cansado* 'to be tired' and

estar dormido 'to be asleep' are unable to do that because they do not include initial boundaries that are able to separate the two eventualities involved.

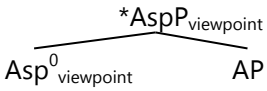
Taking this into consideration, we can establish the analysis of depictives in (56). The reason why the actor arrived and was tired simultaneously in (56a) and the sleepwalker walked and was asleep simultaneously in (56b) is that the adjectives express imperfective states; given that they do not include their boundaries, the eventualities involved can overlap. If it were the case that the adjectives expressed perfective eventualities, either there should be an interpretation in which the actor was tired after arriving and the sleepwalker was asleep after walking or the sentences would be ungrammatical, but neither of them is the case. We can conclude that there is enough empirical evidence that adjectives express imperfective eventualities by default when the copula does not appear, which is in accordance with the analysis defended here whereby deadjectival nominalizations, which do not include the copula in their derivation, express imperfective eventualities as well.

Based on Kratzer (1998), García Fernández (2000), Demirdache & Uribe-Etxebarria (2000, 2004, 2007, 2014), Jaque (2014), among others, we can postulate a syntactic functional node ($AspP_{viewpoint}$) with viewpoint aspect information. The idea that I put forth here is that this node only attaches to verbal structures. If the copula is present, the aspectual node appears; if the copula is absent, as in deadjectival nominalizations, the aspectual node does not appear:

(59)



(60)



If it is the case that deadjectival nominalizations cannot express perfective states because they do not include the copula in their morphological structure, the analysis predicts that deverbal nominalizations, which do include verbal morphology, can actually express perfective states. The prediction is borne out: deverbal nominalizations like *pertenencia* 'belonging', *abundancia* 'abundance', *confianza* 'trust', *permanencia* 'stay', *posesión* 'possession', etc. can co-occur with aspectual modifiers, as shown in (61).

(61) a. la pertenencia de Juan al club durante cuatro años
the belonging of Juan to.the club for four years
'Juan's belonging to the club for four years'

b. la abundancia de agua durante varias décadas
the abundance of water for several decades

Certainly, other stative nominalizations that are, presumably, morphologically related to verbs do not naturally combine with aspectual modifiers headed by *durante* 'for', like *moderación* 'moderation', *abnegación* 'selflessness', *ofuscación* 'bewilderment', *atrevimiento* 'boldness', etc.:

(62) a. ?la moderación del político durante varios años.
the moderation of.the politician for several years
b. ?la abnegación de Jenny durante varios meses.
the selflessness of Jenny for several months

Nonetheless, bear in mind that, as noted in the literature, their semantics correlate with the adjectival rather than with the verbal structure (see Pena 2006, among others). For example, *la moderación del político* 'the politician's moderation' correlates with *El político es/era moderado* 'The politician is / used to be moderate' and *la abnegación de Jenny* 'Jenny's selflessness' correlates with *Jenny es/era abnegada* 'Jenny is / used to be selfless'. In short, their formal properties do not correspond with their semantic interpretation. Although it is not the goal of this dissertation to provide an exhaustive characterization of these nominalizations, it is important to note that there are two possible analyses that can account for their behavior: either (a) they are actually derived from an adjectival base or (b) they are formed out of an impoverished verbal structure that cannot encode perfective information.

Leaving these nominalizations aside, which deserve an independent treatment, we can conclude that deverbal nominalizations can trigger perfective interpretations, whereas deadjectival nominalizations are always imperfective. In this respect, Fábregas & Marín (2012) claim that there is parametric variation between languages whose nominalizations can only encode lexical aspect-related information, like Spanish, and languages whose nominalizations can encode both lexical and viewpoint aspect-related information, like Slovenian. Specifically, Fábregas & Marín formulate the Aspect Preservation Hypothesis, which states that Spanish (French, Catalan, English and German) nominalizations do not modify the aspectual information of the verbal base. Their claim is based on the observation that certain Spanish verbs like *decorar* 'to decorate' can express either an eventive or a stative reading, but their respective nominalizations can only inherit the eventive reading. The authors conclude that the stative

reading of the verb *decorar* 'to decorate' is obtained by means of viewpoint aspect and that the nominalization *decoración* 'decoration' cannot inherit that information:

(63) a. Juan decoró el árbol de navidad. EVENT READING
Juan decorated the tree of Christmas
'Juan decorated the Christmas tree.'
b. Las velas decoraban la tarta. STATIVE READING
the candles decorated the cake
'The candles decorated the cake.'

(64) a. la decoración del árbol de navidad durante unas horas
the decoration of.the tree of Christmas for some hours
'the decoration of the Christmas tree for some hours'
b. #una decoración de la tarta de varias horas.
a decoration of the cake of several hours
'a decoration for several hours'

(Fábregas & Marín 2012: 59)

According to Fábregas & Marín, the stative reading of the verb *decorar* 'to decorate' is obtained via viewpoint aspect, but this information is not encoded in the nominalization. For that reason, the unique possible reading for (64b) is an event reading in which somebody decorated the cake for some hours. However, if we assumed the authors' proposal, we could not account for the systematic contrasts that deverbal and deadjectival nominalizations show with respect to their combination with aspectual modifiers. Arguably, the Aspect Preservation Hypothesis can correctly account for the fact that deadjectival nominalizations encode imperfective states, since their imperfective character results from the properties of the adjectival base; however, it incorrectly predicts that deverbal nominalizations cannot express perfective eventualities, since verbal bases are not lexically perfective. Thus, the Aspect Preservation Hypothesis should be slightly refined in order to incorporate certain viewpoint aspect-related information.

To sum up, in this section I have shown that deadjectival nominalizations cannot co-occur with aspectual modifiers headed by *durante* 'for' even though they constitute atelic eventualities. The reason behind this apparent mismatch is that they express imperfective states; specifically, given that adjectives trigger an imperfective interpretation by default in the absence of the copula and that deadjectival nominalizations do not include the copula in their derivation, they cannot express perfective states. Finally, this analysis provides empirical evidence that

Spanish nominalizations can encode some viewpoint aspect-related information in addition to lexical aspect-related information. The analysis defended here does not only offer a precise characterization of deadjectival nominalizations as imperfective states, but it also ensures a better understanding of the information conveyed by temporal and aspectual modifiers and their interaction with the verbal and nominal domains.

Interim summary

Recall from chapter 2 that stative predicates are defined as temporal objects (which do not involve change in any of their participants). As such, they are supposed to accept time-related modification, namely, temporal, frequency and aspectual modifiers. As we have seen so far, this is the case with respect to temporal and frequency modification, and there are independent reasons that explain why the nominalizations in question disallow aspectual modifiers. The following table summarizes how deadjectival nominalizations parallel imperfective eventualities:

Table 2. Temporal, frequency and aspectual modifiers and their interaction with viewpoint aspect

	Temporal modification	Frequency modification	Aspectual modification
Perfective states	+	+	+
Imperfective states	+	+	–
Deadjectival nominalizations	+	+	–

In the following subsections, I explore locative and manner modification. In relation to this question, since Davidson (1967) it has often been assumed that, while events accept locative and manner modifiers, states do not accept them, given that states cannot be located in space and do not hold in a particular manner. In this respect, two specific remarks must be made: first, as shown by Ernst (2016) for English, following the Neo-Davidsonian tradition, in the verbal and adjectival domains states accept locative and manner modification more naturally than is often assumed. Second, by virtue of the definition of states provided in this dissertation, whether or not states can combine with locative or manner modification is not as relevant as traditionally considered, since states are not defined on the basis of their capability to be spatially located or to hold in a particular manner. In other words, states occur irrespective of whether they can be

spatially located and of whether they hold in a particular way. In the following subsections, I show, nevertheless, that deadjectival nominalizations can accept locative and manner modifiers, which constitutes the final piece of evidence that they express eventualities.

3.2.5. Locative modification

In this subsection, I analyze the combination of deadjectival nominalizations with locative modifiers, which I have already advanced in chapter 2. Locative modifiers are adjuncts that locate eventualities at a particular place. The most influential classification of adjuncts with a locative meaning is due to Maienborn (2001, 2005a, 2005b), who claims that there exist two types thereof: frame-setting modifiers and locative modifiers, which in turn can be internal and external. The author applies her proposal to German, but it is also applicable to Spanish or English. For argumentative reasons, I illustrate the phenomenon in English:

(65) In Madrid, the mum kissed the kid on his cheek in the kitchen.

In (65) the adjuncts *on his cheek* and *in the kitchen* are locative modifiers: the former is an internal locative modifier, since it adds spatial information about some internal aspect of the eventuality, while the latter is an external locative modifier, since it locates the whole eventuality at a particular place. Finally, *in Madrid* is a frame-setting modifier, since it provides a spatiotemporal frame for the whole sentence or a topic time in the sense of Klein (1994). Thus, while locative modifiers provide spatial information, frame-setting modifiers provide spatiotemporal information. Another aspect in which locative modifiers and frame-setting modifiers differ according to Maienborn is with respect to entailment patterns: only when locative modifiers are omitted, does the semantics of the rest of the sentence remain true. Maienborn shows that events (and Davidsonian states) accept locative modifiers, but states do not accept them and, in any case, accept frame-setting modifiers:

(66) a. John washed the dishes in the kitchen.
b. Mary is quiet in the library.

In (66a), if we omit the adjunct *in the kitchen*, it is also true that John washed the dishes, so this adjunct is a locative modifier that informs about the spatial location at which the event took place. In contrast, in (66b), if we omit the adjunct *in the library*, it is not necessarily true that Mary is quiet in general or at another place, so this adjunct is a frame-setting modifier that receives a spatiotemporal interpretation: 'Mary is quiet when she is in the library'.

However, as advanced in chapter 2, Ernst (2016) shows that this argumentation is not well substantiated: first, in (66a) the adjunct *in the kitchen* can be paraphrased with a temporal clause too: 'John washed the dishes when he was in the kitchen', so we could mistakenly consider it a frame-setting rather than a locative modifier. Second, (66b) does not reproduce the same entailment pattern as (66a) because the sentence acquires a generic interpretation in the present tense; alternatively, if the past tense is used, the entailment pattern is fulfilled: *Mary was quiet in the library* does entail 'Mary was quiet'. Ernst concludes that there are solid reasons to treat locative adjuncts that appear in post-verbal position as true locative modifiers; thus, states can accept locative modification (in certain semantic and pragmatic conditions that are irrelevant here) and the fact that they do not accept locative modification so easily as events is explained because states hold irrespective of their location.

In relation to Spanish deadjectival nominalizations, if they express states, it is predicted that there are at least some cases in which they accept locative modification. This seems to be the case:

(67) a. La popularidad del futbolista en Barcelona sorprendió a todo el mundo.
the popularity of.the footballer in Barcelona surprised ACC *every the world*
'The footballer's popularity in Barcelona surprised everybody.'
b. La tristeza del estudiante en Madrid sorprendió a todo el mundo.
the sadness of.the student in Madrid surprised ACC *every the world*
'Juan's sadness in Madrid surprised everybody.'
c. La amabilidad de Jenny con Melania en la oficina sorprendió a todo el mundo.
the kindness of Jenny with Melania in the office surprised ACC *every the world*
'Jenny's kindness to Melania in the office surprised everybody.'

In (67a) the DP *la popularidad del futbolista* 'the footballer's popularity' denotes a state that holds in Barcelona; in (67b) the DP *la tristeza de Juan* 'Juan's sadness' denotes a state that holds in Madrid; and in (67c) la DP *la amabilidad de Jenny con Melania* 'Jenny's kindness to Melania' denotes a state that holds in the office. Note that *popularidad* 'popularity' is derived from the individual-level adjective *popular* 'popular', *tristeza* 'sadness' is derived from the stage-level adjective triste 'sad' and *amabilidad* 'kindness' is derived from the mental state adjective *amable* 'kind', so this three-way distinction is irrelevant again.

We can conclude that the adjuncts that appear in (67) are locative modifiers and, as a consequence, that deadjectival nominalizations accept locative modification, which provides additional evidence that deadjectival nominalizations express eventualities. In the following

subsection, I study the combination of deadjectival nominalizations with manner modifiers, which requires a bit more of elaboration.

3.2.6. Manner adjectives

In this section, I show that deadjectival nominalizations can combine with manner adjectives, where manner is derived from state-kinds. The combination of stative predicates with manner modifiers has been a controversial issue for semanticists, which is specially accentuated by the difficulty of defining the concept 'manner' in precise terms. As Gehrke & Castroviejo (2015) point out, manner is closely linked to events, so the discussion has traditionally boiled down to positing that either manner modifiers are predicates of events (Parsons 1990; Eckardt 1998; Wyner 1998; Geuder 2000, among others) or manner constitutes an independent object in the semantic ontology (Schäfer 2003, 2008; Piñón 2008; Alexeyenko 2012).

In this dissertation, I opt for a third strategy, namely, to postulate that manner modifiers are predicates of event-kinds but also predicates of state-kinds, given that states in general, and state-token deadjectival nominalizations in particular, can combine with manner modifiers. Although in chapter 2 I showed that other authors (Landman and Morzycki 2003; Landman 2006; Gehrke 2011, 2015, 2017; Anderson & Morzycki 2015) had already derived manner from event-kinds and state-kinds, they analyze manner modifiers as predicates of event-tokens or state-tokens that realize their corresponding kinds. Alternatively, in this dissertation I posit that manner modifiers are predicates of eventuality-kinds. On the one hand, the movement from eventuality-tokens to eventuality-kinds is the consequence of positing that verbs and adjectives are predicates of eventuality-kinds rather than eventuality-tokens. On the other hand, there is empirical evidence that manner modifiers must be derived from a more basic notion like eventuality-kinds, since there are some modifiers that can operate over entities and eventualities, but they only trigger a manner reading in the latter case.

Since the development of Neo-Davidsonian semantics, it has been noted that states are not incompatible with manner modifiers (cf. Davidson 1967). Ernst (2016) provides enough empirical evidence for English that the co-occurrence of stative predicates with manner modifiers is not only an exceptional phenomenon, but rather it is more common than is usually assumed. Data like *pleasantly archaic*, *obnoxiously idiosyncratic*, *eerily reminiscent*, *confusingly different*, etc. are some of the abundant examples provided by Ernst.

Of course, the different properties of the various types of stative predicates are relevant to account for their possible combinations. For example, individual-level predicates like *tall* have a subject that does not cause the state, so they do not accept manner modifiers that are necessarily related to a subject with agency properties, like *intelligently* in **John is intelligently*

tall (see Geuder 2000 for a similar explanation). In contrast, mental state adjectives like *modest* have a subject that is also a causer that may have agency properties, so *John was intelligently modest* is acceptable. Thus, we can conclude with Ernst that the ability of stative predicates to combine with manner modifiers is semantically constrained and the fact that they are simpler than events with respect to their agency/causal and aspectual properties explains why they do not combine with manner modifiers as easily as events do.

In Spanish, states can also accept manner adjectives and, in fact, many of the examples provided by Ernst for English are valid for Spanish as well. Below I illustrate their combination with individual-level, stage-level and mental state adjectives and with their corresponding nominalizations in attributive position:

(68) a. extravagantemente alto, extraordinariamente normal, siniestramente hermoso
'extravagantly tall, extraordinarily normal, eerily beautiful'
b. extrañamente perplejo, sorprendentemente triste, armoniosamente limpio
'strangely perplexed, surprisingly sad, harmoniously clean'
c. francamente amable, bruscamente sincero, tercamente valiente
'honestly kind, roughly sincere, stubbornly brave'

(69) a. extravagante altura, extraordinaria normalidad, siniestra hermosura
'extravagant height, extraordinary normality, eerie beauty'
b. extraña perplejidad, sorprendente tristeza, armoniosa limpieza
'strange perplexity, surprising sadness, harmonious cleanness'
c. franca amabilidad, brusca sinceridad, terca valentía
'honest kindness, rough sincerity, stubborn braveness'[43]

Recall from chapter 2 that the combination of gradable adjectives and manner adverbs gives rise to entailments to the positive; for example, *Ángela es extrañamente alta* 'Ángela is strangely tall' entails that Ángela is tall. Concerning deadjectival nominalizations, the situation is substantially different and depends on whether the nominalization to which manner adjectives accompany is derived from a dimensional or an evaluative adjective. Observe the following examples:

[43] Insofar as manner modifiers are used for making an evaluation, and therefore they involve subjectivity, their natural and most frequent position is the prenominal one. Nevertheless, the post-nominal position is not forbidden, in which case I do not appreciate any relevant semantic differences with respect to the prenominal position:

(i) a. la paciencia extraordinaria de la profesora.
the patience extraordinary of the professor
b. la altura impresionante de la torre.
the height impressive of the tower

(70) a. La altura de las dunas es extraña.
the height of the dunes is strange
b. La densidad del mineral es sorprendente.
the density of.the mineral is surprising

(71) a. La amabilidad del forastero es extraña.
the kindness of.the foreigner is strange
b. La belleza de este paisaje es sorprendente.
the beauty of this landscape is surprising

(70) presents examples of deadjectival nominalizations derived from dimensional adjectives, which can be associated with conventionalized units of measurement; in contrast, (71) shows examples of deadjectival nominalizations derived from evaluative adjectives, which are not associated with those units. From (70a) it does not necessarily follow that the dunes are tall: perhaps the height of the dunes is strange because it is variable or because it is abnormally low. Analogously, from (70b) it does not follow that the mineral is dense: it might be the case that the density of the mineral is surprising because it is extremely low, because it has an uncommon value or because it increases rather than decreases with temperature. In contrast, from (71a) it does follow that the foreigner is kind and from (71b) that the garden is beautiful.

Two conclusions can be drawn from these data: first, the adjectives *extraña* 'strange' and *sorprendente* 'surprising' do not lexically introduce a standard of comparison (see chapter 2 for discussion on their adverbial counterparts *extrañamente* 'strangely' and *sorprendentemente* 'surprisingly'). Second, when evaluative adjectives are involved, what counts as a strange or surprising state-kind normally exceeds a (contextual) standard of comparison because evaluative predicates invoke *between* comparison classes (in the sense of Sassoon & Toledo 2011). Recall from chapter 2, that, while *within* comparison classes involve comparisons between different situations in which the same individual might be, *between* comparison classes involve comparisons between different individuals. The evaluative predicates in (71) are not associated with conventionalized units of measurement (like meters or kilos), so in principle what counts as a *strange kindness* or a *surprising beauty* is evaluated by comparing them to other *strange kindnesses* and *surprising beauties*, which gives rise to a contextual interpretation.

Nonetheless, the question of whether the examples in (71) are evaluated with respect to a contextual standard of comparison in terms of entailments or cancelable inferences is difficult to clarify. In principle, we should treat them as entailments, but it is not impossible to provide a context in which an evaluative predicate can invoke a *within* comparison class according to which the predicate is not assessed with respect to a contextual standard comparison:

(72) La belleza de este paisaje es sorprendente: en invierno el paisaje es bello,
the beauty of this landscape is surprising in winter the landscape is beautiful
pero en verano es horroroso.
but in summer is hideous
'The beauty of this landscape is surprising: in winter the landscape is beautiful, but in summer it is hideous.'

In (72), we utter that the beauty of the garden is surprising because it is variable: in winter the garden is beautiful, but in summer the garden is not beautiful. Thus, (72) invokes a *within* rather than a *between* comparison class: the beauty of the garden is evaluated with respect to other situations in which the garden is. The question of whether evaluative nominalizations give rise to either entailments or cancelable inferences to the positive when combined with manner adjectives requires a deeper investigation and will not be solved here. For the purposes of this subsection, what is important to take into consideration is that the interaction of manner adjectives with dimensional nominalizations provides evidence that the former do not give rise to entailments to the positive; thus, if we concluded that evaluative nominalizations give rise to entailments rather than cancelable inferences to the positive, we would have to ascribe this phenomenon to the involvement of the null morpheme EVAL.

To close this subsection, it is interesting to verify whether modifiers like and *extraño* 'strange' and *sorprendente* 'surprising' must be treated as predicates of state-kinds or rather we can derive them from another less specific notion. A strong argument in favor of deriving these modifiers from kinds that are underspecified as to whether the relevant object is an entity or an eventuality is that they can also modify entities and events:

(73) a. La casa es extraña/sorprendente.
the house is strange surprising
b. La construcción del puente fue extraña/sorprendente.
the building of.the bridge was strange surprising

In (73a), the adjectives in question do not encode state-kinds; rather, they encode entity-kinds assuming that *casa* 'house' is a predicate of entity-kinds (which can express an entity-token if functional material is added). On the other hand, in (73b) the adjectives do not encode state-kinds, but rather event-kinds. Crucially, a manner reading holds in (73b), where an event is involved, but not in (73a), where an entity is involved, so the manner reading only arises when eventualities are involved. Thus, the manner reading is not inherent in these modifiers.

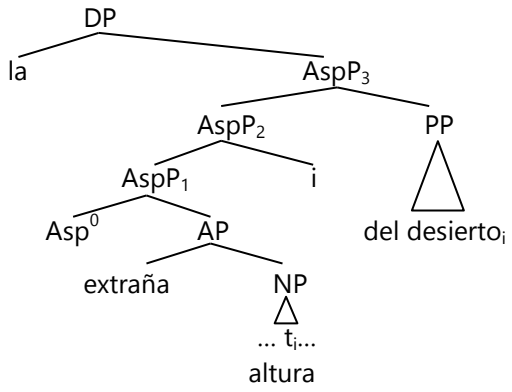
We conclude that deadjectival nominalizations accept manner modifiers in terms of state-kinds. Manner is not a basic object of our semantic ontology, but rather the manner reading is derived from a more basic object, namely, eventuality-kinds. Finally, manner adjectives do not give rise to entailments to the positive when combined with deadjectival nominalizations. In the following subsection, I propose a basic technical implementation for the analysis of manner adjectives.

3.2.6.1. Technical implementation

Recall from the previous subsection that manner modifiers do not make reference to any degree on the scale associated with a nominalization; rather, they denote sets of state-kinds that intersect with the set of state-kinds denoted by the nominalization to form subsets of state-kinds. For example, a strange height is the subset of totally preordered sets of state-kinds of having some height that can be considered strange due to whatever relevant reason. For the purposes of this section, what is important to take into consideration is that the kind-token distinction is useful to account for manner modification.

Let us observe the technical details. For *la extraña altura del desierto* 'the strange height of the desert', I propose the following composition:

(74)



(75) a. $[\![NP]\!] = \lambda s_k.\,\text{tall}(s_k) \wedge \text{holder}(s_k, x)$.

b. $[\![A]\!] = \lambda s_k.\,\text{strange}(s_k)$.

c. $[\![AP]\!] = \lambda s_k.\,\text{tall}(s_k) \wedge \text{holder}(s_k, x) \wedge \text{strange}(s_k)$. by PM

d. $[\![Asp^0]\!] = \lambda G_{<sk,t>} \lambda s.\,\exists s_k[G(s_k) \wedge R(s_k, s)]$.

e. $[\![AspP_1]\!] = \lambda s.\,\exists s_k[\text{tall}(s_k) \wedge \text{holder}(s_k, x) \wedge \text{strange}(s_k) \wedge R(s_k, s)]$.

f. $[\![AspP_2]\!] = \lambda x \lambda s.\,\exists s_k[\text{tall}(s_k) \wedge \text{holder}(s_k, x) \wedge \text{strange}(s_k) \wedge R(s_k, s)]$. by λ-A

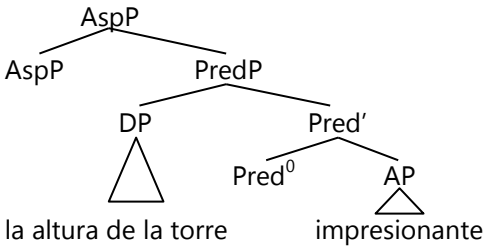
g. $[\![AspP_3]\!] = \lambda s.\,\exists s_k[\text{tall}(s_k) \wedge \text{holder}(s_k, \text{the desert}) \wedge \text{strange}(s_k) \wedge R(s_k, s)]$.

h. $[\![DP]\!] = \iota s.\,\exists s_k[\text{tall}(s_k) \wedge \text{holder}(s_k, \text{the desert}) \wedge \text{strange}(s_k) \wedge R(s_k, s)]$.

The derivation does not include any deep novelties with respect to other derivations developed in this chapter. The important points to which I want to draw the reader's attention are the following: (a) the manner modifier attaches to the nominalization before the node AspP, which guarantees that what is strange is not the state of the desert's having some height, but rather the degree associated with the desert's height; and (b) the manner modifier composes intersectively with the nominalization, which creates a subset of state-kinds of height, that is, all the state-kinds of height that are strange. The result of the derivation is the unique state that is associated with a state-kind of height that is strange and whose holder is the desert.

On the other hand, manner adjectives can appear in predicative position as well, as in *La altura de la torre es impresionante* 'The height of the tower is impressive', which automatically makes us think about the composition of the same structure when a measure phrase occupies the place of the manner adjective, as in *La altura de la torre es de diez metros* 'The height of the tower is ten meters'. Let us proceed step by step. For *La altura de la torre es impresionante* 'The height of the tower is impressive', where the manner adjective occurs in predicative positon, I propose the following composition:

(76)



(77) a. $[\![impresionante]\!] = \lambda s_k.\,\text{impressive}(\lambda s_k)$.

b. $[\![Pred^0]\!] = \lambda G_{<sk,t>}\lambda s\lambda s_k.\,G(s_k) \wedge \text{holder}(s_k, s)$.

c. $[\![Pred']\!] = \lambda s\lambda s_k.\,\text{impressive}(s_k) \wedge \text{holder}(s_k, s)$. by EI

d. $[\![DP]\!] = s'$.

e. $[\![PredP]\!] = \lambda s_k.\,\text{impressive}(s_k) \wedge \text{holder}(s_k, s')$.

f. $[\![Asp^0]\!] = \lambda G_{<sk,t>}\lambda s.\,\exists s_k[G(s_k) \wedge R(s_k, s)]$.

g. $[\![AspP]\!] = \lambda s.\,\exists s_k[\text{impressive}(s_k) \wedge \text{holder}(s_k, s') \wedge R(s_k, s)]$.

The manner adjective denotes (the characteristic function of) a set of state-kinds and projects AP. Given that the adjective appears in predictive position, it projects PredP, which is the functional node that allows the adjective to select for a subject, which will be a state in this case. The subject *la altura de la torre* 'the height of the tower' denotes a state of type *s*, specifically the state in which the tower has some height, which I call *s'*. Above PredP, an aspectual node associates a state-kind from the set of state-kinds denoted by the adjective with a state-token.

Once the state argument is existentially bound, the statement is true iff there is a state that is associated with a state-kind that is impressive whose holder is the state in which the tower has some height.

Now let us show how measure phrases, which appear in predicative position, modify DPs containing deadjectival nominalizations. Before showing the details of the computation, it is necessary to point out two important empirical facts. First, although measure phrases can be analyzed as predicate of state-kinds because degrees are derived from state-kinds, as shown in chapter 1, there is empirical evidence that they express state-tokens when appearing in predicative position, since they accept temporal modification:

(78) La anchura del lago fue de 1000 km hasta 1950.
the width of.the lake was of 1000 km until 1950
'The width of the lake was 1000 km until 1950.'

Second, in Spanish measure phrases can be preceded by the preposition *de* 'of' only in predicative position, as shown in (79a). In attributive position, measure phrases are accepted only when the adjective is dimensional and lexicalizes a lower-closed scale (Sawada & Grano 2011), as in (79b), but crucially the preposition is not admitted:

(79) a. La altura del lago es de 20 metros.
the height of.the lake is of 20 meters
'The height of the lake is 20 meters.'[44]
b. La torre de Pisa está inclinada (*de) 4 grados.
the tower of Pisa is inclined of 4 degrees
'The Tower of Pisa is (of) 4 degrees inclined.'

On the one hand, the fact that measure phrases license temporal modification in predicative position is taken as evidence that they express states, so they project the functional node AspP over the structure. On the other hand, the fact that they are preceded by the preposition *de* 'of'

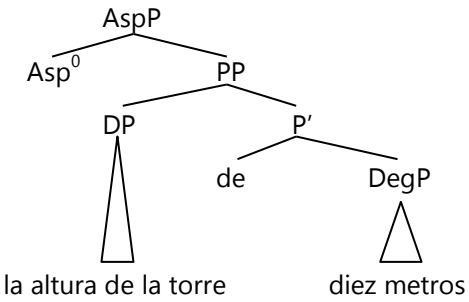
[44] Spanish has available another construction in which the copular verb appears in plural, in which case the preposition cannot be inserted:

(i) La altura del lago son (*de) veinte metros.
the height of.the lake are of twenty meters
'The height of the lake is twenty meters.'

The plural agreement of the measure phrase with the verb raises the question of whether there is a different syntactic structure underlying this type of sentences. I postpone the analysis for future investigations.

only in predicative position is taken as evidence that the preposition is the spell-out of a functional node that allows the measure phrase to be predicated of a subject, namely, PredP. Similar phenomena are observed in Den Dikken (2006) and adapted to Spanish by Eguren & Pastor (2014, 2015), who claim that certain prepositions, especially *de* 'of', are the spell-out of a relational node. For *La altura de la torre es de diez metros* '(lit.) The height of the tower is of ten meters' I propose the following composition:

(80)



(81) a. $[\![DegP]\!] = \lambda s_k.\,\text{ten meters}(s_k)$.

b. $[\![de]\!] = \lambda G_{<sk,t>}\lambda s\lambda s_k.\,G(s_k) \wedge \text{holder}(s_k, s)$.

c. $[\![P']\!] = \lambda s\lambda s_k.\,\text{ten meters}(s_k) \wedge \text{holder}(s_k, s)$. by EI

d. $[\![DP]\!] = s'$.

e. $[\![PP]\!] = \lambda s_k.\,\text{ten meters}(s_k) \wedge \text{holder}(s_k, s')$.

f. $[\![Asp^0]\!] = \lambda G_{<sk,t>}\lambda s.\,\exists s_k[G(s_k) \wedge R(s_k, s)]$.

g. $[\![AspP]\!] = \lambda s.\,\exists s_k[\text{ten meters}(s_k) \wedge \text{holder}(s_k, s') \wedge R(s_k, s)]$.

The measure phrase denotes a set of state-kinds and projects DegP. The PP attaches to DegP introducing the function *holder*, which enables the measure phrase to select for a subject. The subject *la altura de la torre* 'the height of the tower' denotes a state of type *s*, specifically the state in which the tower has some height, which I call *s'*. At the uppermost layer of the structure, an aspectual node associates a state-kind from the set of state-kinds denoted by the measure phrase with a state-token. Once the state argument is existentially bound, the statement is true iff there is a state that is associated with the state-kind *two meters* whose holder is the state in which the tower has some height. Thus, the analysis of measure phrases and manner adjectives when appearing in predicative position is basically the same. The only visible difference is the occurrence of the preposition *de* 'of' in the former case, which I take as the spell-out of PredP. Semantically, the difference between manner adjectives and measure phrases is that the former denote sets of state-kinds that are not inherently ordered, while the latter denote state-kinds that are actually inherently ordered (more details of the orderings are provided in chapter 4).

This analysis presents the great advantage of straightforwardly explaining the occurrence of measure phrases and manner adjectives in predicative position. Degree-based theories rely on the assumption that degree adverbs/adjectives and measure phrases must be adjacent to the adjective or noun that they modify in order to bind the degree variable *d*, so they cannot account for their occurrence in predicative position. In contrast, the state-kind system does not have this problem: by deriving degrees from state-kinds, the degree variable *d* is not incorporated into the denotation of gradable predicates, so these have more flexibility to combine with measure phrases and manner adjectives regardless of whether they appear in attributive or predicative position.

In conclusion, the analysis defended here in which manner adjectives are taken as predicates of state-kinds can account for their combination with deadjectival nominalizations in both the attributive and predicative positions. In addition, an analogous analysis can be applied to the occurrence of measure phrases.

3.2.7. Remaining diagnostics

In the previous subsections, we have seen that deadjectival nominalizations are compatible with temporal, frequency and even locative and manner modifiers, which provides enough empirical evidence that they express eventualities. In this section, I briefly examine other diagnostics that are used in the literature to support or refute the eventuality character of deadjectival nominalizations and argue that they do not lead to conclusive results.

First, the verb *durar* 'to last' (and occasionally *perdurar* 'to endure, to perpetuate') is often used as a test for identifying events and sometimes for identifying eventualities more generally. The literature in this respect is heterogeneous and vast, so I will only mention the proposals that focus on deadjectival nominalizations. Regarding Spanish (see also Alexiadou 2013b for Greek), Jaque & Martín (2019) claim that deadjectival nominalizations that are derived from stage-level predicates are compatible with *durar* 'to last', while the ones that are derived from individual-level predicates are not. Based on Martin (2013) for French, the authors argue that the former express states, while the latter express qualities, as shown in chapter 1. However, there are many examples of deadjectival nominalizations that are derived from individual-level predicates that can combine with *durar* 'to last' and even *perdurar* 'to endure, to perpetuate':

(82) a. Su popularidad duró poco, hasta que tuvieron el accidente.
their popularity lasted shortly until that had.3.PL the accident
'Their popularity lasted shortly, until they had the accident.'

b. Su juventud durará eternamente gracias a la poción mágica.
their youth last.FUT eternally thanks to the potion magic
'Their youth will last eternally thanks to the magic potion.'
c. La belleza del palacio perduró durante siglos, hasta que se incendió.
the beauty of.the palace endured for centuries until that REFL burnt
'The beauty of the palace endured for centuries, until it burnt.'

The examples in (82) are associated with contexts in which the state expressed by each nominalization can vary over time. Hence, they can combine with the predicates *durar* 'to last' and *perdurar* 'to endure, to perpetuate'. However, using the verb *durar* 'to last' as a test for identifying eventualities is not entirely reliable, since this verb does not impose any semantic restrictions on its subjects. For example, even an entity-denoting noun like *silla* 'chair' can co-occur with *durar* 'to last', as in *La silla duró dos años* 'The chair lasted two years'. We can conclude that deadjectival nominalizations can combine with the predicates *durar* 'to last' and *perdurar* 'to endure, to perpetuate', but this cannot be taken as a strong piece of evidence that they express eventualities.

Second, Francez & Koontz-Garboden (2017b) argue for English that deadjectival nominalizations cannot express states because they do not trigger temporal readings in certain partitive contexts. For example, sentences like *My room has half the width of yours* induces a degree rather than a temporal reading; in other words, this sentence does not mean 'My room has its width for half the time your room has its width'. However, the authors overlook that clear-cut examples of stative verbs and stative nominalizations do not prompt temporal readings in these contexts either:

(83) a. Mario quiere/respeta a María la mitad que su hermano.
Mario loves respects ACC María the half than his brother
'Mario loves/respects María half as much as his brother does.'
b. Juan tiene la mitad de preocupación/confianza que María.
Juan has the half of worrying trust than María
'Juan has half María's worrying/trust.'

The sentences in (83) include clear-cut cases of stative predicates that can only trigger a degree rather than a temporal reading. The reason why this is the case is that these states are strictly homogeneous or divisible in instants (as we saw in chapter 2 in relation to extent vs. degree gradation, from Fleischhauer 2016), so they cannot be divided into temporal intervals.

Another piece of evidence that the lack of temporal readings in partitive contexts does not demonstrate that the predicates in question are not eventualities is that, in combining partitive modifiers with interval states, which are not strictly homogeneous or are rather divisible in intervals, we can obtain a temporal reading:

(84) Juan durmió/esperó la mitad que María.
Juan slept waited the half than María
'Juan slept/waited half as much as María.'

In (84) the partitive modifier can prompt a temporal reading whereby Juan slept/waited for half the time than María. This is possible because the states in question, unlike subinterval states, are divisible in intervals, which provides additional evidence that the lack of temporal readings in partitive contexts is related to homogeneity/divisibility and not to their eventuality character. We can conclude that the alleged counterexamples provided by Francez & Koontz-Garboden (2017b) are explained on the basis of the strict homogeneity condition that characterizes subinterval states.

Finally, I would like to examine the combination of deadjectival nominalizations with phrases introduced by the preposition *de* 'of' that are supposed to provide temporal information, such as *de varias horas* 'of several hours' or alike. Fábregas (2016) argues that deadjectival nominalizations do not express eventualities because they do not accept this type of modifiers. Masià (2017) refines Fábregas' observation positing that there are two groups: the ones that accept them and the ones that do not (see also Sanromán 2012 and Jaque & Martín 2019 for Spanish and Martin 2013 for French):

(85) a. ??una libertad/sabiduría de varias horas
a freedom wisdom of several hours
b. una soledad/oscuridad de varias horas
a loneliness darkness of several hours

(Masià 2017: 159)

Although Masià (2017) does not mention it explicitly, what phrases like *de varias horas* 'of several hours' seem to tell apart is nominalizations derived from individual-level predicates, see (85a), from nominalizations derived from stage-level predicates, see (85b). However, the test that is used by Masià is not totally reliable, since there are nominalizations that are derived from

individual-level predicates, like *popularidad* 'popularity', and even entity-denoting nouns, like *vino* 'wine', that are compatible with this type of phrases:

(86) a. una popularidad de varias semanas
a popularity of several weeks
b. un vino de varios / siete años
a wine of several seven years

As concluded by Picallo (1999), what this type of data indicate is that phrases introduced by the preposition *de* 'of' are not true temporal modifiers that locate eventualities (like the ones examined in subsection 3.2.2), but rather they are another type of modifiers that provide a different temporal information that is used for classifying the noun that they modify into distinct sub-kinds.

In sum, in this subsection we have reviewed three tests that have been used to support or refute the eventuality nature of deadjectival nominalizations and resolved that they do not lead to conclusive results. Therefore, they do not pose any important empirical problems to treat these nominalizations as states. In the following section, I examine the individual-level, stage-level and stative causative distinction in the nominal domain.

3.3. Causation

Having provided enough empirical evidence that deadjectival nominalizations express states, we are in conditions to find out whether the individual-level, stage-level and stative causative distinction is also applicable to them. In chapter 2, we concluded that the three-way distinction among individual-level, stage-level and mental state adjectives relies on causation: specifically, individual-level adjectives express non-caused states, stage-level adjectives express externally caused states and, following Leferman (2017), mental state adjectives express internally caused states. In this section, I provide evidence that their corresponding nominalizations can also trigger those readings depending on the readings that their adjectival bases allow for.

For the sake of convenience, let us leave stative causatives aside for the moment. In principle, it is expected that predicates that can only trigger an individual-level reading form nominalizations that express individual-level readings and that predicates that can only trigger a stage-level reading form nominalizations that express stage-level readings:

(87) a. Víctor es / *está popular.
Víctor is.SER is.ESTAR popular

b. la popularidad de Víctor

the popularity of Víctor

'Víctor's popularity'

(88) a. El monstruo *es / está desnudo.

the monster is.SER is.ESTAR naked

b. la desnudez del monstruo

the nakedness of.the monster

In (87a) the predicate *popular* 'popular' only accepts the copula *ser*, which is taken as evidence that it expresses an individual-level state, so we can claim that the nominalization *popularidad* 'popularity' in (87b) also expresses an individual-level state. Analogously, in (88a) the stage-level predicate *desnudo* 'naked' only accepts the copula *estar*, so we can claim that the nominalization *desnudez* 'nakedness' also expresses a stage-level state in (88b).

Nevertheless, in Spanish there are many other predicates of variable behavior that can express either an individual-level or a stage-level reading depending on whether they co-occur with the copula *ser* or *estar*, respectively. For those cases, we need a different way of checking whether the two readings are maintained. According to Fábregas (2016), if stage-level deadjectival nominalizations hold because of an external factor, they must accept the modifier *resultante* 'resulting'. This modifier, he argues, necessarily establishes an anaphoric reference with a previous utterance that might be explicitly realized by its complement, which is introduced by the preposition *de* 'from', as in *resultante de ello* 'resulting from that'. Other modifiers that also establish an anaphoric reference according to Fábregas, although they do not take any complements, are *subsiguiente* 'subsequent' and *consecuente* 'consequent'. However, the test proposed by Fábregas does not show clear contrasts of acceptability:

(89) a. Juan tuvo una crisis y ya no es creyente. Su ateísmo resultante le hizo feliz.

Juan had a crisis and already not is believer his atheism resulting him made happy

'Juan had a crisis and is not a believer anymore. His resulting atheism made him happy.'

b. María compuso una canción famosa. Su popularidad resultante la hizo millonaria.

María composed a song famous her popularity resulting her made millionaire

'María composed a famous song. Her resulting popularity made her a millionaire.'

(90) a. El monstruo se quitó la ropa. Su desnudez resultante nos dejó sin palabras.

the monster REFL take.off the clothe its nakedness resulting us left without words

'The monster took off its clothes. Its resulting nakedness left us speechless.'

b. El conductor no paró de beber alcohol. Su ebriedad resultante causó un accidente.
the driver not stopped of drink alcohol his drunkenness resulting caused an accident
'The driver did not stop drinking alcohol. His resulting drunkenness caused an accident.'

According to Fábregas (2016), it is expected that in (90a) the nominalization *desnudez* 'nakedness', which comes from the stage-level predicate *desnudo* 'naked', can co-occur with *resultante* 'resulting' and the same holds for *ebriedad* 'drunkenness' in (90b), which comes from the stage-level predicate *ebrio* 'drunken'. However, the nominalization *ateísmo* 'atheism', which comes from the individual-level predicate *ateo* 'atheistic', and *popularidad* 'popularity', which comes from the individual-level predicate *popular* 'popular', can also combine with *resultante* 'resulting' in (89a) and (89b), respectively. Thus, we need to look for a different test that allows us to distinguish individual-level readings from stage-level readings.

Recall from chapter 2 that stage-level predicates, unlike individual-level ones, are naturally compatible with agentive adverbs, so one way of verifying whether deadjectival nominalizations trigger individual-level or stage-level readings is to examine their behavior with the adjectival agentive counterparts. Look at the following examples:

(91) a. *El visitante es voluntariamente ateo / popular.
the visitor is voluntarily atheistic popular
b. *el voluntario ateísmo del visitante.
the voluntary atheism of.the visitor
c. *la voluntaria popularidad del visitante.
the voluntary popularity of.the visitor

(92) a. El monstruo está deliberadamente desnudo / ebrio.
the monster is deliberately naked drunken
b. la deliberada desnudez del monstruo.
the deliberate nakedness of.the monster
c. la deliberada ebriedad del monstruo.
the deliberate drunkenness of.the monster

In (91a) the individual-level predicates *ateo* 'atheistic' and *popular* 'popular' are incompatible with the agentive modifier *voluntariamente* 'voluntarily'. Analogously, their corresponding nominalizations *ateísmo* 'atheism' and *popularidad* 'popularity' are also incompatible with the agentive modifier *voluntario* 'voluntary', see (91b) and (91c). In contrast, in (92a) the stage-level predicates *desnudo* 'naked' and *ebrio* 'drunken' are compatible with *deliberadamente*

'deliberately'; analogously, their corresponding nominalizations *desnudez* 'nakedness' and *ebriedad* 'drunkenness' are compatible with *deliberado* 'deliberate', see (92b) and (92c).

In relation to nominalizations that come from predicates of variable behavior, Fábregas (2016) claims that there are two groups: the ones that can maintain the individual-level or stage-level readings expressed by their bases and the ones that can only maintain the individual-level reading:

(93) a. A Irene se le enfrió la nariz. La rojez resultante la hacía parecer un payaso.
to Irene REFL her cooled the nose the redness resulting her made resemble a clown
'Irene's nose cooled. Its resulting redness made her resemble a clown.'

b. Pablo bebió y bebió toda la noche. Su subsiguiente embriaguez/borrachez/ebriedad
Pablo drank and drank all the night his subsequent inebriation drunkenness
lo dejó KO durante todo el día.
him left KO for all the day
'Pablo drank and drank all the night. His subsequent inebriation/drunkenness knocked him out for all the day.'

c. El sol cubrió los viñedos, produciendo la consecuente madurez de las uvas.
the sun covered the vineyards producing the consequent ripeness of the grapes

(94) a. Vistieron a la novia con los mejores ropajes. *Su hermosura/belleza resultante dejó al
dressed ACC the bride with the best robes her beauty resulting left the
novio anonadado.
groom astonished
'They dressed the bride with their best robes. Her resulting beauty astonished the groom.'

b. Luisito había comido mucho ese verano. *La gordura / el grosor / la graseza /
Luisito had eaten much that summer the fatness the thickness the fatness
la obesidad subsiguiente le impedía ponerse los pantalones que le habían servido
the obesity subsequent him prevented put.on the pants that him had suited
durante todo el año.
for all the year
'Luisito had eaten too much that summer. His subsequent fatness/thickness/obesity prevented him from wearing the pants that used to suit him well the rest of the year.'

c. Silvia había crecido mucho ese verano. ??La gran altura resultante ya le permitía
Silvia had grown much that summer. her great height resulting already her let

llegar al tercer estante.[45]

reach to.the third shelf

'Silvia had grown a lot that summer. Her resulting great height let her reach the third shelf.'

(From Fábregas 2016: 236, translation mine)

Fábregas claims that the nominalizations in (93), which come from adjectives of variable behavior, can express both individual-level and stage-level readings, so they can combine with the anaphoric predicates *resultante* 'resulting', *subsiguiente* 'subsequent' and *consecuente* 'consequent'. In contrast, although the nominalizations in (94) are also formed out of adjectives of variable behavior, they can only express individual-level readings, so they reject the anaphoric predicates in question.

However, I would like to make a qualification regarding the data that the author considers unacceptable. First, I believe that (94a) is fully acceptable and provide in (95a, b) two examples from the Internet in which *belleza* 'beauty' and *resultante* 'resulting' co-occur, either with or without an explicit complement. Second, in (94b) the nominalization *grosor* 'thickness' is infrequently used when applied to people, while *graseza* 'fatness' is almost obsolete. With respect to *gordura* 'fatness' and *obesidad* 'obesity', (94b) is likely to be unacceptable because of *subsiguiente* 'subsequent', which means 'that follows something *immediately*', and maybe this component of immediacy or any other that escapes my knowledge gives rise to an odd utterance. As shown in (95c), the modifier *resultante* 'resulting' does give rise to acceptable combinations. Finally, I also find (94c) acceptable and, to dispel any doubts, I provide additional data in which only a stage-level reading is licensed. In the adjectival domain, the occurrence of the causal adjunct *con esos tacones* 'with those heels' is only compatible with the copula *estar*, see (96a), which indicates that the only interpretation available is the stage-level one. Importantly for our purposes, the corresponding nominalization is compatible with that adjunct, see (96b), so we can posit that the stage-level reading is maintained.

(95) a. … la iglesia de Santa Ana exhibe su belleza resultante de la mezcla de estilos gótico,

the church of Santa Ana exhibits its beauty resulting from the mixture of styles Gothic

[45] Note that I have translated the determiner *la* 'the' as *su* 'his/her' in (95b) and (95c) because the absence of argument structure induces a kind reading, something that Fábregas (2016) does not note. In Fábregas' examples, we have to suppose that the PP introducing the holder is omitted. I analyze state-kind nominalizations in chapter 4.

renacentista y neoclásico…[46]

Renaissance and Neoclassical

'The church of Santa Ana exhibits its beauty, resulting from the mixture of Gothic, Renaissance and Neoclassical styles.'

b. Las dificultades constructivas que hubo que superar y su belleza resultante hacen de

the difficulties constructive that had to overcome and its beauty resulting made of

esta obra un sorprendente caso singular…[47]

this work a surprising case peculiar

'The construction difficulties that we had to overcome and its resulting beauty turn this work into a surprising peculiar case.'

c. Juan engordó sobremanera en verano. Su gordura/obesidad resultante le causó

Juan fattened very.much in summer his fatness obesity resulting him caused

problemas de salud.

problems of health

'Juan fattened very much in summer. His resulting fatness/obesity caused him health problems.'

(96) a. Silvia *es / está increíblemente alta con esos tacones.

Silvia is.SER is.ESTAR incredibly tall with those heels

b. la increíble altura de Silvia con esos tacones

the incredible height of Silvia with those heels

A similar argument can be adduced with respect to *hermosura* 'beauty', *gordura* 'fatness' and *obesidad* 'obesity'. If, as Fábregas claims, these nominalizations cannot maintain a stage-level reading, we could not explain the following contrasts:

(97) a. La modelo *es / está hermosa con ese vestido.

the model is.SER is.ESTAR beautiful with that dress

b. la hermosura de la modelo con ese vestido

the beauty of the model with that dress

(98) a. El actor *es / está voluntariamente gordo/obeso.

the actor is.SER is.ESTAR voluntarily fat obese

b. la voluntaria gordura/obesidad del actor

the voluntary fatness obesity of.the actor

[46] From https://cutt.ly/tgpXI4G.
[47] From https://cutt.ly/cgpXFpg.

We can conclude that deadjectival nominalizations can express individual-level, stage-level or both readings depending on the properties of their bases, and there are no bases that can express both readings whose corresponding nominalizations cannot express stage-level readings.

In relation to mental state adjectives, recall from chapter 2 that they select for internal arguments headed by the preposition *con* 'with', see (99a) and (100a). Crucially, their nominalizations reproduce the same pattern, see (99b) and (100b).

(99) a. Popeye es / está amable con Olivia.
Popeye is.SER is.ESTAR kind with Olivia
'Popeye is kind to Olivia.'
b. la amabilidad de Popeye con Olivia
the kindness of Popeye with Olivia
'Popeye's kindness to Olivia'

(100) a. Macario fue / estuvo sincero con Marina.
Macario was.SER was.ESTAR honest with Marina
'Macario was honest to Marina.'
b. la sinceridad de Macario con Marina
the honesty of Macario with Marina
'Macarios's honesty to Marina'

In (99a) and (100a) the mental state adjectives can combine with the two copulas and select for an internal argument introduced by *con* 'with', which indicates that they prompt a stative causative reading. Their corresponding nominalizations also introduce the internal argument, so we can posit that the stative causative reading is maintained.

Another piece of evidence that the stative causative reading is available in nominalizations derived from mental state adjectives is that the former, like the latter, can combine with agentive modifiers:

(101) a. Popeye fue voluntariamente amable con Olivia.
Popeye was voluntarily kind with Olivia
b. Macario fue intencionadamente sincero con Marina.
Macario was intentionally honest with Marina

(102) a. la voluntaria amabilidad de Popeye con Olivia
the voluntary kindness of Popeye with Olivia

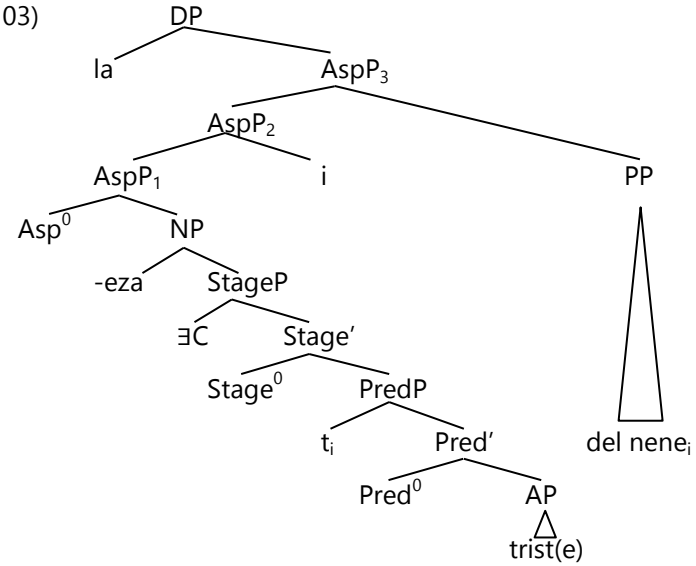
b. la intencionada sinceridad de Macario con Marina
the intentional honesty of Macario with Marina

We conclude that deadjectival nominalizations inherit the causal properties associated with their base adjectives. As a corollary, adjectival bases that can trigger either individual-level or stage-level readings form nominalizations that can express both readings too; the ones that are derived from mental state adjectives, which express a stative causative reading, can also trigger this reading. In the following subsection, I present a technical implementation of the analysis.

3.3.1 Technical implementation

So far, and for convenience sake, I have exemplified the composition of nominalizations that express individual-level states to put the focus on the modifiers that accompany them. Nonetheless, we have to explain how nominalizations that are derived from stage-level states and stative causatives are formed. Recall from chapter 2 that stage-level predicates express properties that are externally caused, while stative causatives express properties that are internally caused. In this sense, their derivation must be more complex than the one of individual-level predicates, which express non-caused properties. On the other hand, deadjectival nominalizations that are derived from stage-level states and stative causatives can trigger quality and degree readings. In order not to complicate the derivation, I show their composition only in the degree reading, which does not include the null morpheme EVAL. For the stage-level (and degree) reading of *la tristeza del nene* 'the sadness of the kid', I propose the following composition:

(103)



(104) a. $[\![AP]\!] = \lambda s_k . \mathrm{sad}(s_k)$.

b. $[\![Pred^0]\!] = \lambda G_{<sk,t>} \lambda x \lambda s_k . G(s_k) \wedge \text{holder}(s_k, x)$.

c. $[\![Pred']\!] = \lambda x \lambda s_k . \text{sad}(s_k) \wedge \text{holder}(s_k, x)$. by EI

d. $[\![PredP]\!] = \lambda s_k . \text{sad}(s_k) \wedge \text{holder}(s_k, x)$.

e. $[\![Stage^0]\!] = \lambda G_{<sk,t>} \lambda c \lambda s_k . G(s_k) \wedge \text{stage}(s_k, c)$.

f. $[\![Stage']\!] = \lambda c \lambda s_k . \text{sad}(s_k) \wedge \text{holder}(s_k, x) \wedge \text{stage}(s_k, c)$. by EI

g. $[\![StageP]\!] = \lambda s_k . \exists c [\text{sad}(s_k) \wedge \text{holder}(s_k, x) \wedge \text{stage}(s_k, c)]$. by ∃C

h. $[\![-eza]\!] = \lambda G . G$.

i. $[\![NP]\!] = \lambda s_k . \exists c [\text{sad}(s_k) \wedge \text{holder}(s_k, x) \wedge \text{stage}(s_k, c)]$.

j. $[\![Asp^0]\!] = \lambda G_{<sk,t>} \lambda s . \exists s_k [G(s_k) \wedge R(s_k, s)]$.

k. $[\![AspP_1]\!] = \lambda s . \exists s_k \exists c [\text{sad}(s_k) \wedge \text{holder}(s_k, x) \wedge \text{stage}(s_k, c) \wedge R(s_k, s)]$.

l. $[\![AspP_2]\!] = \lambda x \lambda s . \exists s_k \exists c [\text{sad}(s_k) \wedge \text{holder}(s_k, x) \wedge \text{stage}(s_k, c) \wedge R(s_k, s)]$. by λ-A

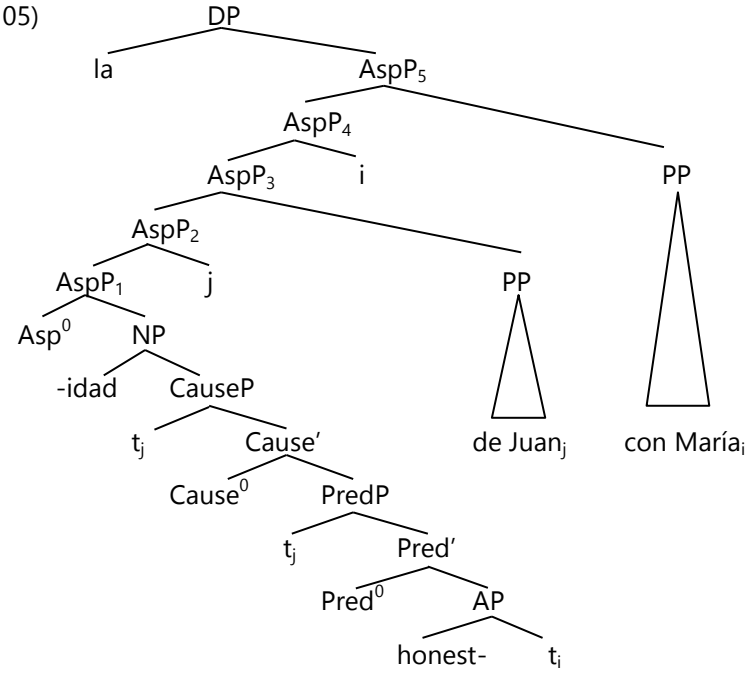
m. $[\![AspP_3]\!] = \lambda s . \exists s_k \exists c [\text{sad}(s_k) \wedge \text{holder}(s_k, \text{the kid}) \wedge \text{stage}(s_k, c) \wedge R(s_k, s)]$.

n. $[\![DP]\!] = \iota s . \exists s_k \exists c [\text{sad}(s_k) \wedge \text{holder}(s_k, \text{the kid}) \wedge \text{stage}(s_k, c) \wedge R(s_k, s)]$.

What we need to take into consideration here is the influence of the functional node StageP. This node introduces the function *stage*, which associates the base state-kind s_k with an external cause *c*, which is existentially bound in Spec-StageP via ∃C. This way we can derive why stage-level states are predicates that express properties that are externally caused. The result of the derivation is the unique state that is associated with a state-kind of sadness whose holder is the kid, and that state-kind has an external causer. This analysis is in accordance with other syntactic analyses in which stage-level predicates are syntactically more complex than individual-level ones (Zagona 2009, 2015; Gallego & Uriagereka 2009, 2016; Brucart 2012; Camacho 2012; Fábregas 2016); however, instead of positing a functional node with aspectual information, as in these analyses, the stage is considered here an external cause. My analysis correctly predicts that individual-level and stage-level predicates do not differ with respect to aspect, since both types of predicates express states, but rather they differ in their causal properties.

Finally, for the stative causative (and degree) interpretation of *la honestidad de Juan con María* 'Juan's honesty to María', I propose the following composition:

(105)



(106) a. $[\![A]\!] = \lambda y \lambda s_k.\, \text{honest}(s_k, y)$.

b. $[\![AP]\!] = \lambda s_k.\, \text{honest}(s_k, y)$.

c. $[\![Pred^0]\!] = \lambda G_{<sk,t>} \lambda x \lambda s_k.\, G(s_k) \wedge \text{holder}(s_k, x)$.

d. $[\![Pred']\!] = \lambda x \lambda s_k.\, \text{honest}(s_k, y) \wedge \text{holder}(s_k, x)$. by EI

e. $[\![PredP]\!] = \lambda s_k.\, \text{honest}(s_k, y) \wedge \text{holder}(s_k, x)$.

f. $[\![Cause^0]\!] = \lambda G_{<sk,t>} \lambda x \lambda s_k.\, G(s_k) \wedge \text{causer}(s_k, x)$.

g. $[\![Cause']\!] = \lambda x \lambda s_k.\, \text{honest}(s_k, y) \wedge \text{holder}(s_k, x) \wedge \text{causer}(s_k, x)$. by EI

h. $[\![CauseP]\!] = \lambda s_k.\, \text{honest}(s_k, y) \wedge \text{holder}(s_k, x) \wedge \text{causer}(s_k, x)$.

i. $[\![-idad]\!] = \lambda G.\, G$.

j. $[\![NP]\!] = \lambda s_k.\, \text{honest}(s_k, y) \wedge \text{holder}(s_k, x) \wedge \text{causer}(s_k, x)$.

k. $[\![Asp^0]\!] = \lambda G_{<sk,t>} \lambda s.\, \exists s_k [G(s_k) \wedge R(s_k, s)]$.

l. $[\![AspP_1]\!] = \lambda s.\, \exists s_k [\text{honest}(s_k, y) \wedge \text{holder}(s_k, x) \wedge \text{causer}(s_k, x) \wedge R(s_k, s)]$.

m. $[\![AspP_2]\!] = \lambda x \lambda s.\, \exists s_k [\text{honest}(s_k, y) \wedge \text{holder}(s_k, x) \wedge \text{causer}(s_k, x) \wedge R(s_k, s)]$. by λ-A

n. $[\![AspP_3]\!] = \lambda s.\, \exists s_k [\text{honest}(s_k, y) \wedge \text{holder}(s_k, \text{j}) \wedge \text{causer}(s_k, \text{j}) \wedge R(s_k, s)]$.

o. $[\![AspP_4]\!] = \lambda y \lambda s.\, \exists s_k [\text{honest}(s_k, y) \wedge \text{holder}(s_k, \text{j}) \wedge \text{causer}(s_k, \text{j}) \wedge R(s_k, s)]$. by λ-A

p. $[\![AspP_5]\!] = \lambda s.\, \exists s_k [\text{honest}(s_k, \text{m}) \wedge \text{holder}(s_k, \text{j}) \wedge \text{causer}(s_k, \text{j}) \wedge R(s_k, s)]$.

q. $[\![DP]\!] = \iota s.\, \exists s_k [\text{honest}(s_k, \text{m}) \wedge \text{holder}(s_k, \text{j}) \wedge \text{causer}(s_k, \text{j}) \wedge R(s_k, s)]$.

The starting point is the gradable adjective *honesto* 'honest', which includes another position *y* for the internal argument that experiences the honesty caused by the subject, which corresponds to the PP *con María* '(lit.) with María'. Alternatively, it could have been posited that it is the preposition *con* '(lit.) with' that introduces the internal argument; since this is of little

relevance to our analysis, I propose the former for the sake of simplicity. The functional node PredP introduces the holder *x* of the state, as in the case of individual-level and stage-level states. However, in this case the node CauseP attaches to the structure above PredP. This node introduces the function *causer*, which associates the holder *x* with the state-kind s_k; what this indicates is that the holder of the state is also its causer or the participant that is responsible for bringing the state about, which accounts for the fact that stative causatives express internally caused properties. The functional node CauseP is taken from Fábregas (2016); according to this author, this node is the counterpart of InitP in the verbal domain (from Ramchand 2008) and is projected by adjectives whose subjects have a causative semantics (see Leferman 2017 for an alternative implementation that makes use of two state variables instead of the node CauseP). The result of the derivation is the unique state that is associated with a state-kind of honesty whose holder and causer is Juan and whose experiencer is María.

In sum, in this subsection I have offered a syntactic and semantic implementation for deadjectival nominalizations that express stage-level states and stative causatives that captures their differences in terms of causation, in accordance with the empirical evidence provided in the previous subsection. In the following section, I delve into the analysis of scalar properties and comparison classes in the nominal domain.

3.4. The comparison class

I have previously shown that the most salient contrast between gradable adjectives and their nominalizations is that only the former are obligatorily assessed with respect to a standard of comparison. Automatically, this asymmetry leads us to wonder whether gradable adjectives and their nominalizations show any other contrasts in relation to their scalar properties and the comparison classes invoked. In this section, I argue that deadjectival nominalizations inherit the scalar properties and the comparison class from their corresponding base adjectives.

The point of departure of this investigation is Masià (2017): in the author's study of Spanish adverbial and adjectival maximizers, like *completamente* 'completely' and *completo* 'complete', respectively, Masià provides evidence that gradable adjectives parallel their corresponding nominalizations:

(107) a. ??completamente alto
completely tall
b. ??completa altura
complete height

(108) a. completamente árido
completely arid
b. completa aridez
complete aridity

(Masià 2017: 156)

(107a) shows that gradable adjectives like *alto* 'tall', whose scales do not include maximal points (or maximal state-kinds in my proposal), do not accept the maximizer *completamente* 'completely', whereas (108a) shows that gradable adjectives like *árido* 'arid', whose scales do include a maximal point, can combine with that maximizer. (107b) and (108b) reproduce an analogous pattern with respect to the corresponding nominalizations and the maximizer *completo* 'complete'.

However, as pointed out in chapter 2, there are gradable adjectives whose interpretation as relative or absolute varies depending on whether they invoke a *between* or a *within* comparison class:

(109) a. El suelo está completamente seco.
the floor is.ESTAR completely dry
b. la completa sequedad del suelo
the complete dryness of.the floor
(110) a. Este clima es (*completamente) seco.
this climate is.SER completely dry
b. la (*completa) sequedad de este clima
the complete dryness of this climate

In (109a) the adjective *seco* 'dry' invokes a comparison *within* the same individual and is compatible with the maximizer *completamente* 'completely'; in other words, in order to know whether the floor is dry or not, we do not have to compare it to other similar floors, but rather to other situations in which the same floor might be. In contrast, in (110a) the adjective *seco* 'dry' invokes a comparison between individuals and does not combine with the maximizer in question; accordingly, in order to know whether the climate is dry or not, we have to compare it to other similar climates. In other words, in (109a) the adjective has an absolute interpretation because the standard of comparison is one of the endpoints of the scale, while in (110a) the adjective has a relative interpretation because the standard of comparison is a contextually

determined degree. Crucially, their corresponding nominalizations do not alter the interpretations and show an analogous behavior, see (109b) and (110b).

Recall the case of the adjective *limpio* 'clean' from chapter 2, which allows for an individual-level reading in which it rejects the maximizer *completamente* 'completely', see (111a), but also an individual-level reading in which it accepts it, see (112a).

(111) a. Este suelo es (*completamente) limpio.
this floor is.SER completely clean
b. El suelo está (completamente) limpio.
the floor is.ESTAR completely clean
c. la completa limpieza del suelo[48]
the complete cleanness of.the floor

(112) a. Las elecciones fueron (completamente) limpias.
the elections were.SER completely clean
b. la completa limpieza de las elecciones
the complete cleanness of the elections

In (111a) the adjective *limpio* 'clean' has an individual-level interpretation and rejects the maximizer *completamente* 'completely'; in contrast, in (111b) the adjective has a stage-level interpretation and accepts the maximizer. Therefore, the nominalization in (111c) can only have a stage-level interpretation in the presence of *completa* 'complete'. Regarding (112a), the adjective has an individual-level interpretation. Observe that, in this case, it can combine with the maximizer *completamente* 'completely', and its corresponding nominalization with the maximizer *completa* 'complete', see (112b). If the maximizer appears, (111a) is unacceptable because the adjective invokes a comparison between individuals, while (112a) is acceptable because the adjective invokes a comparison within the same individual. In other words, while we need to compare the floor to other similar floors in order to utter (111a), we do not need to compare the elections to other elections to utter (112a).

[48] The nominalization *limpieza* 'cleanness' is exceptional in Spanish insofar as it can also express an event in other contexts, as revealed by its combination with the predicate *tener lugar* 'take place':

(i) La limpieza de las calles tuvo lugar ayer.
the cleanness of the streets took place yesterday
'The cleaning of the streets took place yesterday.'

In order to explain this case, we could posit that the base is the verb *limpiar* 'clean' or that the event reading of the nominalization *limpieza* 'cleanness' is idiosyncratic. I am not aware of any other exceptional cases in this line.

Regarding minimizers, the situation is different, since their occurrence does not ensure an absolute interpretation. Recall that we concluded in chapter 2 that minimizers are licensed not only when the adjective invokes a *within* comparison class, but also when it invokes a *between* comparison class; however, in the latter case an implicit standard of comparison must be entailed (see Sassoon 2012a for English):

(113) a. Las gafas están ligeramente húmedas.
the glasses are.ESTAR slightly humid
b. la ligera humedad de las gafas
the slight humidity of the glasses

(114) a. #Este clima es ligeramente húmedo.
this climate is.SER slightly humid
b. #la ligera humedad de este clima
the slight humidity of this climate

In (113a) the adjective invokes a *within* comparison class, so we do not need to compare the glasses to other similar glasses to determine whether (113a) is true or false; in addition, the minimizer *ligeramente* 'slightly' is licensed naturally and triggers an absolute interpretation, so any degree of humidity above zero is enough to utter (113a). In contrast, in (114a) the adjective invokes a *between* comparison class, so we need to compare the climate to other climates to determine whether the climate is humid or not; unlike in (113a), the minimizer is only licensed in a reading in which an external standard of comparison is implicitly understood (e.g. *slightly humid for inland inhabitants*), which is signaled by the symbol #. In order for (114a) to be true, it is necessary that the degree of humidity associated with the climate is above a contextually determined degree of humidity. Finally, what is important to take into consideration for the purposes of this section is that the nominalizations do not alter the properties of their corresponding bases, so they reproduce an analogous pattern; see (113b) and (114b).

In sum, in this section I have shown that deadjectival nominalizations do not change either the scalar properties or the comparison classes that are associated with their base adjectives. Thus, the only relevant contrast that the two domains show with respect to their gradable properties is that nominalizations need not be evaluated with respect to a standard of comparison, as concluded in section 3.1 and subsection 3.2.6. In chapter 4, by exploring the semantics of bare state-kind nominalizations that participate in possessive structures with the verb *tener* 'to have', as in *El suelo tiene humedad* 'The floor has humidity', I provide additional

empirical evidence that deadjectival nominalizations do not have to be assessed with respect to a standard of comparison.

Having examined deadjectival nominalizations with respect to the modifiers that accompany them, their causal properties, their scale endpoints and the comparison classes that they invoke, the following section focuses on the semantic contribution of deadjectival suffixes.

3.5 The semantics of deadjectival nominalizers

So far, I have taken for granted that deadjectival nominalizers are mere transposers or suffixes whose sole function is to the change the category of their bases from adjectives to nouns. However, in this section I will show that the existence of certain deadjectival nominalizations that express a more specialized meaning than their corresponding bases requires a more fine-grained analysis. In this section, I show that nominalizers can either take as their input the whole domain of state-kinds denoted by adjectival bases, which is the most common situation, or can restrict that domain, but they cannot broaden it to introduce a new meaning that is not encoded in adjectival bases. Before describing my proposal, let us start by showing that the nominalizer does not contribute any other meanings that we can consider systematic.

For example, nominalizations containing the suffix *-ura* usually express physical properties when the affix attaches to adjectival bases (RAE & ASALE 2009), as in *altura* 'height' and *hermosura* 'beauty', but it is not always the case, as in *travesura* 'prank', which expresses an event. In fact, despite some exceptions (like the pairs *fresc-or ~ fresc-ura* 'freshness' and *dulz-or ~ dulz-ura* 'sweetness', which will be analyzed below), there are no suffix alternations derived from the same base. With respect to the fact that a certain base attaches to a certain suffix and not to another one (e.g. *triste* 'sad', which only attaches to *-eza* to form *tristeza* 'sadness'), it depends on historical, phonological and productivity factors, while semantic factors are much less influential or even irrelevant.

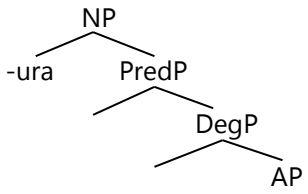
From a functionalist perspective, Lieber (2004, 2016) proposes for English that all suffixes contribute semantic content in terms of features. In the case of deadjectival nominalizers, they would bear the feature [−material], which would be responsible for the abstract character of deadjectival nominalizations. In this dissertation, I do not apply this analysis for two reasons: first, the abstract character of deadjectival nominalizations results from the eventuality nature of their bases, and positing that the nominalizer contributes the feature [−material] would be redundant. And, second, as shown in chapter 1 based on Bosque (1999), I have serious doubts that the abstract-concrete distinction is lexically relevant; rather, it is derived from other more specific notions, such as the eventuality nature of the predicate, the kind reading, figurative

senses, etc. For the meaning of deadjectival nominalizers, see also RAE & ASALE (2009: chapter 6) and Arche & Marín (2015) for Spanish and Alexiadou & Martin (2012) for French.

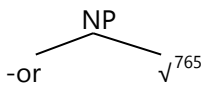
Now observe some exceptional cases in which the same base gives rise to two different nominalizations that have different meanings: *fresco* 'fresh' > *frescor* 'freshness' ~ *frescura* 'vividness'; *simple* 'simple, foolish' > *simplicidad* 'simplicity' ~ *simpleza* 'foolishness'; *laico* 'laic' > *laicidad* 'laicity' ~ *laicismo* 'laicism', etc. As mention above, in order to account for these cases, it is necessary to refine the analysis performed so far according to which deadjectival suffixes are mere transposers, but, before that, I will review a proposal that addresses this phenomenon on the basis of the existence of acategorial roots.

Fábregas (2016) posits that the contrast between the pair *frescor* 'freshness' ~ *frescura* 'vividness' (and others like *amargor* 'bitterness' ~ *amargura* 'grief, sorrow' and *dulzor* 'sweatness' ~ *dulzura* 'tenderness') is due to a difference between the syntactic structures that underlie them.[49] While the suffix *-ura* can attach to adjectival bases, the suffix *-or* merges with acategorial roots. According to the standard assumptions in Distributed Morphology (Marantz 1997, 2000; Arad 2003; Acquaviva 2009, 2014; Alexiadou & Martin 2012; Borer 2013; Harley 2014: a.o.), roots are acategorial elements that are devoid of meaning and are only associated with a numerical index. When a certain root with an index *n* is selected by a syntactic node, for example A (or *a*P), which stands for an adjective, an adjective with a particular meaning is formed. Accordingly, Fábregas (2016) posits that, in the pair *fresc-ura* 'freshness' ~ *fresc-or* 'vividness', the latter nominalization is derived directly from the acategorial root $\sqrt{}^{n}$ with no intermediate adjectival step, where the index *n* might have the value 765, for example. Fábregas notes that both *frescura* and *frescor* are gradable, so the author posits that in the former case its gradability comes from the base adjective, while in the latter its gradability comes from the suffix. Fábregas' morphosyntactic analysis is the following:

(115) a.



b.



[49] As pointed out in RAE & ASALE (2009: 6.2q), in European Spanish there is a tendency to use the word ending in *-or* in the literal sense, so *frescor* 'freshness', *amargor* 'bitterness' and *dulzor* 'sweetness' are mostly used when the property can be perceived by one of the five senses. In contrast, there is a tendency to use the word ending in *-ura* in a figurative sense, so *frescura* 'vividness', *amargura* 'grief, sorrow' and *dulzura* 'tenderness' are mostly used when the five senses are not involved in the perception of the property. I nonetheless warn the reader that the contrasts are not applicable to American Spanish and even in European Spanish we do not find unanimous crisp judgments. In this dissertation, I assume RAE & ASALE's remark because it is consistent with my grammaticality judgments.

According to Fábregas (2016), in (115a) *frescura* 'vividness' is composed in the same fashion as regular deadjectival nominalizations. In contrast, in (115b) *frescor* 'freshness' is formed when the nominalizer *-or*, to which the author attributes the source of gradability, attaches to a certain acategorial root. The analysis correctly predicts that both *frescura* and *frescor* are gradable (or constitute mass nouns), since they come from a gradable base or affix, and also that *frescura* and *frescor* have different meanings. However, it runs into three problems.

The first problem is that, in the absence of AP, Fábregas' (2016) analysis predicts that PredP and DegP are not present in the derivation of *frescor* 'freshness'. The former is the functional node that captures argument structure inheritance, while the latter hosts degree modifiers like the null morpheme EVAL. In assuming that *frescor* does not include PredP, there is no way of accounting for argument structure inheritance:

(116) a. La noche es fresca.
the night is fresh
b. el frescor de la noche
the freshness of the night

Fábregas' analysis predicts that the PP *de la noche* 'of the night' is not the argument inherited from the adjectival structure, so his analysis does not explain why the DP *la noche* 'the night' in (116a) and the PP *de la noche* 'of the night' in (116b) maintain the same semantic relation with the adjective and the nominalization, respectively, or in other words are assigned the same thematic role. Moreover, this analysis does not explain why the adjective and its corresponding nominalization select for the same number of arguments. Regarding the absence of DegP, Fábregas' analysis predicts that a DP containing the nominalization *frescor*, like *el frescor de la noche* 'the freshness of the night', cannot acquire a quality reading, given that DegP, which is the functional node projected by EVAL, is not present in the derivation. To solve the problem, the author, who bases his analysis on a degree-based theory, posits that the degree variable *d* introduced by *-or* can be bound contextually, but this would imply that the nominalization can acquire a quality reading without the presence of EVAL, which could not be easily implemented in a formal semantic apparatus. The only possible semantic operation that could occur in the absence of EVAL would be an existential closure ∃C of the degree variable, but in that case the quality reading, which is necessarily linked to the presence of EVAL, would not arise either.

The second problem of Fábregas' analysis is that it attributes the source of gradability of the nominalization *frescor* 'freshness' to the nominalizer *-or*. Certainly, the problem is not empirical,

given that this suffix gives rise to gradable or mass nominalizations even when it attaches to verbal bases (e.g. *dol-or* 'pain', *tem-or* 'fear', *cal-or* 'heat', etc.). Rather, the problem is that it does not enable a unified treatment for all deadjectival nominalizers. Moreover, an extension of this analysis would force us to assume that one of the member of the pairs *laicidad* 'laicity' ~ *laicismo* 'laicism' and *simplicidad 'simplicity' ~ simpleza 'foolishness'*, for instance, is formed out of an acategorial root and that some of the suffixes involved (*-idad*, *-ismo* or *-eza*) are also the nominalization's source of gradability. However, under this analysis it is impossible to predict in which cases the same suffix attaches to an adjectival structure or to a root or why it should introduce gradability in some cases and not in others. Moreover, this analysis would miss the generalization that the main properties of deadjectival nominalizations are inherited from their bases.

Finally, the third problem is that it does not explain why the nominalizations *frescor* 'freshsness', *amargor* 'bitterness' and *dulzor* 'sweetness' give rise to a meaning that is predictable from the adjectival bases. In other words, given that roots are devoid of meaning, they are generally used in Distributed Morphology to account for the formation of nominalizations that are associated with an idiosyncratic and unpredictable meaning; however, nominalizations like *frescor* seem to follow a regular pattern (namely, they are mass nouns, select for a subject, can have either a degree or a quality reading and are usually employed in the literal sense), which would get blurred if we derived them from roots. We can conclude that the hypothesis of roots defended by Fábregas presents several problems when trying to account for the meaning of the relatively exceptional deadjectival nominalizations under scrutiny.

Alternatively, we could be tempted to embrace a lexicalist device of word formation and to postulate that there are special lexical rules that account for the different meanings that the nominalizations derived from the same base can acquire. However, a closer inspection of the data indicates that the meaning of the resulting nominalizations under examination is not as unpredictable as it appears to be. As pointed out in RAE & ASALE (2009), what these nominalizations have in common is that they express a more specific meaning that their bases or, in other words, some nominalizations only take as their basic meaning a specific sense that the adjective can trigger. Consider the following data:

(117) a. La noche / este estilo es fresco/a.
the night this style is fresh
b. ?el frescor / la frescura de este estilo
the freshness the vividness of this style

c. el frescor / ?la frescura de la noche
the freshness the vividness of the night

Certainly, from (117) we cannot draw any categorical conclusions, since we deal with tendencies rather than with clear contrasts: nevertheless, in European Spanish the nominalization *frescor* 'freshness' is preferably used in the literal sense, while the nominalization *frescura* 'vividness' is preferably used in the figurative sense. In contrast, their base adjective *fresco* 'fresh, vivid' encompasses both senses. An analogous situation holds with respect to *amargor* 'bitterness' ~ *amargura* 'grief, sorrow' and *dulzor* 'sweatness' ~ *dulzura* 'tenderness' and their corresponding bases. In other cases, the contrasts are clearer, as in *simplicidad* 'simplicity' ~ *simpleza* 'foolishness', *flacura* 'thinness' ~ *flaqueza* 'weakness', *laicidad* 'laicity' ~ *laicismo* 'laicism', where at least one of the members of the pair takes a unique sense from the base adjective.

To sum up, certain nominalizations only pick up one of the senses of their base adjectives, so their meaning is not as unpredictable as, for instance, the meaning of idioms like *kick the bucket* 'to die', but rather we deal with a process of *semantic narrowing* or *specialization*, which constitutes a relevant factor of semantic change (Traugott & Dasher 2001). The study of this phenomenon, which dates back to Bréal (1964 [1900]) at least, comes from historical grammar and holds when a word acquires a more specific or restricted meaning so that it can be applied to a fewer number of individuals. For example, in Old English the word *hund* meant 'dog' (*hound* refers now to a particular hunting breed of dogs) and the word *mete* (> *meat*) meant 'food' (Luján 2010). Semantic narrowing is opposed to semantic *broadening*, in which case a word acquires a more general meaning so that it can be applied to a larger number of individuals. For instance, in Old English *bridd* (> *bird*) meant 'young bird' (Luján 2010).

What is important to take into consideration here is that the formation of deadjectival nominalizations may involve semantic narrowing but not semantic broadening, although in most cases the base meaning remains stable. The way of accounting for that is to posit that the nominalizer can either take the whole domain of the function associated with the adjective or restrict it, see (118), and derive two denotations from the main one. If the nominalizer takes the whole domain of the function, we can propose that it denotes an identity function (from Barker 1995), see (119a), as I have assumed hitherto. In contrast, in order to account for semantic narrowing, the nominalizer restricts the domain of the function, so we can propose the denotation offered in (119b):

(118) $[\![NMLZ]\!] = \lambda G_{<sk,t>} \lambda s_k . \exists G'_{<sk,t>} [G'(s_k) \wedge G' \subseteq G]$.

(119) a. $[\![NMLZ]\!] = \lambda G.\, G.$

b. $[\![NMLZ]\!] = \lambda G_{<sk,t>} \lambda s_k.\, \exists G'_{<sk,t>} [G'(s_k) \wedge G' \subset G]$.

The adjectival base that undergoes semantic narrowing, the particular suffix and the subset of state-kinds that the suffix takes as its input is idiosyncratic and unpredictable, but the phenomenon of narrowing occurs regularly. With this in mind, we can explain the formation of pairs like *frescor* 'freshness' ~ *frescura* 'vividness', in which case both nominalizations express a more specific meaning than their base adjective. The composition proposed for the degree reading of the nominalizations involved is the following one:

(120) a. $[\![fresco]\!] = \lambda s_k.\, \text{fresh}(s_k)$.

b. $[\![Pred^0]\!] = \lambda G_{<sk,t>} \lambda x \lambda s_k.\, G(s_k) \wedge \text{holder}(s_k, x)$.

c. $[\![Pred']\!] = \lambda x \lambda s_k.\, \text{fresh}(s_k) \wedge \text{holder}(s_k, x)$. by EI

d. $[\![PredP]\!] = \lambda s_k.\, \text{fresh}(s_k) \wedge \text{holder}(s_k, x)$.

(121) a. $[\![-or]\!] = \lambda G_{<sk,t>} \lambda s_k.\, \exists G'_{<sk,t>} [G'(s_k) \wedge G' \subset G)]$.

b. $[\![NP]\!] = \lambda s_k.\, \exists G'_{<sk,t>} [G'(s_k) \wedge G' \subset \text{fresh} \wedge \text{holder}(s_k, x)]$.

c. $[\![Asp^0]\!] = \lambda G_{<sk,t>} \lambda s.\, \exists s_k [G(s_k) \wedge R(s_k, s)]$.

d. $[\![AspP]\!] = \lambda s.\, \exists s_k \exists G'_{<sk,t>} [G'(s_k) \wedge G' \subset \text{fresh} \wedge \text{holder}(s_k, x) \wedge R(s_k, s)]$.

(122) a. $[\![-ura]\!] = \lambda G_{<sk,t>} \lambda s_k.\, \exists G''_{<sk,t>} [G''(s_k) \wedge G'' \subset G)]$.

b. $[\![NP]\!] = \lambda s_k.\, \exists G''_{<sk,t>} [G''(s_k) \wedge G'' \subset \text{fresh} \wedge \text{holder}(s_k, x)]$.

c. $[\![Asp^0]\!] = \lambda G_{<sk,t>} \lambda s.\, \exists s_k [G(s_k) \wedge R(s_k, s)]$.

d. $[\![AspP]\!] = \lambda s.\, \exists s_k \exists G''_{<sk,t>} [G''(s_k) \wedge G'' \subset \text{fresh} \wedge \text{holder}(s_k, x) \wedge R(s_k, s)]$.

Up to (120) the composition is the same for the two nominalizations in question: the adjective *alto* 'tall' introduces the function *tall*, which denotes in the state-kind domain, and PredP introduces a holder, as usual. These nominalizations can also express a quality reading, in which case the null morpheme EVAL would be included in the derivation; here I illustrate the composition of the degree reading, which does not include EVAL. Above PredP, a suffix attaches to the structure to form a nominalization. In (121) the suffix *-or* restricts the domain of the state-kinds *G* denoted by the adjective, picking up only a proper subset *G'* thereof; of course, this subset of state-kinds must be defined in such a way that it can only be applied to individuals in the literal sense, but I have not provided the details for convenience sake. In contrast, in (122) the suffix *-ura* picks up a different proper subset of state-kinds *G''* from the set of state-kinds *G* denoted by the adjective, which must be defined as those state-kinds that can be applied to

individuals in a figurative sense. In both cases, the functional node AspP attaches to the structure to instantiate a state-kind from the subset of state-kinds picked up by the nominalizer.

The analysis correctly predicts that the meaning of the two nominalizations is more specific than the meaning of the base adjective, since the domain of the nominalizations is a proper subset of the domain of the adjective. In addition, in deriving the nominalizations from the base adjective instead of an acategorial root, the analysis also correctly predicts that PredP is present in the derivation and DegP may be present to account for the quality reading.[50] Finally, to capture the fact that the two nominalizations involved have a different meaning, a more fine-grained analysis should define *G'* in (121) and *G''* in (122) in such a way that their intersection is empty.

We can conclude that deadjectival nominalizers are affixes that play two roles: first, they change the category of the adjective to which they attach into a noun; second, they take as their input either the whole domain of the adjectival function or a proper subset thereof. The former case is the most common one and does not impact on the meaning of the base adjective. The latter case, in which semantic narrowing or specialization is involved, is less common and restricts the domain of the base adjective by taking a proper subset of the set of state-kinds denoted by it. The phenomenon of semantic narrowing must be explained as a regular process, while the adjectival bases to which it applies, the choice of the suffix and the proper subset of state-kinds that are taken by the nominalizer are subject to idiosyncratic constraints of Spanish. Deadjectival suffixes do not lexicalize any other semantic information that can be considered systematic.

3.6. Summary of the chapter

In this chapter, I have offered a detailed analysis of deadjectival nominalizations that express state-tokens. In section 3.1, following Fábregas (2016), I have shown that deadjectival nominalizations can trigger either a degree or a quality reading, where only the latter reading involves the null morpheme EVAL; the existence of the degree reading is possible because deadjectival nominalizations, unlike their adjectival bases, are not necessarily evaluated with

[50] I do not rule out an analysis based à la Fábregas (2016) on the existence of acategorial roots in order to account for the formation of other deadjectival nominalizations that are employed in a technical sense, like *latitud* 'latitude' (?< *lato* 'wide'), *longitud* 'longitude' (?< (obs.) *longo* 'long'), *fuerza* 'force' (?< *fuerte* 'strong'), etc. Note that the semantic connection with their base adjectives is very weak and in English some of these nominalizations involve suppletive bases.

On the one hand, an analysis according to which the nominalizer attaches to an acategorial root without an intermediate adjectival step correctly predicts that DegP cannot be included in the derivation and, therefore, that these nominalizations do not have a quality reading in the absence of an explicit quantifier or measure phrase: for instance, **La latitud de Madrid es una de sus propiedades* 'The latitude of Madrid is one of their properties' is unacceptable. On the other hand, an analysis based on acategorial roots poses the challenge of positing a denotation for roots out of which the meaning of the nominalizations in question is composed. Thus, the analysis of these nominalizations on the basis of the hypothesis of acategorial roots may be promising, but it deserves a careful inspection that exceeds the goals of this dissertation.

respect to a standard of comparison. However, in contrast to Fábregas, who argues for the existence of qualities and degrees as ontological objects, I have argued that deadjectival nominalizations express states in both the degree and quality readings. Nominalizations like *altura* 'height' and non-deadjectival nouns like *temperatura* 'temperature' are special, since they can only trigger a degree reading in the absence of an explicit mass quantifier or measure phrase, but they also express states.

In section 3.2, I have developed the most striking novelty of my proposal, namely, that it takes as basic that gradable adjectives are predicates of state-kinds. Endowed with a constructionist device of word formation, I have proposed a technical implementation for the syntax and semantics of deadjectival nominalizations. Positing that adjectives denote in the domain of state-kinds instead of state-tokens is an innovative contribution of this dissertation, but it is also an extension of Gehrke's (2011, 2015, 2017) analysis of German adjectival passives, in which eventive verbs are taken as predicates of event-kinds and express event-tokens only when functional material is added. Following an analogous reasoning, in order to account for the state-token reading of deadjectival nominalizations, an aspectual node AspP attaches to the nominal structure introducing the realization function *R* (from Carlson 1977), which associates a state-kind with a state-token.

In addition, I have argued in line with Zato (2020) that deadjectival nominalizations express *imperfective* states, since they express properties that are subject to time but they do not include their boundaries. As such, they accept temporal, frequency and even manner and locative modification, but they do not admit aspectual PPs headed by *durante* 'for' even though they are atelic, since aspectual modifiers are only licensed in perfective interpretations. Against what is suggested in Fábregas & Marín (2012), I conclude that nominalizations can encode some viewpoint aspect-related information, which explains why deadjectival nominalizations, unlike deverbal nominalizations, show a clear contrast with respect to their combinatorics with aspectual modifiers.

In line with Gehrke & McNally (2015), I have explained the semantics and distribution of frequency adjectives by virtue of the kind-token dichotomy: frequency adjectives can trigger a temporal reading regardless of which position they appear in, in which case they denote in the token domain; in contrast, they trigger a non-temporal reading when occurring in post-nominal position, in which case they denote in the kind domain. With respect to manner modifiers, which I have analyzed as predicates of state-kinds, they do not give rise to entailments to the positive when combined with deadjectival nominalizations, which is in accordance with the fact that deadjectival nominalizations are not necessarily assessed with respect to a standard of comparison. The question of whether evaluative nominalizations give rise to either entailments

or cancelable inferences to the positive is not solved here, but I concluded that it is not the manner adjective that would introduce the standard of comparison if the former were the case.

In sections 3.3 and 3.4 I have shown that deadjectival nominalizations can trigger an individual-level, stage-level or stative causative reading depending on the properties of the adjectival base and invoke the same comparison class as their base adjectives.

In section 3.5, I have offered an inspection of deadjectival nominalizers according to which they are affixes that change the category of the adjective to which they attach. In addition, the nominalizer can either take as its input the whole domain of the function introduced by the adjective or restrict its domain by taking a proper subset from the set of state-kinds, which accounts for the phenomenon of semantic narrowing. The former case explains the formation of most deadjectival nominalizations, while the latter explains the formation of pairs like *frescor* 'freshness' ~ *frescura* 'vividness', which are derived from the same base.

Before closing the chapter, I would like to retrieve some insights presented in chapter 1 and make a brief reflection on the semantic ontology that is employed here and the abstract character of deadjectival nominalizations. Postulating that gradable adjectives are predicates of state-kinds and that deadjectival nominalizations express imperfective states allows us to make use of a reduced ontology of semantic objects, which does not include degrees, qualities or tropes. *Degrees*, whose existence as ontological semantic objects is accepted in the vast majority of proposals on gradability, are derived from state-kinds (see chapter 4 for additional argumentation); what other authors have treated as *qualities* can be viewed as imperfective states or individual-level states; and I side with Jaque (2014) and Anderson & Morzycki (2015) in claiming that *tropes* are unnecessary in our ontology because they do not contribute any relevant semantic differences with regard to states. In this respect, an analysis that makes use of a simpler ontology of semantic objects is preferable over other analyses that resort to a larger inventory of semantic objects.

Finally, deriving the abstractness of deadjectival nominalizations from their eventuality nature also allows us to dispense with the abstract-concrete distinction as a lexical opposition, in line with what was argued in chapter 1 based on Bosque (1999). Certainly, one can maintain that deadjectival nominalizations express abstract concepts; however, this property is not encoded in their lexical-semantics, but rather it is a natural consequence of their stative nature.

In the following chapter, I deal with the mass nature of deadjectival nominalizations and analyze the rest of types of deadjectival nominalizations that can be formed in Spanish, namely, state-kind, participant and event nominalizations, focusing on state-kind nominalizations.

Chapter 4

The mass and count distinction and the state-kind domain

In the previous chapter, I have addressed the analysis of state-token deadjectival nominalizations, whose most salient properties are the presence of their arguments and the fact that they express imperfective states. This chapter constitutes the second part of the analysis, in which I examine their mass nature as well as the rest of types of deadjectival nominalizations, namely, state-kind, participant and event nominalizations. Particularly, I focus on the mass-count distinction and the factors that regulate it, delineating the specific role of gradability and atelicity. I also show that the kind-token hypothesis plays a crucial role not only in explaining the interaction of deadjectival nominalizations with the mass and count domains, but also in configuring their complete typology.

In section 4.1, I study the similarities and differences between canonical mass nouns like *agua* 'water' and deadjectival nominalizations. On the one hand, I propose that both canonical mass nouns and deadjectival nominalizations are similar in that they are associated with a set of elements that are ordered with respect to each other; on the other, building on Francez & Koontz-Garboden (2017a), I posit that the difference between them is that canonical mass nouns are partially ordered in join semi-lattices in the sense of Link (1983), while deadjectival nominalizations are totally preordered in scales. Nonetheless, my proposal differs crucially from Francez & Koontz-Garboden's in that I argue that scales are composed of state-kinds rather than portions of a substance.

In section 4.2, I examine the factors that regulate the mass-count distinction in the domain of nominalizations, specifically determining the role of gradability and atelicity. Contra the standard analysis (from Mourelatos 1978), which states that there is a mapping from atelicity onto the mass domain, I provide evidence that there is mapping from gradability onto the mass domain, which captures the fact that gradable adjectives form mass nominalizations in normal circumstances. Thus, only gradable predicates, which, like mass nouns, can be taken as sets of elements that are ordered with respect to one another, can form mass nominalizations. Furthermore, I disassociate countability from morphological pluralization and argue that the latter entails the former, but the converse is not the case. Pluralization is possible when heterogeneity is involved. Accordingly, state-token deadjectival nominalizations cannot pluralize because they are atelic and, therefore, homogeneous; however, they can form plural count nouns if they involve some kind of heterogeneity, which holds due to several specific factors.

In section 4.3 I study what I call here state-kind nominalizations, which are characterized by the fact that their arguments are not present and by having a generic reading. In particular I examine the four main syntactic contexts in which they appear: first, I analyze *definite* state-kind nominalizations like *la tristeza* '(lit.) the sadness' in *La tristeza es un sentimiento doloroso* '(lit.) The sadness is a painful feeling', which are preceded by the definite determiner; second, I study *quantified* state-kind nominalizations, which are preceded by a mass quantifier or a measure phrase functioning as a mass quantifier, as in *mucha / dos metros de altura* '(lit.) a lot of / two meters of height'; third, I study *indefinite* state-kind nominalizations, which are flanked by the indefinite determiner and a measure phrase or a manner modifier, as in *una altura de dos metros / increíble* '(lit.) a height of two meters / incredible'; fourth, I study *bare* state-kind nominalizations, which are not accompanied by any determiner or modifier, as in *Los electrones tienen altura* '(lit.) Electrons have height'. Evidence that state-kind deadjectival nominalizations do not express eventualities comes from the fact that they do not admit temporal, frequency modification with a temporal reading or aspectual modification, although they accept frequency modifiers with a non-temporal reading.

In section 4.4 I briefly analyze participant nominalizations like *durezas* '(lit.) hardnesses, calluses', which express entities, and event nominalizations like *imprudencias* '(lit.) imprudences, imprudent acts' and show how an analysis based on the kind-token distinction can explain their semantics and morphosyntactic formation. In addition, I recapitulate all types of deadjectival nominalizations that can be constructed out of gradable adjectives and frame the discussion in a more general perspective in the morphology field, especially in comparison with deverbal nominalizations. I conclude that the phenomenon of nominalization is semantically constrained: specifically, I posit that the domain of the arguments of predicative bases constitutes the domain of the resulting nominalizations. Finally, I argue that the fact that deadjectival nominalizations do not denote in the domain of degrees reveals that degrees cannot be considered arguments of gradable adjectives, which constitutes an additional argument that they must be dispensed with from our semantic ontology.

Section 4.5 summarizes the main ideas of the chapter.

4.1. The internal ordering of deadjectival nominalizations

In this section, I explore the semantic structure of deadjectival nominalizations and show their similarities and differences with respect to canonical mass nouns. I propose that, on the one hand, both types of nouns are internally structured as sets of elements that are ordered with respect to each other, which accounts for their mass nature. On the other hand, canonical mass nouns differ from deadjectival nominalizations in that the former are associated with join semi-

lattices in the sense of Link (1983), while the latter are associated with scales; following Francez & Koontz-Garboden (2017a), I posit that scales are totally preordered, which means that all elements of the scale can be ordered by pairs, but two different elements can occupy the same place on the scale. My proposal differs from Francez & Koontz-Garboden's in that I claim that scales are composed of state-kinds rather than portions of a substance.[51]

The first question that we have to elucidate is why deadjectival nominalizations constitute mass nouns. As shown in chapter 1, deadjectival nominalizations combine naturally with mass quantifiers:

(1) mucha agua / arena / harina / altura / belleza / honestidad
much water sand flour height beauty honesty
'a lot of water / sand/ flour / height/ beauty / honesty'

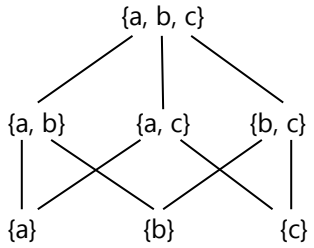
(1) shows that the mass quantifier *mucha* 'much, a lot of' can combine with both regular mass nouns, such as *agua* 'water', *arena* 'sand' and *harina* 'flour', and with deadjectival nominalizations, such as *altura* 'height', *belleza* 'beauty' and *honestidad* 'honesty'. Thus, one striking property of deadjectival nominalizations is that they constitute mass nouns in normal circumstances, and our model of nominalizations must capture that property.

Among the different treatments of mass nouns in the literature (see Lasersohn 2011 for a brief review), the most widely accepted proposal is the one by Link (1983), who claims that mass nouns are mereologically structured by the part-whole relation; specifically, they can be constructed as sums of portions of a substance that form a join semi-lattice, a structure I will come back to below. Hence, we could claim that deadjectival nominalizations can be taken, like regular mass nouns, as substances composed of sums of portions; for instance, the nominalization *belleza* 'beauty' would consist in a substance composed of sums of portions of beauty. However, in this chapter I show that there is empirical evidence that deadjectival nominalizations are associated with scales as total preorders of degrees rather than partial orders of portions. As will be sketched below, the fact that deadjectival nominalizations constitute mass nouns can also be captured in my view if we posit that mass nouns are construed as sets of elements that are ordered with respect to each other. My proposal must not be taken in the sense of Chierchia (1998b), in which mass nouns are lexically encoded as

[51] My proposal also differs from Francez & Koontz-Garboden's (2015, 2017a) in how they capture the mass nature of deadjectival nominalizations. In addition to a total preorder by size, these authors claim that nominalizations, like canonical mass nouns, are associated with a mereological ordering, to which they attribute their mass character, as shown in chapter 1. By contrast, to account for the mass nature of deadjectival nominalizations, I appeal to their semantic characterization as sets of elements that are ordered with respect to each other, which makes it unnecessary to posit that they are also associated with a mereological order. More details below.

plural count nouns, given that mass nouns and plural count nouns do not show the same syntactic distribution (Lasersohn 2011). Rather, I construe mass nouns as sets of elements that are ordered with respect to one another, where the ordering can be either a partial order or a total preorder. Since deadjectival nominalizations are associated with scales as sets of degrees, which I derive from state-kinds, they can be conceived as sets of state-kinds that are ordered with respect to each other. Before fleshing out my claims, let me go over the properties that are associated with join semi-lattices and scales. Let us start by considering the join semi-lattice structure depicted in figure 2:

Figure 2: Join semi-lattice



(2) a. Axiom of reflexivity: $\forall x$: $x \preccurlyeq x$.

b. Axiom of transitivity: $\forall x \forall y \forall z$: $x \preccurlyeq y \wedge y \preccurlyeq z \rightarrow x \preccurlyeq z$.

c. Axiom of antisymmetry: $\forall x \forall y$: $x \preccurlyeq y \wedge y \preccurlyeq x \rightarrow x = y$.

(From Champollion & Krifka 2016: 515, 516)

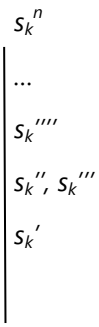
Let *A* be a non-empty set of portions *A* of a substance, for instance *water*, where {a}, {b} and {c} represent portions of this substance. Substances are subsets of *A* that form a join semi-lattice with the join operation ⊔ (commutative, idempotent, and associative), where ⊔ induces an ordering relation $\preccurlyeq$ on *A*, that can be thought of as a part-whole relation (Francez & Koontz-Garboden 2017a). The part-whole relation captures the intuition that a part of water is water (i.e. divisibility) and that two portions of water together are also water (i.e. cumulativity). In addition, according to Champollion & Krifka (2016), join semi-lattices are also defined by the axioms in (2): the axiom of reflexivity in (2a) asserts that every portion is part of itself; the axiom of transitivity in (2b) states that any portion *x* of another portion *y* of a portion *z* is also a portion *x* of the portion *z*; finally, the axiom of antisymmetry in (2c) conveys that two portions that are part of each other are the same portions.

On the other hand, join semi-lattices are partially ordered because their domain contains other elements that cannot be ordered by the mereological relation $\preccurlyeq$. As Francez & Koontz-Garboden point out in this respect, not all portions of the domain can be ordered by pairs, since

two portions of the same substance need not be part of each other. For example, if Brian has a portion of water in a bottle and Stewie has another portion of water in a different bottle, these portions cannot be ordered with respect to each other because neither of them is part of the other one. At the lowest level of the diagram, the portion {a} cannot be ordered with respect to the portions {b} and {c}, while, for example, the portion {a} can actually be ordered with respect to {a, b} because {a} is part of {a, b}. As will be argued below, positing that canonical mass nouns are partially ordered is crucial to account for certain empirical phenomena.

Now let us examine my conception of scales. Scales are sets of state-kinds that are ordered by a total preorder ≤, which means that it is reflexive, transitive, total (or connected), but not antisymmetric. A total preorder is an ordering in which all elements can be ordered with respect to each other: for example, the state-kind *two meters tall* can be ordered with respect to the state-kind *1.5 meters tall*. The following diagram represents the total preorder associated with scales:

Figure 3: Scale



(3) a. Axiom of monotonicity: $\forall G_{<sk,t>} \forall s_k \forall s'_k [G(s_k) = 1 \wedge s'_k \leq s_k \rightarrow G(s'_k) = 1]$.

b. Axiom of reflexivity: $\forall s_k$: $s_k \leq s_k$.

c. Axiom of transitivity: $\forall s_k \forall s_k' \forall s_k''$: $s_k \leq s_k' \wedge s_k' \leq s_k'' \rightarrow s_k \leq s_k''$.

The axiom of monotonicity in (3a), adapted from Heim (2000) to the state-kind system, captures the intuition that a person that is two meters tall is also 1.99 meters tall, 1.98 meters tall, etc. Thus, the total preorder ≤ proposed here is similar to the mereological order ⋞, but it is different insofar as a state-kind is not defined as part of another state-kind. In other words, while a portion of water can be taken to be part of another portion of water or, put it differently, they can overlap,[52] state-kinds are discrete or atomic units, so a state-kind is not a part of another state-kind. However, the axiom of monotonicity ensures that holding a state-kind of

[52] The overlap relation ∘ can be formally expressed as $x \circ y =_{def} \exists z(z \preccurlyeq x \wedge z \preccurlyeq y)$, which means that two things, x and y, overlap if and only if they have a part in common, z (Champollion & Krifka 2016).

being two meters tall entails holding a state-kind of being 1.5 meters tall. (Think about natural numbers: a book with 200 pages is also a book with 199 pages, although the number 199 is not part of 200).

Note that positing that scales are totally *preordered* rather than totally *ordered* means that they are not subject to antisymmetry. This means that two different state-kinds, such as s_k'' and s_k''' in figure 3, can occupy the same place in the ordering. This property allows us to explain why two different state-kinds of beauty, like *Spanish beauty* and *Nordic beauty*, can occupy the same place in the ordering, that is, they can refer to the same degree of beauty, as we will see below.

Finally, join semi-lattices and scales also differ with respect to their endpoints. While the former are taken as non-empty sets, i.e. there are no portions whose value is zero, scales can include maximal and/or minimal endpoints, which allows us to capture the distribution of maximizers and minimizers and entailment patterns (as explained in chapter 2). For example, the adjective *limpio* 'clean' and its corresponding nominalization *limpieza* 'cleanness' encode a maximal endpoint on their scale, construed as a state-kind that is placed over the rest of state-kinds in the ordering; in contrast, *sucio* 'dirty' and *suciedad* 'dirtiness' encode a minimal endpoint on the scale, which is construed as a zero or, in other words, as the absence of any state-kinds (more details in subsection 4.3.3).

Let us focus now on the empirical consequences of positing that scales are *totally* rather than *partially* (pre)ordered, which allows us to account for the differences between canonical mass nouns and deadjectival nominalizations. The first group of data shows that deadjectival nominalizations and regular mass nouns show systematic semantic contrasts when co-occurring with certain determiners. As pointed out in chapter 1, the phenomenon was observed by Tovena (2001), for Italian and French, and by Brucart & Rigau (2002), for Catalan; see also Baglini (2015) for Wolof and Francez & Koontz-Garboden (2017a) for English and Hebrew. I will comment first on Tovena's main data and afterwards illustrate the phenomenon in Spanish:

(4) a. quanto coraggio! = che coraggio!
what courage

b. quanto burro! ≠ che burro!
what a lot of butter *what (good) butter*

(From Tovena 2001: 573)

Tovena observes that what she calls abstract nouns like *coraggio* 'courage', which we can equate to deadjectival nominalizations, give rise to a quantity qua degree reading when combined either with the exclamative determiner *quanto* 'how much' or with the exclamative

determiner *che* 'what (a)'. In contrast, when canonical mass nouns like *burro* 'butter' are involved, the former determiner triggers a quantity reading: 'a lot of butter', while the latter triggers a quality reading: 'a butter that is typically very good, but also bad, weird, original, etc.'. A similar contrast can be offered in Spanish:

(5) a. ¡cuánta amabilidad! = ¡qué amabilidad!
how.much kindness what.a kindness
b. ¡cuánto vino! ≠ ¡qué vino!
how.much wine what.a wine

While in (5b) the exclamative determiner *cuánto* 'how much' induces a quantity reading, the exclamative determiner *qué* 'what (a)' induces a quality reading; in contrast, in (5a) both readings are neutralized and the phrases involved are felicitous in the same contexts. What Tovena calls quality reading can be possible because *qué vino* 'what a wine' can refer to a kind of wine. The kind reading is more apprehensible when questions are involved:

(6) a. ¿Cuánto vino quieres?
how.much wine want.2.SG
'How much wine do you want?
b. ¿Qué vino quieres?
what wine want.2.SG
'What wine do you want?

(7) a. ¿Cuánta altura tiene?
how.much height have.3.SG
'How tall are they?'
b. ¿Qué altura tiene?
what height have.3.SG
'How tall are they?'

(6a) asks how much wine somebody wants, that is, the quantity of wine, whereas (6b) asks what kind of wine somebody wants, for example *red wine*, *white wine*, etc. (7) shows that the quantity and kind readings become equivalent regardless of the interrogative determiner that is used, as expected because deadjectival nominalizations are involved.[53]

[53] Interrogative determiners are illicit when nominalizations derived from evaluative adjectives are involved:

Having clarified that canonical mass nouns can trigger two readings depending on which exclamative (or interrogative) determiner they are combined with, while deadjectival nominalizations express only one reading, it is time to explain how the contrasts emerge. On the one hand, canonical mass nouns are associated with a partial order that consists of portions that can be mereologically ordered with respect to each other as well as other portions that are not part of other portions and, therefore, cannot be ordered with respect to one another. Assuming that the exclamative determiner *qué* 'what (a)' induces a kind reading when combined with mass nouns, this reading is different from the quantity reading because two different kinds of a substance are not part of each other: for example, a portion of white wine cannot be part of a portion of red wine. In contrast, assuming that the exclamative determiner *cuánto* 'how much' requires an ordering, the quantity reading arises as a consequence of the part-whole relation, that is, the existence of portions that can be taken as parts of other portions: for instance, if Mark has two liters of wine in a bottle, the portion *one liter of Mark's wine* is part of the portion *two liters of Mark's wine*.

On the other hand, deadjectival nominalizations are associated with scales, which consist exclusively of state-kinds that are ordered with respect to each other, so the kind and degree readings are neutralized. The exclamative determiner *cuánto* 'how much' requires an ordering, which is provided by the total preorder, while *qué* 'what (a)' requires the existence of kinds, which are totally preordered in this case: for instance, the state-kind *height of two meters* is necessarily ordered with respect to the state-kind *height of one meter*. In short, two interpretations can emerge when canonical mass nouns are involved because their domain includes portions that are mereologically ordered and other portions that are not ordered with respect to one another; in contrast, only one interpretation can emerge when deadjectival nominalizations are involved because their domain only includes state-kinds that are totally preordered.

Francez & Koontz-Garboden (2017a, 2017b) claim that both canonical mass nouns and nominalizations are associated with portions, but, while the former are associated with a mereological order, the latter are rather associated with a total preorder, which is total, but not

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(i) a. *¿Cuánta amabilidad tiene?
how.much kindness has
b. *¿Qué amabilidad tiene?
what kindness has

The reason of this contrast with respect to deadjectival nominalizations derived from dimensional adjectives, like *altura* 'height' in (7), is that interrogative determiners require a precise degree on the scale as an answer, but nominalizations derived from evaluative adjectives are not associated with conventionalized units of measurement, so that requirement is not fulfilled.

antisymmetric. According to the authors, their lack of antisymmetry explains that the following statement is not contradictory:

(8) The Taj Mahal has as much beauty as the Stata Center, though their beauties are very different.

(Francez & Koontz-Garboden 2017a)

According to Francez & Koontz-Garboden, deadjectival nominalizations do not have an antisymmetric ordering, which explains that the two buildings can have different portions of beauty that nevertheless occupy the same position in the preorder, that is, two different portions with the same amount of beauty. For instance, the two buildings have the same degree of beauty, but the Taj Mahal has an Oriental beauty and the Stata Center has an extravagant beauty.

Regarding canonical mass nouns, which meet the axiom of antisymmetry, they do not give rise to a contradiction either in analogous contexts, a phenomenon that Francez & Koontz-Garboden do not mention (although it could be properly captured by their proposal):

(9) Rosa tiene tanto vino como Bea, pero sus vinos son diferentes.
Rosa *has as.much.as wine as Bea but their wines are different*

Canonical mass nouns like *vino* 'wine' are associated with join semi-lattices, whose ordering is antisymmetric by definition, so the fact that (9) is acceptable cannot be attributed to their lack of antisymmetry. What I propose is that (9) is acceptable because the domain of regular mass nouns is partially ordered. Accordingly, the first sentence states that Rosa and Bea have the same amount of wine, while the second sentence states that the portions of wine are different because they are not part of each other, for instance if Rosa has one liter of red wine and Bea has one liter of white wine.

Going back to (8) and adapting Francez & Koontz-Garboden's insights to the state-kind system, (8) is acceptable because two different state-kinds of beauty can occupy the same place on the scale. As claimed above, the Taj Mahal may have *an Oriental beauty*, while the Stata Center may have *an extravagant beauty*, and these two state-kinds of beauty are associated with the same degree on the scale. In other words, two state-kinds of beauty that occupy the same place on the scale can be different because they result from the intersection of the different sets of state-kinds denoted by *Oriental* and *extravagant*. These are relational adjectives in the sense of Bally (1944; see Bosque & Picallo 1996 and Demonte 1999 for Spanish, among others).

Adapting McNally & Boleda's (2004) influential analysis of relational adjectives as predicates of entity-kinds to the state-kind system, we can posit that they denote properties of state-kinds, like the manner adjectives analyzed in chapter 3. Accordingly, *Oriental beauty* and *extravagant beauty* denote different subsets of state-kinds that can occupy the same place on the scale of beauty. I will come back to this question in section 4.2.

An alternative proposal would be to posit that certain deadjectival nominalizations, like *belleza* 'beauty' or *inteligencia* 'intelligence', are rather partially ordered because their domains also include state-kinds that cannot be ordered with respect to each other: for example, we cannot order *Latin beauty* with respect to *a lot of beauty* or *spatial intelligence* with respect to *a lot of intelligence*. However, when co-occurring with exclamative determiners, only one natural interpretation arises:

(10) a. ¡qué belleza! = ¡cuánta belleza!
what.a beauty how.much beauty
b. ¡qué inteligencia! = ¡cuánta inteligencia!
what.an intelligence how.much intelligence

If we posited that these predicates are instead associated with a partial order, it would be mistakenly predicted that the determiners *qué* 'what (a)' and *cuánta* 'how much' induce two different readings, as in the case of canonical mass nouns, but it is not the natural case.[54] Regardless, even accepting that the kind reading is naturally possible, the contrast with canonical mass nouns would persist, since the latter do not prompt a quantity reading when preceded by the exclamative determiner *qué* 'what (a)', as illustrated in (6b).

[54] The kind reading is marginally possible in a context in which we talk about different types of beauty/intelligence, according to which a certain person has, for instance, an exotic beauty or an inquisitive intelligence. To account for the emergence of that reading, we could posit, in the spirit of Sassoon (2013) and McNally & Stojanovic (2014), that *belleza* 'beauty' and *inteligencia* 'intelligence' can invoke different dimensions of beauty and intelligence, respectively, or are, in other words, *multidimensional*. Nonetheless, note that this reading is not exclusive of these nominalizations, see (i), which would force us to posit that all deadjectival nominalizations are multidimensional, hence undermining the usefulness of the notion of 'multidimensionality' for this case.

(i) a. ¡qué amabilidad (tan invasiva)!
what.a kindness so invasive
'What a(n) (invasive) kindness'
b. ¡qué tristeza (tan dulce)!
what.a sadness so sweet
'What a (sweet) sadness'
c. ¡qué altura (tan irregular)!
what.a height so irregular
'What a(n) (irregular) height'

A thorough explanation of why deadjectival nominalizations can marginally trigger kind readings even though they are associated with a total preorder is postponed for a future research.

In addition to the semantic interpretation of exclamative (and interrogative) determiners, the fact that mass nouns are associated with a partial order, while deadjectival nominalizations are associated with a total preorder, explains the behavior of the determiner *ningún* 'no, any' in Spanish when combined with count nouns, canonical mass nouns and deadjectival nominalizations (see again Tovena 2001 for Italian and French; Baglini 2015 for Wolof; Francez & Koontz-Garboden 2017a for English and Hebrew):

(11) a. Claudio no tiene ninguna percha.
Claudio not have no hanger
'Claudio does not have any hangers.'
b. #Claudio no tiene ningún vino.
Claudio not has no wine
'Claudio does not have any wines.'
c. Claudio no tiene ninguna amabilidad.
Claudio not have no kindness
'Claudio does not have any kindness.'

Under the assumption that *ningún* 'no, any' denies *discrete* or *atomic* units (see Francez & Koontz-Garboden 2017a for Italian *nessun*), (11a) means that the number of hangers that Claudio has is zero. The symbol # in (11b) means that the sentence is acceptable in the kind reading whereby Claudio does not have any kind of wine (*red wine*, *white wine*, etc.), but it is unacceptable in the quantity interpretation whereby Claudio does not have any portions of wine, since portions overlap or can be taken as part of another one, hence *ningún* 'no, any' cannot pick up discrete units. Finally, in deriving degrees from state-kinds, (11c) receives a natural explanation: Claudio does not have any state-kind of kindness, where state-kinds constitute discrete objects or do not overlap. Again canonical mass nouns and deadjectival nominalizations show a relevant contrast: the determiner *ningún* 'no, any' induces a kind reading, and the kind reading is construed as a degree reading when deadjectival nominalizations are involved because their domain is totally rather than partially (pre)ordered in state-kinds.[55]

[55] Based on Morzycki's (2009) analysis of size adjectives, such as *big* and *enormous*, Masià (2017) notes that canonical mass nouns and deadjectival nominalizations also show a relevant contrast. Observe the following examples:

(i) gran casa / parque enorme.
big house park huge
(ii) a. *gran agua / #arroz enorme.
big water rice huge

Having provided enough empirical evidence that the domain of regular mass nouns is partially ordered, while the domain of deadjectival nominalizations is totally preordered, it is necessary to comment on the following data, which may pose problems to this proposal:

(12) a. una altura extraña
a height strange
'a strange height'
b. una altura de dos metros
a height of two meters

The fact that deadjectival nominalizations are totally preordered does not straightforwardly account for (12a); for instance, we cannot order *a strange height* with respect to *a height of two meters*. However, note that the adjective *extraña* 'strange' functions as a manner modifier, so it denotes a different set of state-kinds that are not inherently ordered, and that set intersects with the set of totally preordered state-kinds denoted by the nominalization. Thus, what these data show is that the domain of deadjectival nominalizations can intersect with a different domain of state-kinds, resulting in one state-kind that cannot be ordered with respect to the state-kinds denoted by the nominalization (i.e. the scale). (12b) shows that the intersection is also possible between the set of totally preordered state-kinds denoted by the nominalization and the set of inherently ordered state-kinds denoted by the measure phrase, resulting in one state-kind that can be ordered with respect to the state-kinds denoted by the nominalization. I will come back to this question in section 4.3, where I analyze indefinite state-kind nominalizations and posit that they constitute count rather than mass nouns. What is relevant to take into consideration up to now is that the existence of data like (12a) does not provide evidence against the claim that the domain of deadjectival nominalizations is totally preordered.

Before concluding this section, I would like to recapitulate the main ideas. Deadjectival nominalizations constitute mass nouns because they are conceived as sets of elements that are ordered with respect to each other. However, canonical mass nouns and deadjectival

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b. gran belleza / felicidad enorme.
big beauty happiness huge

(From Masià 2017: 166)

On the one hand, (i) illustrates that size adjectives like *gran* 'big' and *enorme* 'huge' combine with count nouns, like *casa* 'house' and *parque* 'park', in which case the former have their literal meanings. On the other, (ii) shows the contrast between canonical mass nouns and deadjectival nominalizations: while the former do not co-occur with size adjectives, as shown in (iia), the latter are compatible with them and acquire a degree reading, see (iib). For instance, *gran belleza* 'big beauty' corresponds to a beauty that holds to a high degree. These data reinforces the analysis that canonical mass nouns and deadjectival nominalizations must have a different semantic structure even though they are similar in that they constitute mass nouns.

nominalizations are associated with different domains: on the one hand, canonical mass nouns are associated with join semi-lattices, which are partially ordered by the mereological part-whole relation $\preccurlyeq$, which is reflexive, transitive and antisymmetric. On the other hand, deadjectival nominalizations are associated with scales, which consist of state-kinds that are ordered by the total preorder $\leq$, which is monotone, reflexive and transitive. Join semi-lattices include portions that are part of each other and other portions that cannot be ordered with respect to each other, which explains why join semi-lattices are partially ordered. In contrast, scales consist of a totally preordered set of state-kinds, which means that all the state-kinds of the domain can be ordered with respect to each other; given that scales are not subject to antisymmetry, two different state-kinds can occupy the same place on the scale. In the following section, I provide the specific constraints that regulate the mass-count distinction in the domain of nominalizations, focusing on the impact of gradability and atelicity.

4.2. The role of gradability and atelicity in the mass domain

In this section, I deal with the mass and count distinction with regard to state-token deadjectival nominalizations and argue there is a mapping from gradability onto the mass domain. The mapping is possible because both gradable adjectives and mass nouns can be taken as sets of state-kinds that are ordered with respect to one another. In addition, I argue that state denoting nominalizations, in being these atelic or homogeneous, do not pluralize under normal circumstances. Nevertheless, it is possible to find them with the plural marking if the states involve some kind of heterogeneity. The analysis defended here, whereby only gradable bases form mass nominalizations, poses a serious challenge for what we can call *the standard analysis*, according to which there is a mapping from atelicity onto the mass domain.

Since Mourelatos (1978; see also Bach 1986, Krifka 1989, Borer 2005, Fábregas & Marín 2012, Wellwood 2014, Husić 2020; cf. Rothstein 2004, 2010, 2017 and Grimm 2014), it has been claimed that there is a correlation between atelicity and the mass domain. For example, Mourelatos notes that the construction *John hates liars*, which includes the stative, and therefore atelic, predicate *to hate*, corresponds to *There is hate by John of liars*, where *hate* is a mass noun because it is not preceded by any determiner. In contrast, the construction *Mary capsized the boat*, which includes the accomplishment, and therefore telic, predicate *to capsize the boat*, corresponds to *There was a capsizing of the boat by Mary*, where *capsizing* is a count noun because it is preceded by the indefinite determiner.

The problem with the standard analysis is that it takes for granted that all stative predicates are gradable; certainly, *to hate* is an atelic predicate, but it is also a gradable predicate. However,

recall from chapter 2 that we concluded that stativity does not entail gradability, since there are states that are not gradable. Consider the following data:

(13) a. *El futbolista pertenece mucho al club.
the footballer belongs much to.the club
b. *mucha pertenencia (al club)
much belonging to.the club

(14) a. *El nadador posee mucho el récord.
the swimmer owns much the record
b. *mucha posesión (del récord)
much owning of.the record

(15) a. #El estudiante permaneció mucho en casa.
the student stayed much at home
b. *mucha permanencia (en casa)
much staying at home

Under the assumption that *mucho* 'a lot of, much' is compatible with gradable predicates and mass nouns (see Fleischhauer 2016 for a cross-linguistic study), neither the non-gradable predicates *pertenecer* 'to belong', *poseer* 'to own' and *permanecer* 'to stay' in (13a), (14a) and (15a) nor their corresponding nominalizations *pertenencia* 'belonging', *posesión* 'owning' and *permanencia* 'stay' in (13b), (14b) and (15b) accept it, which suggests that non-gradable states cannot form mass nouns. The symbol # in (15a) indicates that *permanecer* 'to stay' allows for a temporal rather than a degree reading, which is irrelevant here; recall from chapter 2 that the temporal reading is possible because *permanecer* 'to stay' is an interval state, which, like activities, is divisible in intervals. Thus, *permanecer* 'to stay' is not gradable in the relevant sense and, therefore, (15a) does not constitute a true counterexample.

Consequently, we have to reformulate the standard hypothesis: there is a mapping from *gradability* onto the mass domain. All stative predicates are atelic insofar as they are homogeneous, as concluded in chapter 2 following McNally (2017), but only gradable states form mass nominalizations. This mapping holds because gradable predicates constitute sets of elements, state-kinds in this case, that are ordered with respect to each other, which is the requirement to form mass nouns. However, the situation becomes more complicated when attempting to account for morphological pluralization of count nouns. Although pluralization has been unavoidably linked to countability in the literature, in the sense that being a count noun automatically means accepting the plural, there is something more to say in this respect.

In particular, I argue that morphological pluralization entails countability, but the converse is not the case.

As claimed above, the predicates in (13a), (14a) and (15a) do not form mass nominalizations, which leads us to posit that they form count nominalizations. However, the nominalizations in question are reluctant to appear with the plural marking in normal circumstances:

(16) a. *las pertenencias del futbolista al club
the belongings of.the footballer to.the club
b. *las posesiones del récord por parte del nadador
the ownings of.the record by part of.the swimmer
c. *las permanencias del estudiante en casa
the stays of.the student at home

My claim is that the reason why these nominalizations reject the morphological plural in normal circumstances is that they are derived from atelic predicates. Atelic predicates, unlike telic ones, are homogenous, hence their reluctance to pluralize even though they constitute count nouns. Thus, the class of nouns derived from non-gradable stative predicates, like *pertenencia* 'belonging', remains in a dim field in which they constitute count nouns that cannot pluralize in normal circumstances. The role of gradability and atelicity with respect to the mass and count distinction becomes clear now: gradable predicates form mass nouns and non-gradable predicates form count nouns, and atelic or homogeneous predicates do not pluralize in normal circumstances because morphological pluralization requires heterogeneity.

So far, I have described what happens in *normal circumstances*. Nevertheless, there are exceptional cases in which count nominalizations derived from non-gradable stative predicates can pluralize:

(17) a. Las disputas por la copa entre los cántabros y los godos y las sucesivas posesiones [de la misma] [por unos y otros] centran la acción de sucesos en la historia de España.[56]
'The fights for the cup between Cantabrians and Goths and the successive ownerships (lit. *ownings*) by one another are the focus of historical events in Spain'

[56] https://cutt.ly/IgpXJxp.

b. Se puede encontrar y descubrir sin deformación alguna el hecho jurídico original de la historia de la Villa de San Bernardo de Tarija a través de sus sucesivas pertenencias a los Virreinatos de Lima y Río de La Plata.[57]

'We can find and find out without distortion the original juridical fact of the history of Villa de San Bernardo de Tarija through its successive belongings to the viceroyalties of Lima and Río de la Plata'

c. La NASA sigue acariciando la idea de volver a enviar astronautas a la Luna (…) a través de sucesivas permanencias [en una base lunar].[58]

'NASA still entertains the idea of sending astronauts again to the Moon by means of successive stays (lit. *stayings*) in a lunar base'

There is no doubt that the sentences in (17) express states: they all include their arguments, signaled between the square parentheses, and accept the frequency modifier *sucesivas* 'successive'. Certainly, both *pertenencia* 'belonging' and *posesión* 'owning' can also constitute participant nominalizations (which will be analyzed in subsection 4.4.1) when appearing in plural, in which case they express entities:

(18) El caballero perdió sus (*sucesivas) pertenencias/posesiones.
the knight lost his successive belongings ownings

However, note that the arguments of the nominalizations are absent in (18) and the frequency modifier *sucesivas* 'successive' cannot appear. We can conclude that, while the nominalizations that appear in (18) express plural entities, for instance they refer to the knight's sword and shield, the nominalizations occurring in (17) express plural states. Under the hypothesis defended here that plural count nouns demand heterogeneity, and given that states are homogeneous, we must explain the licensing of (17) based on the fact that they involve some kind of heterogeneity because they hold at different times. In (17a) the cup is owned sometimes by the Cantabrians and sometimes by the Goths, which involves different states of owning the cup. Analogously, in (17b) the Villa de San Bernardo sometimes belongs to Lima and sometimes to Río de la Plata, which again involves different states of belonging to one viceroyalty. Finally, (17c) is heterogeneous because it involves different states of astronauts' staying in a lunar base. Thus, the heterogeneity that exceptionally licenses the pluralization of stative count nominalizations is due to the fact that these hold at different times.

[57] https://cutt.ly/qgpXL9w.
[58] https://cutt.ly/FgpXXdD.

Nonetheless, it would be a mistake to conclude from this analysis that the conditions that allow the nominalizations in (17) to behave as plural count nouns are exclusive of the ones that are derived from non-gradable bases. Even nominalizations that are derived from gradable bases can form plural count nouns under certain circumstances. The phenomenon whereby gradable bases can also form count nominalizations was observed by Grimm (2014: 198) for English, who claims that the standard analysis according to which there is a mapping from atelicity onto the mass domain is incorrect, as I do in this dissertation. Before showing examples in Spanish, let us examine Grimm's data:

(19) a. Please, let's not insult both our intelligences by pretending this is open to question. The desire to provoke a reaction, preferably an over reaction, is glaringly obvious. Seeing this does not require being [Osama Bin Laden]'s secret pen pal. (Google)
b. A young deaf boy is discovered dead. Warrick, Sara, and Grissom handle this case, dealing with their ignorances about the deaf community. (Google)
c. We are a mother and daughter team that have decided to put our creativities together and make a business that is 100% made in the USA. (Google)

(Grimm 2014: 194, 195)

According to Grimm (2014: 194), the nominalizations occurring in (19) express the properties that have an entity anchoring. For example, *intelligences* "designates intelligence with respect to different individuals". Thus, these nominalizations do not express entities, but rather properties that can be counted because they are associated with different individuals. Although this proposal goes in the correct direction, it lacks specificity, since it does not explain why deadjectival nominalizations can be counted when different holders are involved. Under my view, these data receive a natural interpretation. First, we know that the nominalizations in (19) express state-tokens because they have arguments, where the holders are manifested by means of possessives: ***our*** *intelligences*, ***their*** *ignorances* and ***our*** *creativities*. There are no reasons to posit that the states involved hold at different times: for example, in (19a) one individual's intelligence appears to hold at the same time as another individual's intelligence; and the same holds for *their ignorances* in (19b) and *our creativities* in (19c).

However, the states can be considered heterogeneous due to two reasons: either they hold to different degrees on the scale, for example in (19a) one individual is more/less intelligent than another individual, or maybe one individual has a spatial intelligence and the other has an emotional intelligence, in which case heterogeneity is derived from different kinds of intelligence. The same holds for *ignorances* and *creativities* mutatis mutandis. Thus,

morphological pluralization requires heterogeneity and this can be achieved by state-token deadjectival nominalizations if they hold to different degrees on the scale or are associated with different domains of state-kinds. I flesh out this insight below.

Having described the English data, at this point I would like to introduce Spanish data, which corroborate that state-token nominalizations can pluralize if they are heterogeneous in some respect:

(20) a. *las desnudeces de las ramas
the nakednesses of the branches
b. Los árboles llevan muy bien —en sus anillos internos— la cuenta de sus años y de las sucesivas desnudeces de sus ramas.[59]
'Trees keep track —in their internal rings— of their age and the successive nakednesses of their branches.'

(21) a. *las tristezas de Vivianne.
the sadnesses of Vivianne
b. El rostro de Vivianne se ha descompuesto meticulosamente, la precisión de sus sucesivas tristezas ha sido un espectáculo penoso.[60]
'Vivianne's face decomposed meticulously, the precision of her successive sadnesses has been a piteous show.'

(20a) and (21a) show that state-token deadjectival nominalizations cannot form plural count nouns in normal circumstances. However, (20b) and (21b) show that they can appear with the plural marking in a special context in which the state-tokens hold at different times, as in (17), which is indicated by the occurrence of the frequency modifier *sucesivas* 'successive'. Thus, we can count distinct states of being naked and being sad because they are heterogeneous insofar as they hold at different moments. As I noted with respect to (17), this situation, although possible, is exceptional in Spanish.

A second situation in which state-token nominalizations can be heterogeneous, which is analogous to the cases analyzed by Grimm (2014) for English, holds when they hold to different degrees on the scale or are associated with different domains of state-kinds, which necessarily involves nominalizations that are derived from gradable predicates, unlike the ones in (17). This second situation is far from being exceptional. Observe the following data:

[59] https://cutt.ly/LgpX3wu.
[60] https://cutt.ly/OgpXNiN.

(22) a. la altura de Raúl y Alberto
the height of Raúl and Alberto
'Raúl and Alberto's height'
b. las (respectivas) alturas de Raúl y Alberto
the respective heights of Raúl and Alberto
'Raúl and Alberto's (respective) heights'

(23) a. la inteligencia de Laura y María
the intelligence of Laura and María
'Laura and María's intelligence'
b. las (respectivas) inteligencias de Laura y María
the respective intelligences of Laura and María
'Laura and María's (respective) intelligences'

In (22a) *altura* 'height' appears in singular because there is only one homogeneous state-token: hence, Raúl and Alberto are equally tall, so the state is associated with the same degree of height. In contrast, in (22b) *altura* 'height' appears in plural, so there are two heterogeneous state-tokens: for example, Raúl is taller than Alberto, so each state-token is associated with a different degree of height (note that the modifier *respectivas* 'respective' can be inserted because the two heights involved are different).

Regarding (23a), *inteligencia* 'intelligence' appears in singular because there is only one homogeneous state-token: we can thus suppose that Laura and María are equally intelligent. In contrast, in (23b) *inteligencia* 'intelligence' appears in plural, so there are two heterogeneous state-tokens: for example, Laura is more intelligent than María, so each state-token is associated with a different degree of intelligence. Moreover, the plural can also be licensed if, for example, Laura has a spatial intelligence and María has an emotional intelligence. Recall from section 4.1 that relational adjectives, like *spatial* and *emotional*, can be treated as predicates of state-kinds too in the spirit of McNally & Boleda's (2004) analysis. Accordingly, (23b) can be licit in a context in which María is as intelligent as Laura, but each individual has a different type of intelligence because the set of state-kinds denoted by the nominalization intersects with the different sets of state-kinds denoted by the relational adjectives implicitly involved.

Thus, on the one hand, we have stative predicates like *pertenecer* 'to belong' that are not gradable, so they form count nominalizations. On the other, we have predicates like *triste* 'sad' that are gradable, so they form mass nominalizations, as shown in section 4.1. However, both types of predicates are usually reluctant to appear with the plural marking, which means that stativity and morphological pluralization are, in principle, incompatible because the latter

requires heterogeneity; states are homogeneous regardless of whether they are gradable or not, hence its usual incompatibility with the plural.[61] Nonetheless, we can count states if they are heterogeneous in some respect: because they hold at different times and because they hold to different degrees or are associated with different domains of state-kinds if the predicates are gradable. My proposal is in line with Grimm (2014), who claims that the mapping from atelicity onto the mass domain is untenable. Nevertheless, my proposal is more specific than Grimm's, because it provides an alternative mapping, from gradability onto the mass domain, and contributes the factors that regulate the licensing of the plural marking of deadjectival nominalizations.[62]

Before closing this section, it is interesting to note that my proposal accounts for the count nature of nominalizations derived from activity predicates, which are non-gradable in the relevant sense and atelic by definition in light of the empirical evidence provided in chapter 2. The activity predicates *conducir el carrito* 'to drive the cart' and *buscar el tesoro* 'to search for the treasure' form count nominalizations that can pluralize if they refer to events that take place at different times:

(24) a. *mucha conducción del carrito
much driving of.the cart
b. *mucha búsqueda del tesoro
much search of.the treasure

(25) a. las sucesivas conducciones del carrito
the successive drivings of.the cart
b. las sucesivas búsquedas del tesoro
the successive searches of.the treasure

On the one hand, (24) shows that the activity nominalizations *conducción* 'driving' and *búsqueda* 'search' cannot combine with the mass quantifier *mucha* 'a lot of, much', which reveals that they constitute count nouns. On the other hand, (25) shows that these nominalizations can pluralize if they express events that take place at different times. Thus, my analysis correctly

[61] The existence of data like *The actor's frequent sadness* and *Last week, the actor was sad many times*, which also occur in Spanish, does not constitute a counterargument to my claim that stative predicates cannot appear in the plural in normal circumstances, since in these cases we deal with *plural (or iterative) readings* rather than with *morphological pluralization*. Thus, although these data convey that there are several states in which the actor is sad, this plural reading is not obtained by means of morphological pluralization. In this dissertation, I do not explore the licensing of this type of plural readings; see Rothstein (2017) and references therein for discussion.

[62] Rothstein (2004, 2010, 2017) also argues against the mapping from atelicity onto the mass domain; nevertheless, given that the author does not analyze nominalizations, I do not examine her proposal.

predicts that activity predicates behave as non-gradable stative predicates like *pertenecer* 'to belong', since both types are atelic and not gradable.

In sum, in this section I have provided evidence that state-token deadjectival nominalizations constitute mass nouns because they are derived from gradable bases, where both domains are characterized by including sets of elements that are ordered with respect to each other. Furthermore, deadjectival nominalizations reject the plural in normal circumstances because they are atelic/homogeneous. Nevertheless, they can pluralize if they involve some kind of heterogeneity, in which case they hold at different times, they hold to different degrees on the scale or are associated with different domains of state-kinds that result in different subsets of state-kinds. In the following section, I address the study of state-kind nominalizations.

4.3. State-kind nominalizations

Having provided an analysis of the semantic structure of state-token nominalizations and its interaction with the mass and count domains, in this section I study state-kind nominalizations, which are syntactically characterized by the absence of their arguments and semantically characterized by triggering generic interpretations. The section is divided into three subsections depending on the syntactic and morphosemantic properties that these nominalizations exhibit: in subsection 4.3.1, I study *definite* state-kind nominalizations, which are preceded by the definite determiner, see (26a). In subsection 4.3.2, focusing on the double distribution of measure phrases in Spanish, I study both *quantified* and *indefinite* state-kind nominalizations, where the former are preceded by a mass quantifier and the latter by the indefinite determiner. An example of a quantified state-kind nominalization is offered in (26b), while (26c) shows an example of an indefinite nominalization. Finally, in subsection 4.3.3 I study *bare* nominalizations, which appear in isolation, like the one in (26d). In every subsection, I also include an analysis for the occurrence of quantified, indefinite and bare nominalizations when occurring as the internal argument of the possessive verb *tener* 'to have', as in (26b), (26c) and (26d).

(26) a. La honestidad abunda.
the honesty abounds
'Honesty abounds'
b. El puente tiene {mucha / dos metros de} altura.
the bridge has much two meters of height
c. El puente tiene una altura {de dos metros / extraña}.
the bridge has a height of two meters strange
'The bridge has a {height of two meters / strange height}'

d. Los objetos tridimensionales tienen profundidad.
the objects tridimensional have depth
'Tridimensional objects have some depth'

4.3.1 Definite state-kind nominalizations

4.3.1.1 Kind-referring DPs

In chapter 3, we have studied DPs containing nominalizations that express state-tokens, that is, nominalizations that express properties that are subject to time. These nominalizations are formally characterized by the presence of the definite determiner and their arguments, usually a PP introducing the holder of the state. In this subsection, I deal with *definite* state-kind nominalizations, that is, deadjectival nominalizations that have a generic interpretation and are preceded by the definite determiner. The nominalizations under examination are like the following, whose most salient property is that they are preceded by the definite determiner and not accompanied by PPs introducing arguments:

(27) a. La honestidad abunda.
the honesty abounds
'Honesty abounds.'
b. La belleza está en el interior.
the beauty is in the interior
'Beauty is inside.'
c. La tristeza invadió sus corazones.
the sadness invaded their hearts
'Sadness filled their hearts.'
d. Aquí la inteligencia brilla por su ausencia.
here the intelligence shines by its absence
'Here intelligence is conspicuous by its absence.'

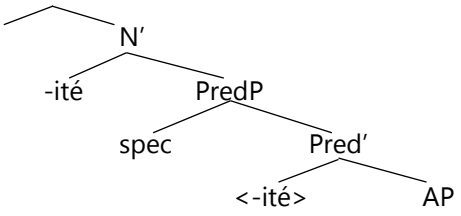
In (27) we do not deal with someone's honesty, beauty, sadness or intelligence, but rather we take honesty, beauty, sadness and intelligence as generic properties. I will come back to the semantic issue later on, where I argue that the generic reading comes from the DP or that the DP is a *kind-referring* DP in the sense of Krifka et al. (1995). Before that, it is necessary to present the starting point of the investigation. As shown in chapter 1, in Roy's (2010) seminal work on French deadjectival nominalizations, the author claims that they should be classified into two types:

(28) a. La popularité (constante) de ses chansons m'impressionne.
the popularity constant of his songs me.impresses
b. La popularité (*constante) est une qualité qui lui fait défaut.
the popularity constant is a quality that to.him does default

(From Roy 2010: 146)

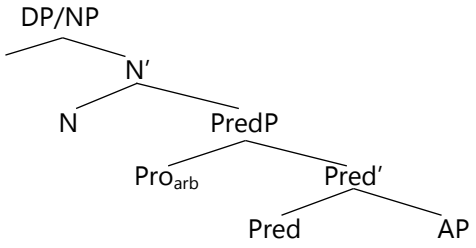
According to Roy, in (28a) the nominalization *popularité* 'popularity' expresses a state, accepts modification by a frequency adjective (*constante* 'constant') and is followed by the argument PP *de ses chansons* 'of his songs'. In contrast, in (28b) *popularité* 'popularity' expresses a quality, frequency modification is banned and the nominalization has no arguments. Roy claims that the stative reading is the basic one, while the quality reading arises when the nominalization receives a generic interpretation in the absence of their arguments. The morphosyntactic analysis proposed by this author is the following:

(29)



(From Roy 2010: 149)

(30)



(From Roy 2010: 151)

(29) offers the analysis for state nominalizations, while (30) presents the analysis for quality nominalizations. Roy (2010) attributes the source of stativity to the adjectival base, so the state reading holds without additional stipulation. Regarding quality nominalizations, Roy claims that they express states inserted in generic contexts when an arbitrary Pro_{arb} is bound by a generic operator GEN: the specific place for this operator is not provided by the author, but we can presume that it must be placed inside the domain of the DP for the reasons that will be explained below. As claimed in chapter 3, although I agree with Roy that the quality reading must be understood as a generic interpretation, I propose a converse analysis in which the basic

reading is the generic reading (i.e. the kind reading), while the stative reading is the derived reading (i.e. the token reading).

The reason why I do not follow Roy's analysis is precisely that, in what the author calls the quality reading, she attributes the source of genericity to a generic operator. Indeed, although Roy does not mention it, there are two possible options, namely, the generic operator can be placed either outside or inside the DP. The data reveal that genericity comes from the DP, since the predicates that are placed out of the DP do not impact its generic reading regardless of whether they have a generic or an episodic interpretation. Observe the following data:

(31) a. La (*habitual) tristeza es un sentimiento doloroso.
the usual sadness is a feeling painful
'(Usual) sadness is a painful feeling.'
b. La (*habitual) tristeza invadió sus corazones.
the usual sadness invaded their hearts
'(Usual) sadness filled their hearts.'

In (31a) the predicate *es un sentimiento doloroso* 'is a painful feeling' has a generic reading or cannot be located at a particular time; in contrast, in (31b) the predicate *invadió sus corazones* 'filled their hearts' has an episodic reading, that is, it can be located at a particular time. Crucially, in both cases the insertion of the frequency modifier *habitual* 'usual', which can only trigger a temporal reading in prenominal position, is blocked (I will come back to frequency modifiers in subsection 4.3.1.4). More specifically, recall from chapter 3 that frequency modifiers in prenominal position only trigger a temporal reading in the sense of Gehrke & McNally (2015), in which case they denote in the state-token domain; however, in both (31a) and (31b) frequency modifiers are unlicensed. What this means is that the source of genericity comes from the DP, that is, we deal with a *kind-referring* DP in the sense of Krifka et al. (1995), hence the type clash between the nominalization, which denotes in the kind domain, and the modifier, which denotes in the token domain. In order to understand better what a kind-referring DP is, consider the following data:

(32) a. The potato was first cultivated in South America.
b. Potatoes were introduced into Ireland by the end of the 17th century.
(33) a. John smokes a cigar after dinner.
b. A potato contains vitamin C, amino acids, protein and thiamine.

(Krifka et al. 1995: 2, 3)

According to Krifka et al., the source of genericity in (32) comes from the DPs, since they do not designate a particular potato in (32a) or a particular group of potatoes in (32b), but rather the natural kind *potato* itself; note that the predicates *was cultivated in South America* and *were introduced into Ireland* trigger an episodic interpretation of the entire sentence, but they do not alter the generic reading of the DPs. In contrast, in (33) the source of genericity comes from the predicates involved (*smokes a cigar* and *contains vitamin C*, etc.), which do not trigger an episodic interpretation that can be located at a particular time. In this case, Krifka et al. talk about *characterizing* or *generic sentences*. Finally, there are cases in which the two types of genericity co-occur:

(34) a. Potatoes are served whole or mashed as a cooked vegetable.
b. The potato is highly digestible.

(Krifka et al. 1995: 3)

According to the authors, the subjects of the sentences in (34) can refer to kinds and the sentences themselves can trigger a generic interpretation. Thus, if we go back to (31), we will understand the proposal more clearly: in both (31a) and (31b) the DP refers to a state-kind irrespective of whether the verbal predicate triggers a generic interpretation, like *es un sentimiento doloroso* 'is a painful feeling' in (31a), or whether the verbal predicate triggers an episodic interpretation, like *invadió sus corazones* 'filled their hearts' in (31b). Thus, in (31a) we deal with a kind-referring DP inserted in a generic sentence, while in (31b) we deal with a kind-referring DP inserted in an episodic sentence.

Having clarified that the source of genericity in the case of definite nominalizations comes from the DP, we can go back to Roy's (2010) analysis. Specifically, Roy claims that the generic interpretation holds due to the absence of the arguments of nominalizations, in which case an arbitrary Pro_{arb} is bound by a generic operator. Given that genericity comes from the DP, the only possibility for this analysis is to place the generic operator above the NP projection. However, although in English it could be possible to place it in a covert DP that dominates NP, given that there are no explicit definite determiners in this type of structures (e.g. *Sadness is a painful feeling*), in Romance languages like Spanish that position is occupied by the definite determiner. Thus, the only possibility would be to posit that the determiner does not introduce the iota operator *ι* when deadjectival nominalizations that have a generic reading are involved, but rather that it introduces a generic operator GEN. However, that would force us to posit two different denotations for the definite determiner, which is an undesirable option, as Espinal & Borik (2015) remark in their analysis of entity-kind denoting DPs (e.g. *El dodo fue exterminado*

'(lit.) The dodo was exterminated, Dodos were exterminated). Specifically, Espinal & Borik claim that the noun *dodo* denotes a property of entity-kinds of type e_k and the definite determiner introduces the iota operator ι, as usual, which captures the kind reading:

(35) a. $[\![dodo]\!] = \lambda x_k.\,\mathrm{dodo}(x_k)$.
b. $[\![the\ dodo]\!] = \iota x_k[\mathrm{dodo}(x_k)]$.

The result of the derivation is the unique entity-kind of dodos. In case the noun *dodo* refers to a particular individual instead of the natural kind of dodos, as in *El dodo fue disecado en el museo Ashmolean* 'The dodo was dissected in the Ashmolean museum', the functional node *Num* attaches to the derivation to instantiate an entity-kind from the set of entity-kinds. The composition proposed by Espinal & Borik (2015) is as follows:

(36) a. $[\![dodo]\!] = \lambda x_k.\,\mathrm{dodo}(x_k)$.
b. $[\![Num^{-pl}]\!] = \lambda P_{<ek,t>}\lambda x.\,\exists x_k[P(x_k) \wedge R(x_k, x) \wedge x \in At]$.
c. $[\![Num^{-pl}]\!]([\![dodo]\!]) = \lambda x.\,\exists x_k[\mathrm{dodo}(x_k) \wedge R(x_k, x) \wedge x \in At]$.
c. $[\![the\ dodo]\!] = \iota x.\,\exists x_k[\mathrm{dodo}(x_k) \wedge R(x_k, x) \wedge x \in At]$.

The functional node Num^{-pl}, which attaches to singular count nouns according to the authors, takes a predicate of entity-kinds and existentially binds the entity-kind variable introducing a set of entity-tokens; the expression $x \in At$, where *At* stands for 'atomic', captures the fact that *dodo* is an atomic entity, that is, a singular countable entity. Finally, the iota operator ι takes the unique entity-token from the set of entity-tokens.

Going back to deadjectival nominalizations, the alternative analysis that I propose, more in line with Espinal & Borik (2015) in particular and with the kind-token tradition in general, is that the basic reading is the state-kind reading, while the state-token reading holds when the arguments of the nominalizations are present (see also Moltmann 2004, 2009 for a similar insight in term of *tropes* and *kinds of tropes*). If this is the case, the aspectual node AspP attaches to the structure introducing a function that instantiates a state-kind from the set of state-kinds, as I showed in chapter 3. Thus, the DP *la tristeza del actor (durante la película)* 'the actor's sadness (during the movie)' denotes a state-token, whereas the DP *la tristeza* 'sadness' in *La tristeza es un sentimiento doloroso* 'Sadness is a painful feeling' denotes a state-kind.

Before introducing the technical details of the analysis for definite state-kind nominalizations, it is necessary to show that they can also trigger either degree or quality readings, so they can include the null morpheme EVAL in the derivation.

4.3.1.2 Quality and degree readings

In this subsection, I provide evidence that state-kind nominalizations can trigger either quality or degree readings. Recall from chapter 3 that state-token nominalizations can trigger a quality reading, in which the nominalization is used for referring to the adjectival property, or a degree reading, in which the nominalization is used for referring to some degree on the scale:

(37) la belleza del actor
the beauty of.the actor
R1: 'The actor's quality of being beautiful'
R2: 'The actor's degree of beauty'

In chapter 3, the contrast is technically captured by including the null morpheme EVAL in the derivation of the quality reading. With this in mind, in this section I argue that state-kind nominalizations can also trigger degree and quality readings. The problem with state-kind nominalizations is that we cannot insert them in some of the contexts that were examined in chapter 3 in order to identify the quality and the degree readings, since they only work properly when the nominalizations are predicated of their arguments. For example, the predicate *no es suficiente* 'is not enough' gives rise to anomalous sentences:

(38) a. *La velocidad no es suficiente para ganar la carrera.
the speed not is enough to win the race
'Speed is not enough to win the race.'
b. *La belleza no es suficiente para ser feliz.
the beauty not is enough to be happy
'Beauty is not enough to be happy.'

Nevertheless, we can provide other contexts that induce each different reading. Observe the following data:

(39) a. La velocidad aumenta con la aceleración.
the speed increases with the acceleration
'Speed increases with acceleration.'
b. La belleza disminuye con la edad.
the beauty decreases with the age
'Beauty decreases with age.'

(40) a. La velocidad es una de las cualidades de este coche.
the speed is one of the qualities of this car
'Speed is one of the qualities of this car.'
b. La belleza es una de las cualidades de este paisaje.
the beauty is one of the qualities of this landscape
'Beauty is one of the qualities of this landscape.'

In (39a), which includes the predicate *aumentar* 'to increase', we deal with speed in general, which comprises all degrees of speed, that is, low and high speeds. In other words, (39a) means 'In general, the degree of speed increases with acceleration'. The same holds for (39b), where the predicate *disminuir* 'to decrease' informs us that the degree of beauty becomes lower as the time goes on, but we do not know if it is high or low. The quality readings according to which what increases with acceleration is the quality of being fast or what decreases with age is the quality of being beautiful do not make any sense. In contrast, (40a) conveys that one of the qualities of the car is that it is fast, and (40b) conveys that one of the qualities of the landscape is that it is beautiful. The degree readings according to which one of the qualities of the car is that it has some speed and one of the qualities of the landscape is that it has some beauty are excluded because they are trivial. Recall from chapter 3 that degree readings are possible because deadjectival nominalizations, unlike their base adjectives, are not necessarily evaluated with respect to a standard of comparison.

Nominalizations like *altura* 'height' and *anchura* 'width', which can only trigger a degree reading, as shown in chapter 3 in relation to state-token nominalizations, show the expected pattern:

(41) a. La altura disminuye con la edad.
the height decreases with the age
'Height decreases with age.'
b. *La anchura es una de las cualidades de este coche.
the width is one of the qualities of this car
'Width is one of the qualities of this car.'

(41a) expresses that the degree of height decreases with age, but we do not know whether that degree is high or low. In contrast, in (41b) the predicate *es una de las cualidades de este coche* 'is one of the qualities of this car' induces a quality reading because it is assumed that all

entities are endowed with a certain degree of width, but this reading is unavailable, hence the sentence's ungrammaticality.

Finally, it must be noted that non-deadjectival nouns like *coste* 'cost', *peso* 'weight' and *temperatura* 'temperature' behave as nominalizations like *altura* 'height' in that they can only trigger a degree reading, as concluded in chapter 3 with respect to state-token nominalizations:

(42) a. El peso aumenta con la masa.
the weight increases with the mass
'Weight increases with mass.'
b. La temperatura disminuye con la altitud.
the temperature decreases with the altitude
'Temperature decreases with altitude.'
c. *El peso/coste es una de las cualidades de este coche.
the weight cost is one of the qualities of this car
'Weight/cost is one of the qualities of this car.'

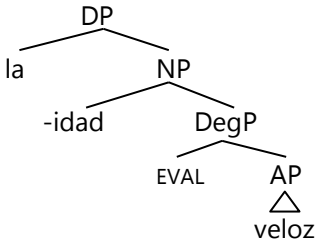
In (42a) and in (42b) the nouns *peso* 'weight' and *temperatura* 'temperature' are compatible with the predicates *aumentar* 'to increase' and *disminuir* 'to decrease', triggering a degree reading: what increases with mass is the degree of weight and what decreases with altitude is the degree of temperature. In contrast, in (42c) these nouns give rise to unacceptable utterances because the predicate *es una de la cualidades de este coche* 'is one of the qualities of this car' induces a quality reading, but this is unavailable; the degree readings whereby one of the qualities of the car is that it has some weight or some cost are excluded because they are trivial.

We can conclude that state-kind nominalizations, like state-token ones, can amount to either quality or degree readings. Exceptional nominalizations like *altura* 'height' and non-deadjectival nouns like *temperatura* 'temperature' can only trigger degree readings. In the following subsection, I present a syntactic and semantic analysis for definite state-kind nominalizations.

4.3.1.3 Technical implementation

In this subsection, I offer a morphosyntactic and semantic analysis for state-kind definite nominalizations, which must account for the fact that they trigger a generic reading whose source is the DP. The morphosyntactic composition that I propose for the quality reading of *la velocidad* 'the speed' in *La velocidad es una de las cualidades de este coche* 'Speed is one of the qualities of this car' is the following:

(43)



(44) a. $[\![veloz]\!] = \lambda s_k.\,\text{fast}(s_k)$.

b. $[\![EVAL]\!] = \lambda G_{<sk,t>}\lambda s_k.\,G(s_k) \wedge s_k > st_c$.

c. $[\![DegP]\!] = \lambda s_k.\,\text{fast}(s_k) \wedge s_k > st_c$.

d. $[\![-idad]\!] = \lambda G.\,G$.

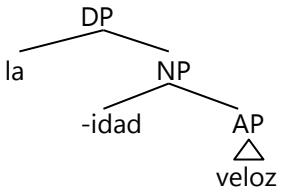
e. $[\![NP]\!] = [\![nP]\!] = \lambda s_k.\,\text{fast}(s_k) \wedge s_k > st_c$.

f. $[\![DP]\!] = \iota s_k[\text{fast}(s_k) \wedge s_k > st_c]$.

The starting point of the derivation is the gradable adjective *veloz* 'fast', which denotes a property of state-kinds. The null morpheme EVAL, whose presence captures the quality reading, introduces a contextual standard of comparison st_c. Recall from chapter 3 that the node PredP merges with the structure at this point of the derivation in the case of state-token nominalizations, which enables them to select for a subject. Regarding state-kind nominalizations, what I propose here to capture the fact that they have a generic reading is that the nominalizer attaches to DegP, which blocks the insertion of PredP. As a consequence, the state-kind is not predicated of a specific individual, so the node AspP, which associates a state-kind with a state-token, does not intercede either. Subsequently, the nominalizer attaches to the structure and, finally, the determiner picks up the unique state-kind from the set of state-kinds denoted by the NP. The result of the derivation is the unique state-kind of having a speed that surpasses a contextual standard of comparison.

For the degree reading of *la velocidad* 'the speed' in *La velocidad aumenta con la aceleración* 'Speed increases with acceleration', I propose the following composition:

(45)



(46) a. $[\![veloz]\!] = \lambda s_k.\,\text{fast}(s_k)$.

b. $[\![-idad]\!] = \lambda G.\,G$.

c. $[\![NP]\!] = [\![nP]\!] = \lambda s_k.\,\text{fast}(s_k)$.

d. $[\![DP]\!] = \iota s_k[\text{fast}(s_k)]$.

The only difference with respect to the quality reading is that the null morpheme EVAL does not appear in the derivation. The output of the expression in question is the unique state-kind of having a speed. The analysis proposed here for both the quality and degree readings of state-kind nominalizations capture their generic character appropriately: in the absence of the functional node AspP, the state-kind expressed by the base adjective is not associated with a state-token.

Note that the fact that the nominalizer attaches to the structure over DegP in the quality reading and over AP in the degree reading excludes the possibility of inserting PredP, StageP and CauseP, which are the functional nodes that capture individual-level, stage-level and stative causative readings, as argued for in chapters 2 and 3. The consequence of the exclusion of these nodes is that this three-way distinction is irrelevant when the state-kind interpretation is involved, which is consistent with the analysis defended in this dissertation according to which even individual-level predicates express properties that are subject to time. In other words, it does not make any sense to apply this three-way distinction to generic interpretations, in which there are no arguments involved and, therefore, there are no eventualities that hold at a particular time. Recall that the distinction is based on how a state-token is caused, but that distinction does not apply if there are no state-tokens involved.

In sum, in this section, building on the kind-token dichotomy, particularly on Espinal & Borik (2015), I have offered a morphosyntactic and semantic analysis for definite state-kind nominalizations that captures their generic character and the quality and degree readings. In the following subsection, I provide empirical evidence that definite nominalizations are incompatible with time-related modification, that is, temporal, frequency and aspectual modifiers, but there are some possible counterexamples that are worth being mentioned.

4.3.1.4 Time-related modification

In this subsection, I provide evidence that definite state-kind nominalizations disallow temporal modifiers, frequency modifiers with a temporal interpretation and aspectual modifiers, which is in agreement with the fact that they express generic properties. In addition, I show that the apparent cases of temporal modifiers that are licensed operate over the kind rather than the token domain, which reveals that they do not constitute true counterexamples.

Fist, definite state-kind nominalizations do not admit temporal modification in normal circumstances:

(47) a. La belleza (*en aquella época) está en el interior.
the beauty at that time is in the interior
'Beauty (at that time) is inside.'
b. La tristeza (*durante el funeral del actor) es un sentimiento doloroso.
the sadness during the funeral of.the actor is a feeling painful
'Sadness (during the actor's funeral) is a painful feeling.'

In (47), the temporal modifiers *en aquella época* 'at that time' and *durante el funeral del actor* 'during the actor's funeral' cannot locate the DPs at a particular time. As shown in the previous subsection with respect to the technical details, the reason of this incompatibility is that the DPs involved denote in the state-kind domain, but temporal modifiers locate eventualities, that is, event-tokens or state-tokens.

Nonetheless, there are cases in which apparent temporal modifiers are licensed, see (48), but note that in these cases the alleged temporal modifiers do not provide information about a particular temporal frame within which an eventuality holds, as in (47), but rather about a generic temporal frame:

(48) a. La felicidad durante la vejez es posible.
the happiness during the old.age is possible
'Happiness during old age is possible.'
b. La tristeza durante el embarazo es habitual.
the sadness during the pregnancy is usual
'Sadness during pregnancy is usual.'

While in (47) the temporal modifiers *en aquella época* 'at that time' and *durante el funeral del actor* 'during the actor's funeral' inform about specific periods of time, in (48) *durante la vejez* 'during old age' and *durante el embarazo* 'during pregnancy' inform about generic periods of time. In the latter case, the alleged temporal modifiers are not true temporal modifiers; rather, they specify a sub-kind of happiness and sadness, respectively.

Regarding frequency modifiers, they do not combine with state-kind nominalizations when appearing in prenominal position, which indicates that they cannot trigger a temporal interpretation in the sense of Gehrke & McNally (2015):

(49) a. La (*frecuente) oscuridad se cernió sobre nosotros.
the frequent darkness REFL *loomed over us*
'(Frequent) darkness loomed over us.'
b. La (*habitual) honestidad abunda.
the usual honesty abounds
'(Usual) honesty abounds.'

On the one hand, recall from chapter 3 that frequency modifiers can trigger a temporal interpretation in prenominal position, in which case they operate in the token domain. The data in (49) show that this interpretation is unlicensed, which is in accordance with the fact that the absence of the arguments of the nominalization triggers a kind reading, as advanced in subsection 4.3.1.1. On the other, recall also that frequency modifiers can trigger a non-temporal reading in post-nominal position when accompanying state-token nominalizations derived from dimensional adjectives, which are associated with conventionalized units of measurement. In the case of state-kind nominalizations, they are unlicensed when modifying definite nominalizations, but they are valid if they modify indefinite nominalizations:

(50) a. La densidad (*habitual) es de 1000 kg/m^3.
the density usual is of 1000 kg/m^3
'(Usual) density is 1000 kg/m^3.'
b. Esta sustancia tiene una densidad habitual de 1000 kg/m^3.
this substance has a density usual of 1000 kg/m^3
'This substance has a usual density of 1000 kg/m^3.'

(50b), in which the frequency modifier can be inserted, does not pose any problems, since the modifier triggers a non-temporal rather than a temporal interpretation in the sense of Gehrke & McNally (2015) and, given that both the nominalization and the modifier denote in the domain of state-kinds, their compatibility is straightforwardly explained. Accordingly, what is usual in (50b) is the degree of density that is associated with the substance (I analyze indefinite state-kind nominalizations in section 4.3.2). In contrast, (50a) poses a particular problem, since its unacceptability cannot be attributed to a type clash, given that both the nominalization and the modifier are supposed to denote in the state-kind domain too. The reason why (50a) is unacceptable is that it does not make any sense to say that there is a degree of density that is usual in general for all individuals in any given world. In this respect, consider the following data:

(51) la densidad habitual de esa sustancia
the density usual of that substance

In (51) the frequency modifier occurring in post-nominal position is licensed because the nominal property is predicated of a specific individual, namely, *esa sustancia* 'that substance'. Accordingly, in (51) there is a usual degree of density that is associated with the substance. Thus, the frequency modifier with a non-temporal reading is licensed if the degree that is considered usual is associated with a specific individual, as in (51), but it is illicit if the degree that is considered usual is taken as generic, as in (50a).

Finally, if state-token nominalizations do not license aspectual modification because they express imperfective eventualities, as shown in chapter 3, it is expected that state-kind nominalizations, which trigger a generic reading and, therefore, do not have a perfective interpretation, do not license them either. The prediction is borne out:

(52) a. La belleza (*durante varios días) está en el interior.
the beauty for several days is in the interior
'Beauty (for several days) is inside.'
b. La tristeza (*durante varios meses) invadió sus corazones.
the sadness for several months invaded their hearts
'Sadness (for several months) filled their hearts'

To recapitulate, definite state-kind nominalizations do not combine with time-related modification, that is, temporal, frequency (with a temporal interpretation) or aspectual modifiers. Putative acceptable examples of temporal modifiers do not constitute true cases of eventuality modifiers and rather they serve for specifying a sub-kind for the kind expressed by the nominalization. In relation to frequency modifiers, they are not licensed in prenominal position because these denote in the state-token domain in that position, but definite nominalizations denote in the state-kind domain. Furthermore, frequency modifiers are not licensed in post-nominal position either, but in this case there is no type clash, since both the nominalization and the modifier operate in the state-kind domain; rather, their incompatibility comes from the fact that it is semantically anomalous to say that there exist a usual degree on a certain scale if this is not associated with a specific individual.

In the following subsection, I study quantified and indefinite state-kind nominalizations, with a particular glance at the role of measure phrases and their interaction with the mass and count distinction.

4.3.2. Quantified and indefinite nominalizations

In this section, I study state-kind nominalizations that are preceded by a mass quantifier or the indefinite determiner, which I call *quantified* and *indefinite* nominalizations, respectively. These nominalizations have not been examined in the literature, with a few exceptions. I focus on the double behavior of measure phrases in Spanish, which according to Eguren & Pastor (2014, 2015) can function as either quantifiers or as adnominal modifiers. In addition, following Schwarzschild's (2002) insights on mass and count nouns, I posit that quantified nominalizations constitute mass nouns, while indefinite ones constitute count nouns. In the end, I provide an analysis for the possessive structures involving the verb *tener* 'to have' in which these nominalizations usually appear as internal arguments.

The two types of constructions that are examined in this subsection are the following: first, indefinite nominalizations are preceded by the indefinite determiner *un(a)* 'a', followed by a measure phrase headed by *de* 'of', as in (53), or an adjective, as in (54), and usually co-occur with the verb *tener* 'to have':

(53) a. El puente tiene una altura de veinte metros.
the bridge has a height of twenty meters
b. Este lago tiene una profundidad de un kilómetro.
this lake has a depth of one kilometer

(54) a. Este puente tiene una altura impresionante.
this bridge has a height striking
'This bridge has a striking height.'
b. Este tenista tiene una destreza increíble.
this tennis.player has a ability incredible
'This tennis player has an incredible ability.'

Second, as noted by Eguren & Pastor (2014, 2015) with respect to measure phrases, Spanish has available another construction in which the measure phrase is followed by a PP headed by *de* 'of', whose complement is the nominalization; in addition, no determiner appears. This is the case of quantified nominalizations:

(55) a. El puente tiene veinte metros de altura.
the bridge has twenty meters of height
b. Este lago tiene un kilómetro de profundidad.
this lake has one kilometer of depth

The existence of the two types of constructions raises many questions, some of which will be addressed here. With respect to measure phrases, we have to explain why Spanish has available two different configurations and whether a different semantics underlies them. With respect to both measure phrases and adjectives, we have to explain why and how they can license these structures. Ultimately, I will show that the solution to the questions that the previous data pose is possible by appealing to a model that includes kinds, and specifically state-kinds, in our semantic ontology, which is the guiding thread of this dissertation.

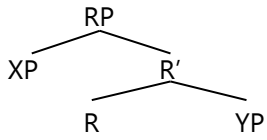
Before examining the data carefully and providing a detailed analysis, it is necessary to explain Eguren & Pastor's (2014, 2015) analysis of measure phrases in Spanish, which establishes the starting point of this investigation.

4.3.2.1 The double behavior of measure phrases

The goal of Eguren & Pastor (2014, 2015) is to provide a syntactic analysis of Spanish measure phrases that accounts for their syntactic properties. Nevertheless, they also incorporate certain semantic considerations that are worth reflecting on. In this section, I will explain the most important syntactic and semantic aspects of their analysis.

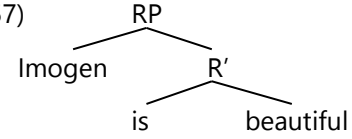
Eguren & Pastor base their proposal on Den Dikken's (2006) theory on predication. According to Den Dikken, all types of predicative structures state a relation between a subject and a predicate, which are mediated by a functional head that projects a Relator Phrase (RP):

(56)



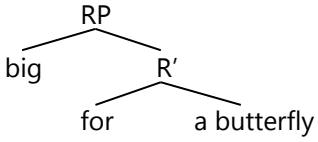
Depending on where the subject and the predicate are base-generated, either in the specifier XP or in the complement YP, we obtain the first two predicative structures. In the *straight predication*, the subject occupies the specifier position, while the predicate is the complement, and these are considered their canonical positions. For example, in copular sentences, like *Imogen is beautiful*, *Imogen*, which is the subject, is base-generated in the specifier position, while *beautiful*, which is the predicate, is base-generated as the complement. This relation is mediated by the copula *is*, which occupies the head of RP:

(57)



In this case, the authors claim that straight predication triggers a predicative interpretation, because the subject has the property expressed by the predicate. In contrast, in the reverse predication, the subject is base-generated in the complement position, while the predicate occupies the subject position, like *big for a butterfly* in *This butterfly is big for a butterfly*:

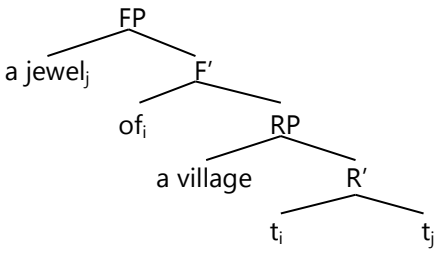
(58)



In this case, the structure does not trigger a predicative interpretation, as in the case of straight predication, but an attributive interpretation. In other words, (58) does not convey that *a butterfly* is big, but rather that *this butterfly* is big with respect to (the size of) butterflies, where the *for*-phrase "restricts the adjective's denotation" (Eguren & Pastor 2015: 292).

Finally, *inverse predication* holds when the subject is base-generated in Spec-RP and the predicate is base-generated in the complement position, but it then moves up in order to be hierarchically above the subject. For example, *a jewel of a village* is an example of inverse predication:

(59)



Thus, a straight predication configuration underlies the inverse predication structure. According to the authors, this analysis captures the predicative interpretation, whereby *a jewel of a village* is equivalent to 'a village that is a jewel'.

On the basis of this theory, Eguren & Pastor (2014, 2015) develop an analysis of Spanish measure phrases that involve straight and reverse predication. The two structures involved are repeated here:

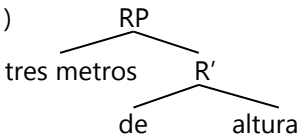
(60) a. tres metros de altura.
three meters of height

b. una altura de tres metros.[63]

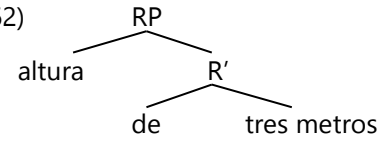
a height of three meters

Assuming with Schwarzschild (2005) and Corver (2009) that measure phrases are predicates, Eguren & Pastor propose that a reverse predication underlies (60a), where the subject *altura* 'height' is base-generated in the complement position, whereas a straight predication underlies (60b), where the subject *altura* is base-generated in Spec-RP:

(61)



(62)



The two RPs involved also differ with respect to their syntactic distribution: the one that is associated with the reverse predication shows the distribution of a quantifier phrase (QP), while the one that is associated with the straight predication shows the distribution of an NP. Let us review the former first. Observe the following data:

(63) a. La valla tiene muchos/tres/*los metros de altura.
the fence has many three the meters of height
b. La valla mide tres metros de altura.
the fence measures three meters of height
c. Esta valla tiene [un metro de altura] más que esa.
this fence has one meter of height more than that

(Eguren & Pastor 2015: 298)

[63] The authors also note that Spanish offers is a third structure that involves measures phrases:

(i) La torre tiene tres metros de alta / alto.
the tower.F has three meters of tall.F tall.M

The structure is the same as the one in (60a), with the difference that the nominalization is replaced by its corresponding base adjective, which can agree or not in gender with the noun of which the property is predicated. The analysis of type of construction falls out of the scope of this dissertation because it does not include any deadjectival nominalizations.

(63a) shows that the measure phrase can be preceded by a quantifier, but not by a definite determiner. In (63b) the measure phrase can combine with the verb *medir* 'to measure' and in (63c) the measure phrase can function as a differential measure phrase, which must "denote a quantity" according to the authors. All these data indicate that the phrase that appears in the reverse predication configuration must project a QP.

In contrast, the phrase that appears in the straight predication configuration is preceded by the indefinite determiner *una* 'a', see (64a), and cannot combine with the verb *medir* 'to measure', see (64b). Moreover, although the authors do not mention it, the measure phrase cannot function as a differential measure phrase, as shown in (64c).

(64) a. una altura de tres metros.
a height of three meters

b. *La valla mide una altura de tres metros.
the fence measures a height of three meters

(Eguren & Pastor 2015: 299)

c. *Esta valla tiene [una altura de un metro] más que esa.
this fence has a height of one meter more than that

In this case, the conclusion is that the phrase that is associated with the straight predication must project an NP. In order to account for the fact that both structures project an RP, but they must also project a QP and an NP, respectively, the authors resort to the Project Both labeling algorithm (Chomsky 2008; Citko 2008). In the overt syntax, two structures can be projected and after filtered out in the interfaces: at the Phonological Form, only the one with the RP survives, while the two can survive at the Logical Form. This analysis accounts, they claim, for the fact that the structures under study comprise a predication relationship, but also have the interpretation of QPs and NPs, respectively.

Finally, with respect to the meaning of each structure, according to the authors, their analysis correctly predicts that the QP/RP structure, the one associated with the reverse predication, can have two interpretations: in the predicative interpretation, *tres metros de altura* '(lit.) three meters of height' means 'a height that is three meters'. In contrast, in the attributive interpretation, the same phrase means 'three meters as for height'. Regarding the structure with the NP/RP, the one associated with the straight predication, the only interpretation that is activated is the predicative one, since the subject and the predicate occur in their canonical positions. In the following subsection, I review Eguren & Pastor's analysis and examine the nominalizations involved with respect to their mass or count nature.

4.3.2.2 Quantified and indefinite nominalizations and the mass-count distinction

In this subsection, I assume Eguren & Pastor's analysis in which measure phrases in Spanish can act as either quantifiers or as adnominal modifiers. In addition, I elaborate on their proposal by incorporating Schwarzschild's (2002) insights on mass and count nouns; in particular, I posit that quantified nominalizations constitute mass nouns, while indefinite nominalizations constitute count nouns. Deadjectival nominalizations can also constitute count nouns because the scales associated with them are composed of state-kinds, which are discrete or atomic objects, as argued in section 4.1 when examining the determiner *ningún* 'no, any'.

The major contribution of the proposal on Spanish measure phrases developed by Eguren & Pastor (2014, 2015) is that they provide empirical evidence that the structures under scrutiny, repeated in (65), differ with respect to their syntactic properties: (65a) constitutes an NP, while (65b) constitutes a QP.

(65) a. altura de dos metros
height of two meters
b. dos metros de altura
two meters of height

However, resorting to the Project Both labeling algorithm to incorporate their RP status is unnecessary on the basis of the formal apparatus assumed here (Heim & Kratzer 1998), since predicate-argument relations do not rely on the existence of a functional node that mediates between predicates and arguments. Consequently, we can dispense with the RP label and take the constituents analyzed as simple NPs and QPs.

In relation to the semantic considerations, recall that Eguren & Pastor's analysis predicts that both structures can have the same interpretation, namely, the predicative one ('a height that is two meters'), but only (65b) can trigger what they call an attributive interpretation ('two meters as for height'). In addition to the fact that it is not clear why two different syntactic structures can be associated with the same interpretation without further argumentation, the paraphrase provided by the authors with respect to the attributive interpretation is imprecise. In other words, they do not explain what "two meters as for height" means in precise terms and, consequently, it is difficult to apprehend its difference with respect to the predicative interpretation.

In what follows, I provide a more precise semantic characterization, which is based on an important aspect that the authors overlook: the syntax of (65a) is typically the one for count nouns, while the syntax of (65b) is typically the one for mass nouns. Let us examine how the two

structures involved differ in this respect. My analysis is based on Schwarzschild's (2002) cross-linguistic study on (English, Spanish, Dutch, Swiss German and Russian) mass and count nouns, according to which the two types differ with respect to the structures in which they participate. Observe the following examples in English:

(66) a. 2 liters of oil
b. *2 liter oil
c. 90 degree oil
(67) a. *2 pages of story
b. a 2 page story

(From Schwarzschild 2002: 227, 229)

The mass noun *oil* can appear in the pseudopartitive construction in (66a), where the measure phrase is followed by the preposition *of*; in contrast, it cannot form a compound in (66b), but it can in (66c). The count noun *page* cannot participate in the pseudopartitive construction in (67a), but it licenses a compound, see (67b). According to Schwarzschild (2002: 288), pseudopartitive constructions require part-whole relations, while compounds do not accept them, either because the noun does not comprise a part-whole relation or because the property that is predicated of the noun "is not monotonic within the universe of the substantive with respect to the part-whole relation". The author explains that a property is monotonic if it tracks part-whole relations, like volume: the more volume of oil we have, the more amount of oil we have; in contrast, more temperature of oil does not entail more amount of oil.

Based on that, we can now explain the data in (66) and (67): pseudopartitive constructions require part-whole relations, so mass nouns like *oil*, unlike count nouns like *story*, can participate in them, see (66a) and compare it to (67a). By contrast, compounds do not admit part-whole relations: (66b) is not acceptable because volume is a monotonic property, so it comprises part-whole relations; in contrast, (66c) is actually acceptable, because temperature is a non-monotonic property, so it does not comprise part-whole relations. Finally, (67b) is acceptable because count nouns do not comprise part-whole relations.

This analysis correctly predicts that nouns that can be either mass or count nouns depending on the context are able to appear in both types of constructions. For example, the noun *chicken* fulfills the prediction:

(68) a. two kilos of chicken
b. a two kilo chicken

In (68a) *chicken* is a mass noun, where chicken can be considered food, and can participate in the pseudopartitive construction. In contrast, in (68b) *chicken* is a count noun, where the chicken can be considered an animal. With this in mind, we can move on to Spanish data, which show a parallel behavior: Spanish has available pseudopartitive constructions for monotonic uses of measure phrases, but it does not make use of compounds for non-monotonic uses; instead, Spanish makes use of NPs and measure phrases function as adnominal complements:

(69) a. 2 litros de gasolina
2 liters of gas
b. *gasolina de 2 litros
gas of 2 liters
c. gasolina de 95 octanos
gas of 95 octanes
'95 octane gas'

(70) a. *300 páginas de libro
300 pages of book
b. un libro de 300 páginas
a book of 300 pages
'a 300 page book'

(71) a. 2 kilos de pollo
2 kilos of chicken
b. un pollo de 2 kilos
a chicken of 2 kilos
'a 2 kilo chicken'

The mass noun *gasolina* 'gas(oline)' can participate in the pseudopartitive construction in (69a) and licenses the NP construction when a non-monotonic property like octane number is involved, see (69c); in (69b) the same construction is not licensed because volume is a monotonic property: more volume of gas entails more amount of gas. In contrast, the count noun *libro* 'book' cannot enter into the pseudopartitive construction in (70a), but it can participate in the NP construction, see (70b). Finally, the noun *pollo* 'chicken' participates in the pseudopartitive construction in (71a), where it is a mass noun, and also licenses the NP construction in (71b), where it is a count noun.

Going back to our central discussion on measure phrases and deadjectival nominalizations, nominalizations like *altura* 'height' can participate in both types of constructions, which reveals that they behave as variable nouns like *pollo* 'chicken':

(72) a. dos metros de altura
two meters of height
b. una altura de dos metros
a height of two meters

In (72a) *altura* 'height' participates in the pseudopartitive construction, which indicates that it is a mass noun, whereas in (72b) it licenses an NP, which indicates that it is a count noun. At this point it is important to relate these data to the internal ordering of deadjectival nominalizations proposed in section 4.1 and the analysis developed in section 4.2 according to which gradable adjectives form mass nominalizations because both domains consist in sets of state-kinds that are ordered with respect to each other. In (72a) the measure phrase functioning as a mass quantifier operates over the set of state-kinds denoted by the nominalization: given that this set is composed of state-kinds that are ordered with respect to each other, by the total preorder ≤, the nominalization constitutes a mass noun.

In contrast, in (72b) there is a state-kind that results from the intersection of the set of state-kinds denoted by the nominalization, i.e. the scale, and the set of state-kinds denoted by the measure phrase, which functions as an adnominal modifier. Given that state-kinds are discrete units, as argued in section 4.1, the nominalization can also behave as a count noun and, therefore, can be selected for by a determiner that combines with count nouns, like the indefinite determiner. I will come back to this issue in subsection 4.3.2.4, where I offer a technical implementation that helps us clarify this reasoning.

To conclude, in this subsection I have analyzed quantified and indefinite state-kind nominalizations on the basis of Eguren & Pastor's (2014, 2015) analysis on Spanish measure phrases and Schwarzschild's (2002) insights on mass and count nouns. Quantified nominalizations constitute mass nouns that are preceded by a measure phrase functioning as a mass quantifier, while indefinite nominalizations constitute count nouns that are followed by a measure phrase functioning as an adnominal modifier and preceded by the indefinite determiner. Before providing a formal analysis of the two constructions under examination, in the following subsection I offer empirical evidence that the nominalizations involved denote in the state-kind rather than the state-token domain.

4.3.2.3 Time-related modification

In the previous subsection, I have shown that deadjectival nominalizations can constitute mass or count nouns, which is revealed by the syntactic structure in which they appear. In this subsection, I provide empirical evidence that in both cases the nominalizations denote in the kind rather than the token domain. The two structures under examination are repeated below:

(73) a. dos metros de altura
two meters of height
b. una altura de dos metros
a height of two meters

First, neither of the two constructions accepts temporal modification:

(74) a. *dos metros de altura durante el verano
two meters of height during the summer
b. *una altura de dos metros durante el verano
a height of two meters during the summer

Second, the distribution of these nominalizations and frequency modifiers shows the expected pattern. Recall from chapter 3 that in Spanish frequency modifiers can operate in both the token and the kind domains: in the former case, they can appear in prenominal or post-nominal position and trigger a temporal interpretation (in the sense of Gehrke & McNally 2015), while in the latter they appear in post-nominal position and trigger a non-temporal interpretation. When state-kind nominalizations are involved, they cannot appear in prenominal position and, if they can appear in post-nominal position, they only trigger a non-temporal interpretation. Consider the following data:

(75) a. *dos metros de frecuente altura
two meters of frequent height
b. *dos metros de altura frecuente
two meters of height frequent

(76) a. *una frecuente tristeza
a frequent sadness
b. *una frecuente densidad de 20 kg/m^3
a frequent density of 20 kg/m^3

(77) a. una altura frecuente de veinte metros
a height frequent of twenty meters
b. una densidad frecuente de 20 kg/m^3
a density frequent of 20 kg/m^3

(75) shows that quantified state-kind nominalizations reject frequency modifiers in both prenominal and post-nominal position.[64] (76) shows that frequency modifiers cannot trigger a temporal reading in prenominal position when indefinite nominalizations are involved, so they give rise to unacceptable phrases; finally, (77) shows that they can trigger a non-temporal reading in post-nominal position when accompanying indefinite nominalizations, according to which what is frequent is a certain degree on the scale.

Third, state-kind nominalizations do not accept aspectual modifiers either, as expected due to their generic character:

(78) a. *dos metros de altura durante varios años
two meters of height for several years
b. *una altura de dos metros durante varios años
a height of two meters for several years

The fact that the two structures that involve measure phrases denote in the domain of state-kinds is consistent with the hypothesis defended in this dissertation, according to which state-token and state-kind interpretations are not unrestricted; rather, the state-token reading arises when the arguments of the nominalizations are present (see chapter 3), while the state-reading holds when the arguments are absent, as in the examples above, where there is no PP introducing the holder of the state.

The situation varies drastically when the verb *tener* 'to have' is introduced, in which case temporal modification, frequency modification with a temporal interpretation and aspectual modification when *tener* 'to have' bears perfective morphology are licensed. I contend that, in this case, the modifiers in question operate at the VP level rather than at the domain of the nominalization. Consider the following data:

[64] The reason why the frequency modifier cannot trigger a non-temporal reading in post-nominal position in (75b) cannot be attributed to a type clash, since both the nominalization and the modifier operate in the kind domain. Rather, the reason of their incompatibility is that the nominalization is a count noun in this case, so it is incompatible with a measure phrase functioning as a mass quantifier.

(79) a. Las dunas tienen dos kilómetros de altura en verano.
the dunes have two kilometers of height in summer
b. Las dunas tienen una altura de dos kilómetros en verano.
the dunes have a height of two kilometers in summer

(80) a. Las dunas frecuentemente tienen dos kilómetros de altura en verano.
the dunes frequently have two kilometers of height in summer
b. Las dunas frecuentemente tienen una altura de dos kilómetros en verano.
the dunes frequently have a height of two kilometers in summer

(81) a. Las dunas *tenían / tuvieron dos kilómetros de altura durante un mes.
the dunes have.IPFV have.PFV two kilometers of height for one month
b. Las dunas *tenían / tuvieron una altura de dos kilómetros durante un mes.
the dunes have.IPFV have.PFV a height of two kilometers for one month

Under the hypothesis defended in this dissertation, the stative verb *tener* 'to have' denotes in the state-kind domain, but, given that their arguments are present (i.e. the subject and the direct object), we can assume that the node AspP attaches to the structure to instantiate a state-kind from the set of state-kinds denoted by the predicate. Consequently, time-related modifiers are accepted, but these operate at the domain of the VP containing the verb *tener* 'to have' rather than the domain of the nominalization. (79) shows that the temporal modifier *en verano* 'in summer' is compatible with state-kind nominalizations if the verb *tener* 'to have' is present. In (80) the frequency modifier *frecuentemente* 'frequently' takes the form of an adverb rather than an adjective, which confirms that it operates at the VP level. Finally, the data in (81) show that aspectual modification is licit if the verb bears perfective morphology, which again is in accordance with the fact that in this case aspectual modifiers operate at the VP level.

In sum, in this subsection I have shown that neither quantified nor indefinite state-kind deadjectival nominalizations accept temporal, frequency (with a temporal reading) or aspectual modifiers, which proves that they do not denote in the token domain. These modifiers are licensed if the nominalizations occur as internal arguments of the verb *tener* 'to have', in which case the modifiers operate at the VP level. In the following subsection, I provide the technical details of the analysis.

4.3.2.4 Technical implementation

In this subsection, I provide a basic morphosyntactic and semantic analysis for quantified and indefinite state-kind nominalizations and the structures that involve the verb *tener* 'to have' and measure phrases. I also extend the analysis to quantified nominalizations preceded by the mass

quantifier *mucha* 'a lot of, much' and to indefinite nominalizations that are followed by a manner modifier.

As shown in chapter 1, the literature on property concepts (in the sense of Dixon 1982) has pointed out that adjectival and possessive structures are tightly connected semantically. For example, Francez & Koontz-Garboden (2015, 2017a), for Ulwa, and Baglini (2015), for Wolof, develop an analysis of property concept nouns, which we can equate to deadjectival nominalizations, as predicates that must combine with a possessive morpheme or a possessive verb in order to be predicated of a subject. While Ulwa usually makes use of the possessive morpheme *-ka*, see (82), Wolof makes use of the verb *am* 'to have' in normal circumstances, see (83).

(82) a. Alas pan-ka
3.SG stick-3.SG
'His/her stick'
b. Yang as-ki-na minisih-ka.
1.SG shirt-1.SG dirty-ka
'My shirt is dirty.'

(Francez & Koontz-Garboden 2017a: 31, 32)

(83) a. Aïda am na-Ø ceeb.
Aïda have FIN-3.SG rice
'Aïda has rice.'
b. Aïda am na-Ø xel
Aïda have FIN.3.SG mind
'Aïda is smart.'

(Baglini 2015: 133)

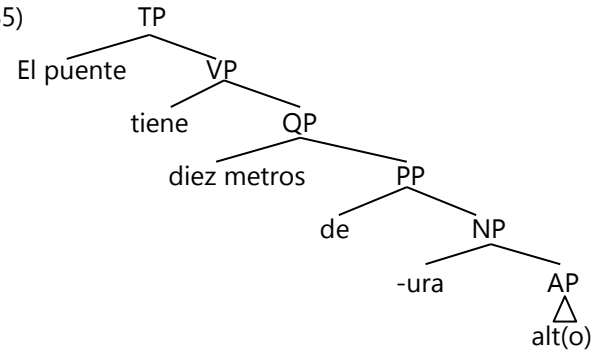
On the one hand, according to Francez & Koontz-Garboden, in (82a) *-ka* is a possessive morpheme that can be used for expressing alienable possession, while (82b) shows that the same morpheme is involved in the syntax of property concepts. On the other, according to Baglini (2015), *am* 'to have' is the verb that is used for alienable possession in (83a), while it can also be used to express property concepts, see (83b). The fact that there are languages in which possession plays a central role when property concepts are involved is far from surprising. In Spanish, the existence of possessive structures involving quantified and indefinite state-kind nominalizations illustrates the phenomenon clearly.

At this point, the question of which denotation the verb *tener* 'to have' must have arises. The meaning of this verb, or its equivalent verb in other languages, especially in English, has been the locus of a long debate and the literature on its syntax and semantics is enormously vast (see Myler 2014 and Bassaganyas 2017 for a state of the art). Given the assumptions of this dissertation, *tener* 'to have' should denote a set of state-kinds that select for an internal argument that is not defined by a specific semantic type; furthermore, a functional node should introduce its external argument à la Marantz (1984) and Kratzer (1996), whose semantic type is not specified either. If the arguments of the verb are present, i.e. the subject and the direct object, then the node AspP associates a state-kind from the set of state-kinds denoted by the verb with a state-token. However, for convenience sake and in order not to address the technical details with a complexity that is irrelevant for the purposes of this subsection, I will posit that *tener* 'to have' expresses a state-token and selects for an internal argument of type s_k and an external argument of type *e*:

(84) $[\![tener]\!] = \lambda s_k \lambda x \lambda s.\, \text{have}(s, x, s_k).$

For the sentence *El puente tiene cien metros de altura* '(lit.) The bridge has one hundred meters of height', where the measure phrase projects a QP, the composition proposed is as follows:

(85)



(Not final)

(86) a. $[\![AP]\!] = \lambda s_k.\, \text{tall}(s_k).$

b. $[\![-ura]\!] = \lambda G.\, G.$

c. $[\![nP]\!] = [\![NP]\!] = \lambda s_k.\, \text{tall}(s_k).$

d. $[\![de]\!] = \lambda G.\, G.$

e. $[\![PP]\!] = \lambda s_k.\, \text{tall}(s_k).$

f. $[\![diez\ metros]\!] = \lambda P_{<sk,t>} \lambda Q_{<sk,t>}.\, \exists s_k [P(s_k) \wedge Q(s_k) \wedge s_k = \text{ten. meters}].$

g. $[\![QP]\!] = \lambda Q_{<sk,t>}.\, \exists s_k [\text{tall}(s_k) \wedge Q(s_k) \wedge s_k = \text{ten. meters}].$

h. $[\![tener]\!] = \lambda s_k \lambda x \lambda s.\, \text{have}(s, x, s_k)$.

(Not final)

The domain of the nominalization is very simple: the adjective *alto* 'tall' denotes a property of state-kinds, and the absence of their arguments is captured by the exclusion of PredP. The nominalizer denotes an identity function (from Barker 1995) and the resulting nominalization projects NP. Next, the preposition is taken as a functional element devoid of meaning, so it denotes another identity function. Given that the measure phrase functions as a mass quantifier in this structure, I posit that it has the semantic type $\langle\langle s_k,t\rangle,\langle\langle s_k,t\rangle,t\rangle\rangle$. Mass quantifiers operate over the set of totally preordered state-kinds denoted by nominalizations, as explained in section 4.1.

Eguren & Pastor (2015), following Longobardi (1994), claim that the QP is dominated by a DP headed by a null definite determiner. Their analysis is based on the observation that that null determiner can appear in certain contexts:

(87) Los dos metros de longitud de esta mesa no son suficientes.
the two meters of length of this table are not enough

(Eguren & Pastor 2015: 299)

However, although the empirical observation is correct, measure phrases preceded by the definite determiner are not equivalent to the ones that are not:

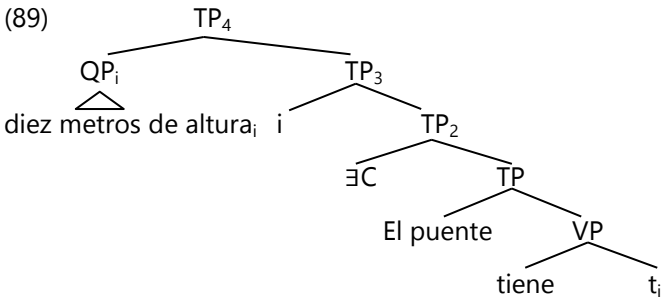
(88) a. La atleta corrió los doce kilómetros de la carrera de San Silvestre.
the runner ran the twelve kilometers of the race of San Silvestre
b. La atleta corrió doce kilómetros de la carrera de San Silvestre.
the runner ran twelve kilometers of the race of San Silvestre

(88a) means that the San Silvestre race has twelve kilometers and the runner ran the whole race. On the contrary, (88b) means that the runner ran twelve kilometers, but the race has more kilometers. The conclusion is that measure phrases preceded by the definite determiner have different truth conditions from the ones that appear without determiner, so Eguren & Pastor's analysis in which the QP is embedded by a DP is not desirable.

Thus, at this point of the derivation there is a QP of type $\langle\langle s_k,t\rangle,t\rangle$, but the verb *tener* 'to have' selects for an internal argument of type s_k, which results in a type clash. In the formal semantic apparatus of Heim & Kratzer (1998), the mismatches caused by QPs that appear in

object position can be alternatively solved by the movement of the QP to the top of the structure in the Logical Form, thus creating a lambda abstract. This covert movement that has been called Quantifier Raising (see May 1977, 1985):

(89)



(Final)

(90) a. $[\![tener]\!] = \lambda s_k \lambda x \lambda s.\, \text{have}(s, x, s_k).$

b. $[\![VP]\!] = \lambda x \lambda s.\, \text{have}(s, x, s_k).$

c. $[\![TP]\!] = \lambda s.\, \text{have}(s, \text{the bridge}, s_k).$

d. $[\![TP_2]\!] = \exists s[\text{have}(s, \text{the bridge}, s_k)].$ by ∃C

e. $[\![TP_3]\!] = \lambda s_k.\, \exists s[\text{have}(s, \text{the bridge}, s_k)].$ by λ-A

f. $[\![QP]\!] = \lambda Q_{<sk,t>}.\, \exists s_k[\text{tall}(s_k) \wedge Q(s_k) \wedge s_k = \text{ten. meters}].$

g. $[\![TP_4]\!] = \exists s \exists s_k[\text{tall}(s_k) \wedge \text{have}(s, \text{the bridge}, s_k) \wedge s_k = \text{ten. meters}].$

(Final)

The QP raises over the whole structure, leaving a trace t_i that saturates the variable s_k. Subsequently, the subject *el puente* 'the bridge' saturates the individual variable *x* in Spec-VP. Afterwards, we need to assume an existential closure ∃C of the state-token variable *s*. At this point of the derivation, the lambda abstraction λ-A has place, introducing the variable s_k that was abstracted away before. Now the QP and TP_3 can compose by Functional Application, giving rise to the end of the derivation, according to which the proposition is true iff there is a state in which the bridge, which is the holder of the state, is associated with a state-kind of height of ten meters.

This analysis according to which the measure phrase functions as a mass quantifier can be naturally adapted to the structure *El puente tiene mucha altura* 'The bridge has a lot of height', in which *mucha* 'much, a lot of' is a mass quantifier. The difference with respect to the measure phrase resides in the fact that the expression including *mucha* 'much, a lot of' involves vagueness rather than a specific degree on the scale. Taking Morzycki's (2015) analysis of *very* as a degree modifier that sets the degree on a high place on the scale, we can propose an analogous denotation for the mass quantifier *mucha* 'much, a lot of', given that there is a logical

correspondence between *muy* 'very' and *mucho* 'much, a lot of' in *muy alto* 'very tall' and *mucha altura* 'a lot of height':[65]

(91) a. $[\![very]\!] = \lambda G_{<d,<e,t>>} \lambda x. \exists d[G(x,d) \wedge d \gg st_G]$.

(From Morzycki 2015: 115)

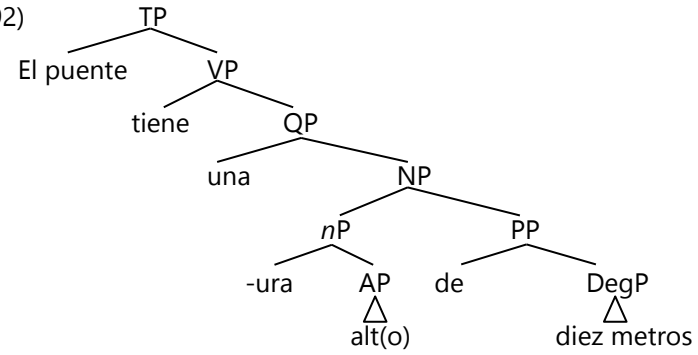
b. $[\![mucha]\!] = \lambda P_{<sk,t>} \lambda Q_{<sk,t>}. \exists s_k[P(s_k) \wedge Q(s_k) \wedge s_k \gg st_G]$.

Adapting Morzycki's analysis for the degree modifier *very* to the state-kind system, the mass quantifier *mucha* 'much, a lot of' takes a state-kind s_k from the scale of height that exceeds a contextual standard state-kind st_G by a large amount. Thus, like the measure phrase *dos metros de* '(lit.) two meters of', the mass quantifier *mucha* 'much, a lot of' operates over the totally preordered set of state-kinds denoted by the nominalization, with the difference that this quantifier is vague.

With respect to the syntax, note that I do not follow the current minimalist assumptions according to which the subject moves from Spec-VP to Spec-TP. I do not represent the move of the verb from the head of VP to the head of TP either, which is supposed to hold in Romance languages like Spanish (see Emonds 1978 and Pollock 1989). Again, all these considerations would require a complexity that does not contribute anything relevant in relation to the characterization of measure phrases.

Now we must look back to indefinite nominalizations, in which the measure phrase functions as an adnominal modifier. For *El puente tiene una altura de cien metros* '(lit.) The bridge has a height of one hundred meters', I propose the following composition:

(92)



(Not final)

(93) a. $[\![AP]\!] = \lambda s_k. \text{tall}(s_k)$.

[65] In fact, both words have the same Latin origin (*mucha* < (NOM) *multus*; *muy* < (ACC) *multum*), but they underwent different phonetic changes according to Lapesa (1980). In addition, in other Romance languages, like Catalan, the same word (with different gender suffixation if necessary) is used as both a degree modifier and a mass quantifier: *molt alt* 'very tall' / *molta alçada* 'a lot of height', which highlights the correlation between them. See Doetjes et al. (2011) for cross-linguistic evidence of this correlation (in Italian, Czech and Moroccan Arabic).

b. $[\![-ura]\!] = \lambda G.\, G.$

c. $[\![nP]\!] = \lambda s_k.\, \text{tall}(s_k).$

d. $[\![de]\!] = \lambda G.\, G.$

e. $[\![DegP]\!] = \lambda s_k.\, \text{ten. meters}(s_k).$

f. $[\![PP]\!] = \lambda s_k.\, \text{ten. meters}(s_k).$

g. $[\![NP]\!] = \lambda s_k.\, \text{tall}(s_k) \wedge \text{ten. meters}(s_k).$ by PM

h. $[\![una]\!] = \lambda P_{<sk,t>} \lambda Q_{<sk,t>}.\, \exists s_k [P(s_k) \wedge Q(s_k)].$

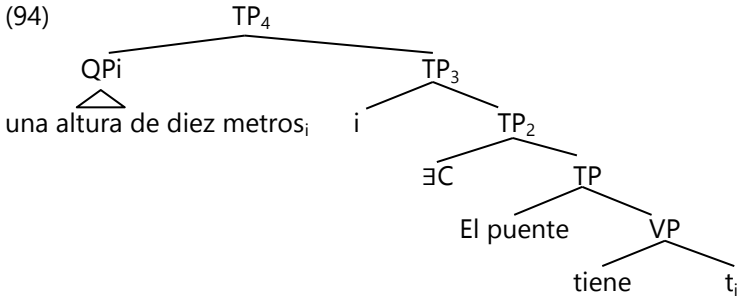
i. $[\![QP]\!] = \lambda Q_{<sk,t>}.\, \exists s_k [\text{tall}(s_k) \wedge \text{ten. meters}(s_k) \wedge Q(s_k)].$

j. $[\![tener]\!] = \lambda s_k \lambda x \lambda s.\, \text{have}(s, x, s_k).$

(Not final)

The arguments of the nominalization are absent again, so the node PredP is excluded from the derivation. In this case, the measure phrase is not a mass quantifier, but a predicate of state-kinds of type <s_k,t> that is selected by a PP in order to combine with the noun. The nominalization and the PP compose intersectively by means of Predicate Modification, resulting in a subset of state-kinds. The NP is selected by the indefinite determiner *una* 'a', which can be taken as an existential quantifier in line with Heim & Kratzer (1998). Again the derivation faces a mismatch: the verb *tener* 'have' selects for an internal argument of type s_k, but the QP is of type <<sk,t>,t>. To repair the mismatch, the QP must ascend over the whole structure in the Logical Form:

(94)



(Final)

(95) a. $[\![tener]\!] = \lambda s_k \lambda x \lambda s.\, \text{have}(s, x, s_k).$

b. $[\![VP]\!] = \lambda x \lambda s.\, \text{have}(s, x, s_k).$

c. $[\![TP]\!] = \lambda s.\, \text{have}(s, \text{the bridge}, s_k).$

d. $[\![TP_2]\!] = \exists s [\text{have}(s, \text{the bridge}, s_k)].$ by ∃C

e. $[\![TP_3]\!] = \lambda s_k.\, \exists s [\text{have}(s, \text{the bridge}, s_k)].$ by λ-A

f. $[\![QP]\!] = \lambda Q_{<sk,t>}.\, \exists s_k [\text{tall}(s_k) \wedge \text{ten. meters}(s_k) \wedge Q(s_k)].$

g. $[\![TP_4]\!] = \exists s \exists s_k [\text{tall}(s_k) \wedge \text{ten. meters}(s_k) \wedge \text{have}(s, \text{the bridge}, s_k)]$.

(Final)

The resulting proposition is true iff there is a state in which a holder, the bridge, is associated with a state-kind of height that is ten meters. In order to understand the details of the semantics of the two structures involved better, let us compare their respective denotations:

(96) a. El puente tiene diez metros de altura.

b. $\exists s \exists s_k [\text{tall}(s_k) \wedge \text{have}(s, \text{the bridge}, s_k) \wedge s_k = \text{ten. meters}]$.

(97) a. El puente tiene una altura de diez metros.

b. $\exists s \exists s_k [\text{tall}(s_k) \wedge \text{ten. meters}(s_k) \wedge \text{have}(s, \text{the bridge}, s_k)]$.

In (96) there is a state-kind from the set of totally preordered state-kinds of height that is ten meters, while in (97) there is a state-kind that results from the intersection of the set of state-kinds denoted by the nominalization and the set of state-kinds denoted by the measure phrase. The reason behind this contrast is that in (97) the measure phrase is a predicate of state-kinds of type $\langle s_k, t \rangle$, while in (96) the measure phrase is a mass quantifier of type $\langle\langle s_k, t \rangle, \langle\langle s_k, t \rangle, t\rangle\rangle$ that quantifies over the totally preordered state-kinds denoted by the nominalization. Certainly, at the end of the derivation we obtain two denotations than can be considered semantically equivalent, although their technical details actually reveal that they are not. Recall from subsection 4.3.2.2 that in (96a) the nominalization is a mass noun, while in (97a) the nominalization is a count noun. The reason why deadjectival nominalizations can also constitute count nouns is that they denote sets of state-kinds, which are discrete units.

Thus, the analysis defended here relies on the assumption that the type and denotation of measure phrases can vary depending on whether they function either as mass quantifiers or as predicates. For example, we can posit, following Partee's (1987) insights, that the quantifying denotation is derived from the predicate one by type shift. Alternatively, building on a degree-based theory, Solt (2015) treats quantifiers as predicates, which allows the author to account, among other data, for the fact that quantifiers can also appear in predicative position, as in *John's students are many*. Adapting the spirit of her proposal to the state-kind system, we could posit that measure phrases that function as quantifiers have the same type (and denotation) as when functioning as nominal predicates, that is, $\langle s_k, t \rangle$. Certainly, that option would simplify the analysis greatly, since it would not require Quantifier Raising in the Logical Form.

However, such an analysis incorrectly predicts that the two structures under scrutiny have exactly the same meaning. In other words, if we posited that the measure phrase is also a

predicate of state-kinds in (96a), it would be mistakenly predicted that the phrases *altura de dos metros* '(lit) height of two meters' and *dos metros de altura* '(lit.) two meters of height' are synonymous, denoting the intersection of the set of state-kinds denoted by *altura* 'height' and the set of state-kinds denoted by *dos metros* 'two meters'. However, in light of the empirical evidence provided here, we can conclude that the structures in question are not synonymous, so an analysis in which measure phrases are treated as predicates of state-kinds in both structures is undesirable.

In the last part of this subsection, I would like to conclude by extending the analysis of indefinite nominalizations that are followed by measure phrases to indefinite nominalizations that are followed by manner adjectives, as illustrated below:

(98) a. El puente tiene una altura increíble.
the bridge has a height incredible
'The bridge has an incredible height.'
b. El futbolista tiene una habilidad extraña.
the footballer has a ability strange
'The footballer has a strange ability.'

In principle, the indefinite determiner cannot be elided regardless of whether the manner adjective occurs either in prenominal or in post-nominal position. This is in accordance with the fact that these nominalizations constitute count nouns, hence the obligatoriness of the determiner:

(99) a. El puente tiene *(una) increíble altura.
the bridge has a incredible height
b. El puente tiene *(una) altura increíble.
the bridge has a height incredible

However, there are other cases in which the absence of the indefinite determiner is licit if the manner modifier appears in prenominal position:

(100) a. Es por ello que la interpretación del texto constitucional tiene extraordinaria
is for that that the interpretation of.the text constitutional has extraordinary

relevancia.[66]

relevance

'That is why the interpretation of the constitutional text has extraordinary relevance.'

b. El coche circula a extraordinaria velocidad.

the car moves at extraordinary speed

c. Los obreros limpiaron las ventanas con increíble habilidad.

the workers cleaned the windows with incredible ability

The absence of the indefinite determiner automatically leads us to think that deadjectival nominalizations can function in these exceptional cases as mass rather than count nouns, which is also possible because the intersection of the two sets of state-kinds involved results in a subset of state-kinds that preserves the scalar ordering.

In fact, canonical mass nouns allow for the presence or absence of the indefinite determiner in normal circumstances when accompanied by a modifier:

(101) Juan tiene (un) excelente vino.

Juan has a excellent wine

'Juan has (an) excellent wine.'

The question of what are the constraints that regulate the elision of the indefinite determiner falls out of the scope of this dissertation. The reader is referred to Kupferman (2004), Beauseroy (2010) and Beauseroy & Knittel (2012) for discussion, who noted that this phenomenon also occurs in French (where the indefinite determiner can be replaced by a partitive determiner in exceptional cases involving deadjectival nominalizations, where the partitive determiner precedes canonical mass nouns in this language). In this dissertation, I focus my attention on the structures in (98), which do include the indefinite determiner.[67]

[66] From https://cutt.ly/mgiCt60.

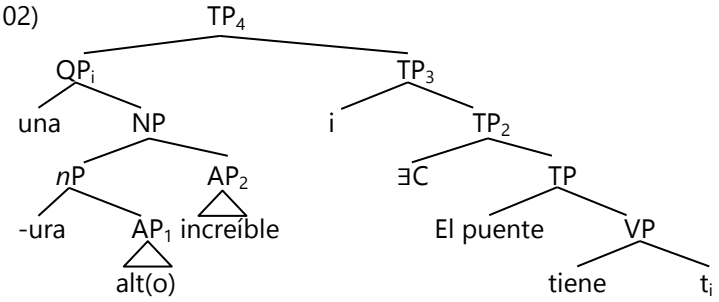
[67] The definite determiner is illicit regardless of whether the nominalization is modified by a manner adjective or a measure phrase:

(i) *Juan tiene la altura increíble / de dos metros.
Juan has the height incredible of two meters

The occurrence of the definite determiner presupposes that the state-kinds *incredible height* and *height of two meters* are unique, but this is not the case. Although this question requires further elaboration, in principle it can be captured by the fact that scales are not subject to antisymmetry, so two state-kinds that occupy the same place on the scale do not have to be identical: for example, two given state-kinds *height of two meters* are not necessarily the same state-kind. This phenomenon could not be accounted for by a model in which degrees are numerical representations, since two degrees that occupy the same place in a total order, which is antisymmetric, must be the same degree, hence the occurrence of the definite determiner when numbers are involved: *El futbolista tiene el/*un número 9* 'The footballer has the/a number 9'.

In an account in which manner can also be derived from state-kinds, this type of structures does not pose any particular problems for the analysis, insofar as we can propose a composition in which the sets of state-kinds denoted by the nominalization and the set of state-kinds denoted by the adjective compose intersectively, as we did with respect to measure phrases functioning as adnominal modifiers. For *El puente tiene una altura increíble* 'The bridge has an incredible height', I propose the following composition:

(102)



(103) a. $[\![AP_1]\!] = \lambda s_k.\,\text{tall}(s_k)$.

b. $[\![-ura]\!] = \lambda G.\,G$.

c. $[\![nP]\!] = \lambda s_k.\,\text{tall}(s_k)$.

d. $[\![AP_2]\!] = \lambda s_k.\,\text{incredible}(s_k)$.

e. $[\![NP]\!] = \lambda s_k.\,\text{tall}(s_k) \wedge \text{incredible}(s_k)$. by PM

f. $[\![una]\!] = \lambda P_{<sk,t>} \lambda Q_{<sk,t>}.\,\exists s_k[P(s_k) \wedge Q(s_k)]$.

g. $[\![QP]\!] = \lambda Q_{<sk,t>}.\,\exists s_k[\text{tall}(s_k) \wedge \text{incredible}(s_k) \wedge Q(s_k)]$.

h. $[\![tener]\!] = \lambda s_k \lambda x \lambda s.\,\text{have}(s, x, s_k)$.

i. $[\![VP]\!] = \lambda x \lambda s.\,\text{have}(s, x, s_k)$.

j. $[\![TP]\!] = \lambda s.\,\text{have}(s, \text{the bridge}, s_k)$.

k. $[\![TP_2]\!] = \exists s[\text{have}(s, \text{the bridge}, s_k)]$. by ∃C

l. $[\![TP_3]\!] = \lambda s_k.\,\exists s[\text{have}(s, \text{the bridge}, s_k)]$. by λ-A

m. $[\![QP]\!] = \lambda Q_{<sk,t>}.\,\exists s_k[\text{tall}(s_k) \wedge \text{incredible}(s_k) \wedge Q(s_k)]$.

n. $[\![TP_4]\!] = \exists s \exists s_k[\text{tall}(s_k) \wedge \text{incredible}(s_k) \wedge \text{have}(s, \text{the bridge}, s_k)]$.

The adjective *alto* 'tall' projects an AP and is selected by the nominalizer *-ura*, forming the nominalization *altura* 'height'. Given that there are no adjectival arguments, the node PredP does not occur. Subsequently, the adjective *increíble* 'incredible' attaches to *n*P; the resulting denotation is the intersection of the set of state-kinds denoted by the nominalization and the set of state-kinds denoted by the manner modifier. Afterwards, the indefinite determiner *una* 'a' picks up the NP, projecting a QP. Again the rising of the QP over the whole structure in the Logical Form is necessary in order for the derivation to avoid a type mismatch. The remaining

steps are the same as in the previous cases. The result of the derivation is a proposition that is true iff there is a state in which the holder, the bridge, is associated with a state-kind of height that is incredible. Thus, the composition is analogous to the one in which measure phrases function as modifiers, with the difference that the state-kinds denoted by the manner modifier are not inherently ordered: for example, the state-kind *an incredible height*, unlike the state-kind *a height of two meters*, does not occupy the same position on the scale of height in all circumstances.

To close this section, let us recapitulate the conclusions. Spanish has available two structures that include measure phrases: on the one hand, *altura de dos metros* '(lit.) height of two meters' constitutes an NP, *altura* 'height' is a count noun, the NP can be selected for by the indefinite determiner *una* 'a' and its denotation includes a subset that results from the intersection of the set of state-kinds denoted by the nominalization and the state-kinds denoted by the measure phrase. This analysis can be extended to manner modifiers like *increíble* 'incredible', which denote sets of state-kinds too, but these are not inherently ordered. In contrast, *dos metros de altura* '(lit.) two meters of height' constitutes a QP, *altura* 'height' is a mass noun and the denotation of the NP includes a state-kind of height whose value on the scale is two meters. This analysis can be naturally extended to other mass quantifiers like *mucha* 'a lot of, much'. In the following subsection, I close the study of state-kind nominalizations by examining bare nominalizations.

4.3.3 Bare nominalizations

In this subsection, I study the nominalizations that appear as the internal argument of the verb *tener* 'to have' in isolation, such as the following ones:

(104) a. Los electrones tienen altura.
the electrons have height
'Electrons have some height.'
b. El suelo tiene suciedad.
the floor have dirtiness
'The floor have some dirtiness.'

I propose that this construction requires that there be another context of evaluation of the sentence[68] that imposes a zero on the scale of the nominalization or, in other words, a context in

[68] I remain intentionally imprecise as to the exact nature of this parameter. Figuring out these details is out of the scope of this dissertation and requires further research.

which there are individuals who are not associated with any degree on the scale (recall from section 4.1 that lower closed scales encode a zero, which is not a state-kind whose value is zero, but rather it must be taken as the absence of any state-kind). For example, uttering (104a) implies that it could be possible that electrons are not associated with any degree of height and (104b) implies that it could be possible that the floor is not associated with any degree of dirtiness. The consequence of the imposition of a zero on the scale is an interpretation according to which no standard of comparison is entailed, which is in accordance with the fact that deadjectival nominalizations are not necessarily evaluated with respect to a standard of comparison. Nevertheless, we will see that nominalizations that are derived from open scale evaluative adjectives behave exceptionally insofar as they are evaluated with respect to a contextual standard of comparison. Let me develop my arguments in more detail.

Bare nominalizations have been overlooked in the literature on gradability or, in any case, the authors simply point out that these constructions are awkward in languages like English or Spanish. For example, Francez & Koontz-Garboden (2017a: 2, 38) claim that constructions involving bare nominalizations in English are "limited" and "more marked" than their corresponding adjectival constructions. In this dissertation, although I do not develop an exhaustive analysis of bare nominalizations, I present empirical evidence that the reason why these constructions are infrequent in languages like Spanish is that they are licensed in strongly constrained contexts. Particularly, if we compare adjectival constructions with their corresponding possessive constructions involving bare nominalizations, the latter seem to be more restricted:

(105) a. María es bella.
María is beautiful
b. *María tiene belleza.
María has beauty

(106) a. En este lugar, todas las cosas son bellas.
at this place every the things are beautiful
'In this place, everything is beautiful.'
b. En este lugar, todas las cosas tienen belleza.
at this place every the things have beauty
'In this place, everything has a beauty.'

The adjectival structure in (105a) and (106a) constitutes the most natural way to express property concepts in Spanish. In contrast, the possessive structure is unacceptable in normal

circumstances, as in (105b), although it can be licensed in contexts in which it is possible to find individuals who are not associated with any degree on the scale. For example, (106b) is licit because it is inserted in a context in which it is possible to conceive that there are individuals that are not associated with any degree of beauty. The specific factors that favor this type of contexts are not examined in this dissertation; in this subsection, I limit my analysis to those contexts in which the construction is valid and compare it to the adjectival construction. The empirical data show that bare nominalizations, unlike their base adjectives, need not be evaluated with respect to a standard of comparison (although the ones that are derived from open scale evaluative adjectives are actually assessed with respect to a contextual standard of comparison). Thus, what my analysis predicts is that the adjectival and nominal constructions are not equivalent semantically. Consider the following data:

(107) a. Ángela es alta.
Ángela is tall
b. *Ángela tiene altura.
Ángela has height

(108) a. Los científicos han descubierto que los electrones son altos.
the scientists have discovered that the electrons are tall
'Scientists have discovered that electrons are tall.'
b. Los científicos han descubierto que los electrones tienen altura.
the scientists have discovered that the electrons have height
'Scientists have discovered that electrons have a height.'

In the context of people, as in (107), it is absurd to conceive that a person is associated with no degree of height because this is an inherent property of humans, so (107b) is unacceptable. In contrast, in scientific contexts, as in (108), in which microscopic particles like electrons are involved, it is possible to conceive that electrons may not have any degree of height, so (108b) is acceptable. The difference with respect to the adjectival structure is that the latter is always licensed because it is obligatorily evaluated with respect to a standard of comparison in the absence of an explicit degree modifier. In contrast, the nominal structure does not demand a standard in the absence of an explicit mass quantifier or measure phrase, as explained in chapter 3 to account for the licensing of degree readings and the semantics of manner adjectives. In short, (108a) and (108b) are not synonymous: (108a) means that electrons have a height that exceeds a contextual standard of comparison, while (108b) means that electrons have some

degree of height, and the latter structure is licensed because it is possible to conceive that electrons could not have any degree of height.

Now let us study bare nominalizations depending on the scale they lexicalize. In particular, let us compare the nominal structures to their corresponding adjectival structures in relation to entailment patterns. First, when nominalizations that encode a minimal endpoint or zero on the scale are involved, they do not give rise to entailments to the positive:

(109) a. El suelo tiene suciedad, pero no está sucio.
the floor has dirtiness but not is dirty
'The floor has some dirtiness, but it is not dirty.'
b. La habitación tiene humedad, pero no está húmeda.
the room has humidity but not is humid
'The room has some humidity, but it is not humid.'
c. Esta madera tiene rugosidad, pero no está rugosa.
this wood has wrinkledness but not is wrinkled
'This wood has some roughness, but it is not wrinkled.'

(109a) conveys that that the floor has some dirtiness, but it does not reach a contextual standard that is enough to be considered dirty; analogously, (109b) conveys that the room has some humidity, but it does not reach a contextual standard that is enough to be considered humid; and the same holds for (109c) mutatis mutandis. What these data show is that the nominal structure, unlike the adjectival one, is not evaluated with respect to a (contextual) standard of comparison.[69]

When nominalizations that encode a maximal endpoint on the scale are involved, the situation is similar:

(110) a. Este lingote tiene pureza, pero no es puro.
this ingot has purity but not is pure
'This ingot has some purity, but it is not pure.'
b. El terreno tiene sequedad, pero no está seco.
the field has dryness but not is dry
'The field has some dryness, but it is not dry.'

[69] Given that lower closed scale nominalizations like *suciedad* 'dirtiness' already encode a zero on their scales, my analysis predicts that their occurrence as bare nominalizations does not need a special context to be licensed, which I believe is the case. Regardless, note that my analysis according to which bare nominalizations require a context that imposes a zero on the scale does not exclude the possibility that there might be even more constraints that regulate their acceptability.

c. Los niños tienen libertad, pero no son libres.
the kids have freedom but not are free
'Kids have some freedom, but they are not free.'

(110a) expresses that the ingot has some purity, but it does not reach the maximal degree on the scale to be considered pure; analogously, (110b) expresses that the field has some dryness, but it does not reach the maximal degree on the scale to be considered dry; and the same holds for (110c) mutatis mutandis. Again these contrasts are possible because the nominalization is not evaluated with respect to a standard of comparison.

The situation becomes slightly more complex when nominalizations that lexicalize open scales are involved. The ones that are derived from dimensional adjectives do not give rise to entailments to the positive:

(111) a. Los objetos tridimensionales tienen profundidad, pero no todos son profundos.
the objects tridimensional have depth but not all are deep
'Tridimensional objects have a depth, but not all of them are deep.'
b. Los electrones tienen densidad, pero no son densos.
the electrons have density but not are dense
'Electrons have a density, but they are not dense.'

(111a) conveys that tridimensional objects have some degree of depth, but they do not have to reach a contextual standard of depth to be considered deep; analogously, (111b) conveys that electrons have some degree of density, but they do not have to have enough density to be considered dense. In contrast, when nominalizations derived from evaluative adjectives are involved, entailments to the positive arise, which accounts for the following contradictions:

(112) a. #En este lugar, todas las cosas tienen belleza, pero no son bellas.
at this place every the things have beauty but not are beautiful
'At this place, everything has a beauty, but not everything is beautiful.'
b. #En mi pueblo, los ancianos tienen amabilidad, pero no son amables.
in my village the elderly.men have kindness but are not kind
'In my village, elderly men have a kindness, but they are not kind.'

Certainly, there are sentences in which the same nominalizations do not give rise to entailments to the positive, but in these cases we presume that the nominalizations are used as dimensional rather than evaluative predicates:

(113) En los juegos de rol, los personajes tienen belleza, pero no tienen por qué ser bellos.
in the games of role the characters have beauty but not have why be beautiful
'In roleplaying games, characters have some beauty, but they do not have to be beautiful.'

For example, in roleplaying games characters are associated with a scale of beauty that ranges from 0 to 100, so we assume objective units of measurement for beauty. The conclusion is that bare nominalizations are not evaluated with respect to a standard of comparison in general, but the ones that are derived from evaluative adjectives actually are. In this respect, the phenomenon raises two questions: why do bare nominalizations derived from evaluative adjectives show an exceptional behavior and what semantic difference do they display with respect to the adjectival structure in this particular case? Although I do not have a perfectly clear answer to these questions, I can provide some insights.

Regarding the former question, nominalizations derived from open scale evaluative adjectives, in not lexicalizing scalar endpoints or being associated with objective units of measurement, invoke *between-individual* comparison classes in the sense of Sassoon & Toledo (2011; see chapter 2): for example, in order to evaluate whether (106b) is true or false, we need to compare the beauty of the things in that place to the beauty of other similar individuals, hence the emergence of the contextual interpretation. In other words, in the lack of scalar endpoints and a conventionalized system of measurement, the only way of measuring someone's beauty, kindness, ability, etc. is to compare them to other individuals'. In contrast, dimensional nominalizations, in being associated with objective units of measurement, invoke *within-individual* comparison classes: in order to utter (108a), we do not have to compare the height of electrons to the height of other similar particles: just one objective value for the degree of height means that electrons have some height.

As for the second question, certainly (106a) and (106b) are semantically equivalent insofar as both structures entail a contextual standard of comparison. However, they differ in that only the possessive structure imposes a zero on the scale of beauty, so only the latter structure requires a context in which there might be individuals without any degree of beauty. The factors that favor this type of contexts and the consequent theoretical implications fall out of the scope of this dissertation; the important aspect to which I want to draw my attention is the empirical fact that bare nominalizations are licensed when the context imposes a zero on the scale in question and

that bare nominalizations derived from open scale evaluative adjectives give rise to entailments to the positive.

Now let us move on to the technical details of the analysis. Recall from subsection 4.3.2.4 that I have posited the following denotation for the verb *tener* 'to have':

(114) $[\![tener]\!] = \lambda s_k \lambda x \lambda s.\, \text{have}(s, x, s_k)$.

However, this denotation cannot be applied here straightforwardly to bare nominalizations, which denote properties of type $<s_k,t>$, since the verb *tener* 'to have' selects for an internal argument of type s_k. This is not a particular problem of our formal semantic apparatus when accounting for bare nominalizations, but rather when accounting for predicates that can select for, in addition to DPs, NPs projected by bare mass nouns or bare plurals, like *tener* 'to have' itself or *robar* 'to steal':

(115) a. Jones tiene la llave.
Jones has the key
b. Jones tiene oro.
Jones has gold
c. Jones tiene joyas.
Jones has jewels

(116) a. Sparrow robó la llave.
Sparrow stole the key
b. Sparrow robó oro.
Sparrow stole gold
c. Sparrow robó joyas.
Sparrow stole jewels

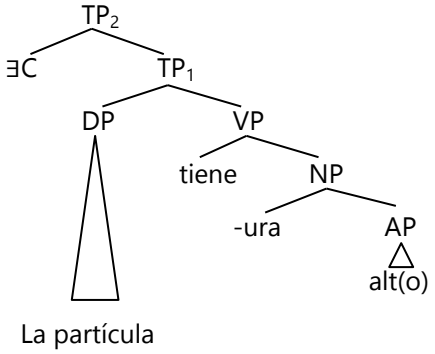
For example, *la llave* 'the key' denotes an entity of type *e*, so it can saturate the internal argument in both (115a) and (116b), assuming that the verbs involved include an entity variable of type *e*. However, to account for bare mass nouns, as the ones in (115b) and (116b), and bare plurals, as in (115c) and (116c), which presumably denote properties of type <e,t>, additional stipulation becomes necessary. Based on van Geenhoven (1996), Dobrovie-Sorin (1997), McNally (1998), Dobrovie-Sorin & Laca (2003) and Dobrovie-Sorin & Beyssade (2012), I assume that predicates can also be represented as existential predicates, which have an existential quantifier in their lexical representation and function as lambda-abstracts over the properties that restrict

the range of their argument variables. In other words, if a predicate selects for an internal argument of type α, but the internal argument is of type <α,t>, the predicate has available another denotation in which it selects for a property of type <α,t> and the internal argument of type α is existentially bound. Accordingly, we can posit the following denotation for the verb *tener* 'to have', which I call *tener*$_2$, in case that it combines with bare nominalizations:

(117) $[\![tener_2]\!] = \lambda G_{<sk,t>} \lambda x \lambda s. \exists s_k [\text{have}(s, x, s_k) \wedge G(s_k)]$.

For the sentence *La partícula tiene altura* '(lit.) The particle has height', I propose the following composition:

(118)



(119) a. $[\![AP]\!] = \lambda s_k. \text{tall}(s_k)$.

b. $[\![-ura]\!] = \lambda G. G$.

c. $[\![nP]\!] = [\![NP]\!] = \lambda s_k. \text{tall}(s_k)$.

d. $[\![tener_2]\!] = \lambda G_{<sk,t>} \lambda x \lambda s. \exists s_k [\text{have}(s, x, s_k) \wedge G(s_k)]$.

e. $[\![VP]\!] = \lambda x \lambda s. \exists s_k [\text{have}(s, x, s_k) \wedge \text{tall}(s_k)]$.

f. $[\![TP_1]\!] = \lambda s \exists s_k [\text{have}(s, \text{the particle}, s_k) \wedge \text{tall}(s_k)]$.

g. $[\![TP_2]\!] = \exists s \exists s_k [\text{have}(s, \text{the particle}, s_k) \wedge \text{tall}(s_k)]$. by ∃C

The composition proceeds as follows: the nominalizer *-ura* attaches to the base adjective *alto* 'tall' to form the nominalization *altura* 'height'. The nominalization does not include EVAL in its derivation, since it is derived from an open scale dimensional adjective, which captures the lack of entailments to the positive (if the nominalization were derived from an open scale evaluative adjective, EVAL would be inserted in the structure). The arguments of the nominalization are not present, so it is correctly captured the fact that the nominalization denotes in the domain of state-kinds. Subsequently, the verb *tener* 'to have' composes with its internal argument by Functional Application, the DP *la partícula* 'the particle' saturates the individual argument and the state-token variable is existentially bound at the end of the derivation. The output of the

expression is a proposition that is true iff there is a state of having a state-kind of height whose holder is the particle.

To wrap up, in this section I have analyzed possessive constructions including bare state-kind deadjectival nominalizations, which are infrequent in Spanish. I have posited that these constructions impose a zero on the scale of the nominalization, to which I attribute the cause of their infrequency. By comparing these constructions to their corresponding adjectival structures, I have shown that they are not assessed with respect to a standard of comparison; however, the ones that are derived from open scale evaluative adjectives are actually evaluated with respect to a (contextual) standard of comparison, so they do give rise to entailments to the positive.

Interim summary and a look ahead

This section summarizes the main types of deadjectival nominalizations that are analyzed so far and the remaining ones. In chapter 3, I have examined state-token nominalizations, which have arguments and express episodic properties, as *belleza* 'beauty' in (120). In chapter 4, I have studied state-kind nominalizations, which do not have arguments and express generic properties. There are fourth types of state-kind nominalizations depending on their syntactic distribution and their morphosemantic properties: definite nominalizations, such as *honestidad* 'honesty' in (121a); quantified nominalizations, such as *altura* 'height' in (121b); indefinite nominalizations, such as *altura* 'height' in (121c); and bare nominalizations, such as *profundidad* 'depth' in (121d).

(120) La belleza del jardín me impresiona.
the beauty of.the garden me impresses
'The beauty of the garden impresses me.'

(121) a. La honestidad abunda.
the honesty abounds
'Honesty abounds.'
b. Este puente tiene una altura de diez metros.
this bridge has a height of ten meters
'This bridge has a height of ten meters.'
c. Este puente tiene diez metros de altura.
this bridge has ten meters of height
d. Los objetos tridimensionales tienen profundidad.
the objects tridimensional have depth
'Tridimensional objects have some depth.'

In the following section, I briefly explore the morphosyntax and semantics of the last two types of deadjectival nominalizations that can be formed in Spanish, namely, participant and event nominalizations, which are exemplified in (122) and (123), respectively. In addition, I frame the typology of deadjectival nominalizations presented in this dissertation within a more general perspective in morphological theory.

(122) El médico tiene varias durezas en la mano.
the doctor has several hardnesses at the hand
'The doctor has several calluses on his hand.'

(123) El rey cometió muchas injusticias.
the king committed many injustices
'The king committed many acts of injustice.'

4.4 Zooming out: deadjectival nominalizations in morphological theory

In this section, I examine the two remaining types of deadjectival nominalizations that can be formed in Spanish, namely, participant and event nominalizations, and study the phenomenon of nominalization from a general perspective, particularly comparing the types of nominalizations that adjectival bases and event verbal bases are able to form. In addition, I posit that nominalization is a morphological process semantically constrained: specifically, the domain of the arguments of predicative bases constitutes the domain of the resulting nominalizations. To conclude, given that there are no nominalizations that denote in the domain of degrees, either these are defined as numerical representations or as equivalence classes, I provide an additional argument that degrees must not be treated as true arguments with its own semantic type. In the following subsection, I study participant nominalizations.

4.4.1. Participant nominalizations

In this subsection, I briefly analyze deadjectival nominalizations that express entities like *bellezas* 'beautiful people, beautiful objects, (lit.) beauties)', *antigüedades* 'antiques, (lit.) oldnesses)', *durezas* 'calluses, (lit.) hardnesses', *rojeces* 'blotches, (lit.) rednesses', *calenturas* 'cold sores, (lit.) hotnesses', etc. Following the morphosyntactic analysis proposed by Fábregas (2016), I provide a semantic analysis on the basis of the kind-token distinction.

Arguably, the study on participant nominalizations that are derived from verbs dates back to Lebeaux (1986) and Grimshaw (1990) and has grown an increasing interest since then (Picallo 1991, 1999; Rappaport Hovav & Levin 1992; van Hout & Roeper 1998; Alexiadou 2001; Borer 2005, 2013; Baker & Vinokurova 2009; Alexiadou & Schäfer 2010; Ntelitheos 2012; Roy & Soare

2011, 2013a, 2013b, 2015; Ignjatović 2016; Fábregas 2012b, 2016; a.o.). In this section, I show that the kind-token distinction also plays a crucial role to account for the formation and meaning of these nominalizations.

The most influential study on deverbal nominalizations is Grimshaw (1990), who identifies two types of nominalizations, which she calls *complex-event nominals* and *result nominals*. The former express what dictionaries usually define as 'acts, actions' and the latter express what dictionaries define as 'results'. Importantly, most nominalizations can express the two readings: for example, *construction* can express either the 'act of constructing' or the 'result of constructing'. Grimshaw collects a number of properties of each type of nominal, among which the most important ones are summarized below:

(124)

Complex-event nominals

(i) Accept modifiers like *took an X time*: *John's examination of the patients took a long time*.

(ii) Arguments are obligatory realized: *the assignment *(of unsolvable problems) by the instructor*.

(iii) Accept aspectual modifiers: *the total destruction of the city in only two days*.

(iv) Accept frequency modifiers: *the constant assignment of unsolvable problems*.

(v) Cannot appear in plural: **The assignments of the problems took a long time*.

(vi) Accept agent-oriented modifiers: *the instructor's deliberate examination of the papers*.

Result nominals:

(i) Do not accept modifiers like *took an X time*: **The instructor's examination took a long time*.

(ii) Arguments are not realized: *The assignment is to be avoided*.

(iii) Do not accept aspectual modifiers: **the examination in two hours*.

(iv) Do not accept frequency modifiers: **The constant assignment is to be avoided*.

(v) Can appear in plural: *The assignments were long*.

(vi) Do not accept agent-oriented modifiers: **the instructor's deliberate examination*.

Grimshaw (1990) concludes that complex-event nominals express events, while result nominals express entities. The author adds a third class of nouns called *simple event nominals* like *exam*, *event*, *race*, *trip*, etc., which behave as result nominals in relation to most of their

properties, but they accept modifiers like *took an X time*, as in *The race/trip took a long time*. Grimshaw claims that the reason why they express events, but they show similar restrictions with respect to result nominals (e.g. **Jack's trip in five hours*, **The frequent trip was a nuisance*), is that the event nature of simple event nominals is encyclopedic, while the event nature of complex-event nominals stems from the fact that they include verbal structure.

On the one hand, this tripartite classification has been very influential and is still considered valid, but, certainly, the literature has cast doubts on some of the properties ascribed by the author to the three types of nominals, especially the claim that complex-event nominals need their arguments to be explicitly realized or that they cannot pluralize (Alexiadou 2001, 2011a; Borer 2013; Grimm & McNally 2013; Grimm 2014; Fábregas 2016; among others).

On the other hand, Grimshaw's typology, although valid, does not show a whole picture of all types of nominalizations that a given verbal base is able to form. Specifically, result nominalizations are just one type of so-called *participant* nominalizations; in other words, there are deverbal nominalizations that express entities, but these are not the result of the event expressed by the base verb. For example, there are other nominalizations expressing entities that designate an agent (*constructor* 'builder' < *construir* 'to build'), an experiencer (*pensador* 'thinker' < *pensar* 'to think'), an instrument (*taladradora* 'drill' < *taladrar* 'to drill'), a location (*dormitorio* 'bedroom' < *dormir* 'to sleep'), a recipient (*prestatario* 'borrower' < *prestar* 'to lend') and there could be other types. Accordingly, *constructor* 'builder' refers to the set of people who build, *pensador* 'thinker' refers to the set of people who think, *taladradora* 'drill' refers to the set of instruments with which somebody drills, *dormitorio* 'bedroom' refers to the set of places in which somebody sleeps and *prestatario* 'borrower' refers to the set of people to whom somebody lends money. In order to account for the formation of these nominalizations within the frame of a constructionist theory, it is necessary to posit that nominalizations can designate the different arguments (and even adjuncts) that the verbal base selects for. I will come back to this issue in subsection 4.4.3.

The existence of participant nominalizations is not privative of verbal bases. In what follows, I illustrate that adjectival bases can also form participant nominalizations. Particularly, I address the analysis of deadjectival nominalizations that name the holder of the state expressed by the adjectival base. My analysis is based on the study of participant deadjectival nominalizations devised by Fábregas (2016), who provides the following examples:

(125) a. Juan tiene algunas rojeces en la piel.
Juan has some rednesses on the skin
'Juan has some blotches on his skin.'

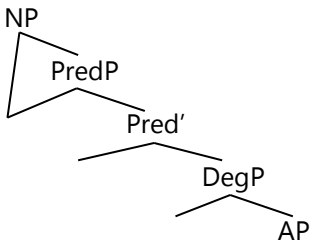
b. Me dio algunas dulzuras.
me gave.3.SG some sweetnesses
'I was given some sweets.'
c. No me molestes con pequeñeces.
not me bother with smallnesses
'Don't bother me with trivialities.'

(From Fábregas 2016: 218, translation mine)

According to the author, these nominalizations express the entity of which the property of the base adjective is predicated. For example, *rojez* 'blotch' refers to an entity that is red, *dulzura* 'sweet' refers to an entity that is sweet and *pequeñez* 'triviality' refers to an entity that is small. The most salient properties of participant nominalizations are that they accept the plural in normal circumstances, as shown in (125), and that they do not accept mass quantifiers, which Fábregas takes as evidence that they constitute count nouns.

In order to account for the fact that participant nominalizations refer to the participant of which the property is predicated, Fábregas proposes that the nominalizer does not attach to the whole adjectival structure, which would account for the formation of state-token nominalizations (*quality* nominalizations in his analysis), but rather the nominalizer is base-generated in Spec-PredP and raises to project an *n*P or *re-projects* in the sense of Gärtner (2002) and Citko (2008, 2011):

(126)

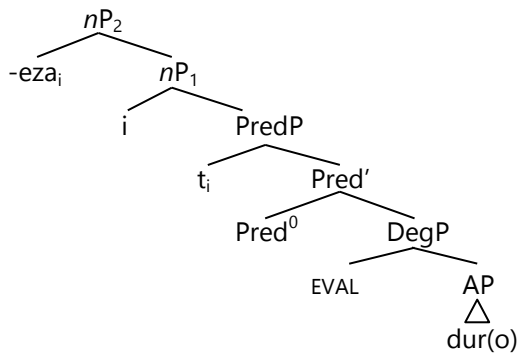


(Fábregas 2016: 219)

By virtue of this morphosyntactic composition, I provide a semantic analysis based on the hypothesis defended in this dissertation that adjectival bases are predicates of state-kinds. In order not to complicate the derivation, my analysis does not capture semantic narrowing. Recall from chapter 3 that there are cases in which a nominalization restricts the meaning of their base adjective: for example, while the adjective *simple* can mean either 'simple' or 'foolish', the nominalization *simplicidad* means 'simplicity' and the nominalization *simpleza* means 'foolishness'. In relation to participant nominalizations, they restrict the domain of the base

adjective in many cases: for example, *angüedades* 'antiques' and *rugosidades* 'wrinkles' do not designate people; *rojeces* 'blotches' does not designate people and even not all red entities are blotches; in contrast, *celebridades* 'celebrities' and *amistades* '(lit.) friendships, friends' only designate people. Dispensing with the machinery that would capture semantic narrowing, I propose the following composition for *dureza* '(lit.) hardness, callus':

(127)



(128) a. $[\![AP]\!] = \lambda s_k.\,\mathrm{hard}(s_k).$

b. $[\![EVAL]\!] = \lambda G_{<sk,t>}\lambda s_k.\,G(s_k) \wedge s_k > st_c.$

c. $[\![DegP]\!] = \lambda s_k.\,\mathrm{hard}(s_k) \wedge s_k > st_c.$

d. $[\![Pred^0]\!] = \lambda G_{<sk,t>}\lambda x_k \lambda s_k.\,G(s_k) \wedge \mathrm{holder}(s_k, x_k).$

e. $[\![Pred']\!] = \lambda x_k \lambda s_k.\,\mathrm{hard}(s_k) \wedge s_k > st_c \wedge \mathrm{holder}(s_k, x_k).$ by EI

f. $[\![PredP]\!] = \lambda s_k.\,\mathrm{hard}(s_k) \wedge s_k > st_c \wedge \mathrm{holder}(s_k, x_k).$

g. $[\![nP_1]\!] = \lambda x_k \lambda s_k.\,\mathrm{hard}(s_k) \wedge s_k > st_c \wedge \mathrm{holder}(s_k, x_k).$ by λ-A

h. $[\![-eza]\!] = \lambda F_{<ek,<sk,t>>}\lambda x_k.\,\exists s_k[F(s_k, x_k)].$

i. $[\![nP_2]\!] = \lambda x_k.\,\exists s_k[\mathrm{hard}(s_k) \wedge s_k > st_c \wedge \mathrm{holder}(s_k, x_k)].$

The derivation up to Pred' does not display any novelties, with the exception that the head of PredP introduces a subject that denotes in the domain of entity-kinds x_k. Recall from chapter 1 that PredP is just a functional node that enables the adjective to select for a subject, but this subject does not have to be an entity-token, although we typically think of entity-tokens as canonical subjects; for example, in *La jirafa es común* '(lit.) The giraffe is common; Giraffes are common', the subject of *común* 'common' is the DP *la jirafa* 'the giraffe', which denotes an entity-kind. Next, the nominalizer is introduced in Spec-PredP and raises to project an *n*P. Given that the nominalizer does not attach to the whole structure, but rather it is base-generated in Spec-PredP, we can posit a different denotation from the one used hitherto, whose specific role is to existentially bind the variable s_k. The result of the derivation is a predicate of entity-kinds x_k that is associated with a state-kind of hardness that exceeds a contextual standard of

comparison st_c. If necessary, a functional node, presumably NumberP following Espinal & Borik (2015), associates an entity-kind from the set of entity-kinds with an entity-token.

In positing that the nominalizer is base-generated in Spec-PredP, the adjective does not take a subject, so the node AspP does not appear in the derivation. Consequently, a state-kind from the set of state-kinds of hardness is not associated with a state-token, which explains why participant nominalizations are not subject to time, so they disallow temporal modifiers:

(129) a. *las rojeces durante el verano
the rednesses during the summer
'the blotches during the summer'
b. *las durezas en invierno
the hardnesses in winter
'the calluses in winter'

Thus, participant nominalizations behave as regular count nouns like *mesa* 'table' insofar as they lack a temporal dimension, and this is possible by implementing an analysis in which adjectives denote in the kind rather than the token domain. Before concluding this section, it is important to reflect on the fact that the existence of participant nominalizations is not a regular phenomenon: for example, in Spanish we can form *rojeces* 'blotches, (lit.) rednesses', but not **azuleces* '(lit.) bluenesses' and we can form *antigüedades* 'antiques, (lit.) antiquities', but not **vejeces* '(lit.) oldnesses'. Thus, although the formation of participant nominalizations can be captured as a regular morphosyntactic process, the system only forms participant nominalizations when certain base adjectives are involved, which forces us to posit that idiosyncratic factors of Spanish are also involved.

In conclusion, as Fábregas has pointed out, participant nominalizations express entities of which the adjectival property is predicated. The main contribution of my analysis is that the existence of participant deadjectival nominalizations provides additional evidence that the base adjective cannot be a predicate of state-tokens, but rather a predicate of state-kinds, because there is no access to the underlying state. In the following subsection, I examine event nominalizations.

4.4.2. Event nominalizations

In this section, I address the morphosyntax and semantics of the last type of nominalizations that adjectives can form in Spanish, namely, event nominalizations, such as *travesuras* 'pranks, (lit.) mischiefs', *imprudencias* 'imprudent acts, (lit.) imprudences', *tonterías* 'silly acts, (lit.)

sillinesses'. The most prominent challenge that these nominalizations pose is that they express events even though they are derived from gradable adjectives, which are supposed to express states. I show that my hypothesis according to which gradable adjectives denote state-kinds rather than state-tokens can account for the fact that they express events, although we need further elaboration that justifies the occurrence of the event reading. In addition, my analysis developed in chapter 3 according to which only deverbal nominalizations, which include verbal structure, can license a perfective interpretation explains why event deadjectival nominalizations, which do not include verbal structure, are incompatible with aspectual modifiers.

My analysis is based on the morphosyntactic analysis developed by Arche & Marín (2015) and Arche et al. (to appear), who show that the nominalizations under examination pass the usual tests that are employed to identify events:

(130) dos imprudencias / varias injusticias
two imprudencies several injustices
'two imprudent acts / several injustices'

(131) a. Juan cometió dos imprudencias / varias crueldades.
Juan committed two imprudencies several cruelties
'Juan carried out two imprudent acts / several cruel acts.'
b. Esta mañana han tenido lugar varias imprudencias/injusticias.
this morning have taken place several imprudencies injustices
'This morning several imprudent acts / injustices have taken place.'
c. He presenciado las imprudencias/injusticias del presidente.
have witnessed the imprudencies injusticies of.the president
'I have witnessed the president's imprudent acts / injustices.'

(Arche & Marín 2015: 264, 265)

Nominalizations like *imprudencia* 'imprudence' and *injusticia* 'injustice' can pluralize, see (130), and can function as the complement of the verb *cometer* 'to commit', see (131a), the verb *tener lugar* 'to take place', see (131b), and the verb *presenciar* 'to witness', see (131c). The authors also note that, unlike event nominalizations that are derived from verbs, these nominalizations do not accept aspectual modification, although they can combine with agentive modifiers:

(132) a. *la imprudencia/crueldad de Juan durante una hora
the imprudence cruelty of Juan for an hour
'Juan's imprudent/cruel act for an hour'
b. la deliberada imprudencia de Juan
the deliberate imprudence of Juan

According to the authors, the formation of event deadjectival nominalizations is not unconstrained, but rather they are derived from what they call evaluative adjectives, i.e. *mental state adjectives* in this dissertation following Stowell's (1991) terminology, with a negative or pejorative meaning. Empirical evidence that these adjectives can be used for evaluating an event is provided by their combination with infinitival sentences:

(133) a. Juan fue cruel/imprudente al hacer esa pregunta.
Juan was cruel imprudent to.the make that question
'Juan was cruel/imprudent to make that question.'
b. Hacer esa pregunta fue cruel/imprudente.
make that question was cruel imprudent
'Making that question was cruel/imprudent.'
c. Fue cruel/imprudente por parte de Juan hacer esa pregunta.
was cruel imprudent by part of Juan make that question
'It was cruel/imprudent of Juan to make that question.'

(Arche & Marín 2015: 266)

Nonetheless, Arche & Marín note that there are mental state adjectives with a pejorative meaning, such as *arrogante* 'arrogant' (> *arrogancia* 'arrogance'), that cannot form event nominalizations. The authors conclude that these cases constitute lexical gaps:

(134) a. Juan fue arrogante al hacer esa pregunta.
Juan was arrogant to make that question
b. Hacer esa pregunta fue arrogante.
to.make that question was arrogant
c. Fue arrogante por parte de Juan hacer esa pregunta.
it.was arrogant by part of Juan to.make that question
(135) a. *dos arrogancias
two arrogancies

b. *Juan ha cometido dos arrogancias.

Juan has committed two arrogancies

c. *Esta mañana han tenido lugar varias arrogancias.

this morning have taken place several arrogancies

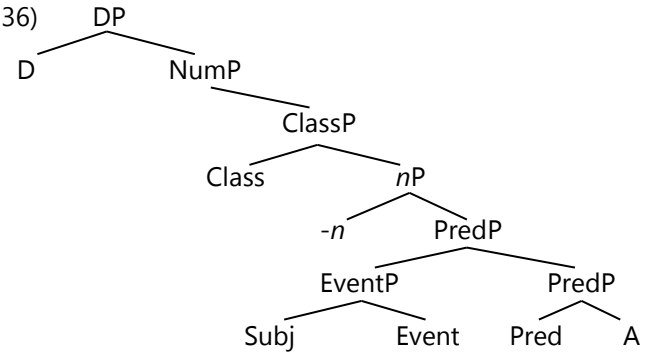
d. *Las arrogancias de Juan hacia su tío.

the arrogancies of Juan towards his uncle

(Arche & Marín 2015: 268)

Thus, although *arrogancia* 'arrogance' is derived from a mental state adjective with a pejorative meaning, which can be applied to events, as shown in (134), it cannot form an event deadjectival nominalization, so it does not pass regular tests used for identifying events, as shown in (135). Below I reproduce the morphosyntactic analysis proposed by the authors:

(136)



(Arche & Marín 2015: 270)

In order to account for the event reading of deadjectival nominalizations, Arche & Marín posit that mental state adjectives have a covert event in the structure; specifically, they place that event in PredP to represent that the adjectival property is predicated of an event. Arche & Marín (2015: 270) propose a simple predication syntax for the event that is placed in PredP, which is supposed to project EventP and is "the essential structure to license purpose clauses but maybe not fully-fledged in the sense that it does not seem to be able to be modified by aspectual adverbials".[70] In a nutshell, what the authors want to capture with that structure is the fact that event nominalizations derived from evaluative adjectives, unlike deverbal nominalizations, are impoverished enough to be incompatible with aspectual modifiers (although they accept agentive modification), and we presume that the perfective-imperfective

[70] In Arche et al. (to appear), the authors replace EventP with Init(iator)P, Subj(ect) with Init(iator) and Event with Proc(ess), following Ramchand's (2008) labels. For the purposes of this dissertation, these replacements do not have relevant consequences for the analysis.

distinction is not applicable to deadjectival nominalizations because the event expressed cannot encode viewpoint aspect-related information.

In sum, Arche & Marín (2015) and Arche et. al (to appear) claim that certain mental state adjectives with a pejorative meaning are able to form event nominalizations; the event reading arises because the adjectival property is predicated of a covert event, which is placed in PredP. Specifically, event deadjectival nominalizations express some kind of impoverished event that makes them incompatible with aspectual modifiers, which is captured by positing that EventP is associated with a simple predication structure.

In this section, I limit myself to adopting the morphosyntactic analysis proposed by Arche & Marín (2015) and Arche et al. (to appear) and to contributing a semantic analysis based on the kind-token dichotomy. Nonetheless, in order to capture the fact that event deadjectival nominalizations do not combine with aspectual modifiers, instead of assuming that the perfective-imperfective distinction is not applicable to them, I propose that they express imperfective events. My proposal is based on Grimshaw's (1990) observation that what she calls simple-event nominals (e.g. *trip*), unlike complex-event nominals (e.g. *examination*), reject aspectual modifiers, as in **Jack's trip in five hours*. As mentioned in subsection 4.4.1, Grimshaw claims that simple-event nouns do not license aspectual modifiers because they do not include verbal structure. Of course, this claim that does not explain, in turn, why verbal structure must license aspectual modifiers, so we need a more refined explanation. As we have seen in chapter 3, aspectual modifiers inform about the duration of eventualities and are only licensed when a perfective interpretation is available; adjectives do not contain verbal morphology and, consequently, trigger an imperfective interpretation by default. This is the reason why state-token deadjectival nominalizations do not accept aspectual modifiers, as shown in chapter 3. Analogously, event deadjectival nominalizations do not contain verbal structure, so they cannot trigger perfective interpretations either, which explains their reluctance to aspectual modifiers. Observe the following data:

(137) a. *la reunión durante/en varias horas
the meeting for in several hours
b. *la imprudencia durante/en varias horas
the imprudence for in several hours

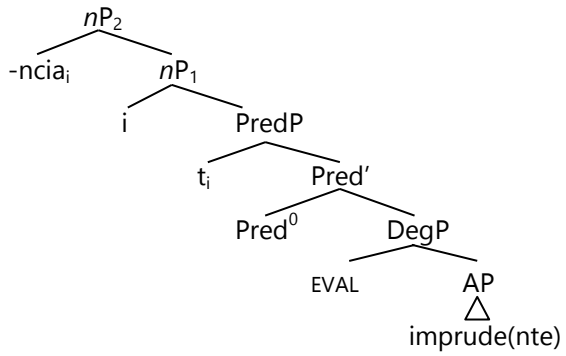
(138) a. La reunión tuvo lugar ayer.
the meeting took place yesterday
b. La imprudencia tuvo lugar ayer.
the imprudence took place yesterday

(139) a. La reunión duró varias horas.
the meeting lasted several hours
b. La imprudencia duró varias horas.
the imprudence lasted several hours

The data in (137) and (138) show that event deadjectival nominalizations and simple-event nouns behave analogously, since they do not accept aspectual modification, but they can function as complements of the verb *tener lugar* 'to take place'. Certainly, (139) shows that both types of nouns can combine with the verb *durar* 'to last', which may indicate that the events denoted can be presented as finished and, consequently, can have a perfective interpretation. However, as we have seen in chapter 3, the verb *durar* 'to last' does not only pick up eventualities (e.g. *La silla duró varios años* 'The chair lasted several years'); thus, although we can conceptualize a meeting or an imprudent act as events that have an end, this must be attributed to our encyclopedic knowledge rather than to the structural properties of the noun in question.

The analysis that I propose for event deadjectival nominalizations is the following:

(140)



(141) a. $[\![AP]\!] = \lambda s_k.\,\text{imprudent}(s_k).$
b. $[\![EVAL]\!] = \lambda G_{<sk,t>}\lambda s_k.\,G(s_k) \wedge s_k > st_c.$
c. $[\![DegP]\!] = \lambda s_k.\,\text{imprudent}(s_k) \wedge s_k > st_c.$
d. $[\![Pred^0]\!] = \lambda G_{<sk,t>}\lambda e_k \lambda s_k.\,G(s_k) \wedge \text{holder}(s_k, e_k).$
e. $[\![Pred']\!] = \lambda e_k \lambda s_k.\,\text{imprudent}(s_k) \wedge s_k > st_c \wedge \text{holder}(s_k, e_k).$ by EI
f. $[\![PredP]\!] = \lambda s_k.\,\text{imprudent}(s_k) \wedge s_k > st_c \wedge \text{holder}(s_k, e_k).$
g. $[\![nP_1]\!] = \lambda e_k \lambda s_k.\,\text{imprudent}(s_k) \wedge s_k > st_c \wedge \text{holder}(s_k, e_k).$ by λ-A
h. $[\![-ncia]\!] = \lambda F_{<vk,<sk,t>>}\lambda e_k.\,\exists s_k[F(s_k, e_k)].$
i. $[\![nP_2]\!] = \lambda e_k.\,\exists s_k[\text{imprudent}(s_k) \wedge s_k > st_c \wedge \text{holder}(s_k, e_k)].$

According to this analysis, event nominalizations are like participant nominalizations insofar as the nominalizer is base-generated in Spec-PredP, but in this case the head of PredP

introduces a subject that denotes in the event-kind domain v_k. Like in participant nominalizations, the nominalizer is base-generated in Spec-PredP, raises to project an *n*P and existentially binds the state-kind variable s_k. (Note that the fact that the nominalizer is base-generated in Spec-PredP blocks the merging of CauseP, although it does not have important implications here). If necessary, an aspectual node would be responsible for instantiating an event-kind from the set of event-kinds. The result of the derivation is a predicate of event-kinds that is associated with a state-kind of imprudence that exceeds a contextual standard of comparison.

In sum, the analysis proposed here correctly captures the fact that event deadjectival nominalizations are incompatible with aspectual modifiers, since adjectives cannot express perfective eventualities in the absence of verbal structure. Event deadjectival nominalizations are formed out of mental state adjectives with a pejorative meaning, although idiosyncratic factors are also involved. In the following subsection, I examine the phenomenon of nominalization from a more general perspective, focusing on the types of nominalizations that adjectival and verbal bases can form.

4.4.3. The role of arguments at the morphology-semantics interface

This subsection discusses the role of the arguments of predicative bases in the morphology-semantics interface, particularly in relation to verbal and adjectival bases. In light of the empirical data provided in this section with respect to deadjectival and deverbal nominalizations, I offer an additional argument in favor of excluding degrees from our semantic ontology. In particular, I show that the phenomenon of nominalization is semantically constrained, since there is empirical evidence that the domain of the arguments of predicative bases, that is, the domain of events, states and entities, constitutes the domain of the resulting nominalizations; thus, if degrees constituted true arguments, it would be expected that there were nominalizations denoting in the degree domain. However, I will show that this is not the case.

In this dissertation, we have seen that gradable adjectives can form nominalizations that denote in the state, entity and event domains. The straightforward follow-up question is whether it is possible to predict the number and the semantic characterization of the nominalizations that predicative bases can form or rather we should take nominalization as an unconstrained or arbitrary phenomenon. I anticipate that there is empirical evidence that nominalization is, to a great extent, a semantically constrained morphological process. In particular, I propose that the domain of the arguments of predicative bases constitutes the domain of the resulting nominalizations. Let us review the phenomenon of nominalization with respect to gradable adjectives, for which we already have a complete picture. As concluded in

chapter 2, gradable adjectives express states, so the existence of stative nominalizations is straightforwardly explained. In addition, gradable adjectives select for a subject that typically denotes in the domain of entities, hence the existence of participant nominalizations. Certainly, the existence of event deadjectival nominalizations is subject to idiosyncratic factors: when certain mental state adjectives are involved, it is assumed that the subject of these predicates can also denote in the domain of events. In other words, to predict the formation of event deadjectival nominalizations, it is necessary to take additional stipulations into account.

As for deverbal nominalizations, we can also find nominalizations that denote in different domains. Take for example the verbal base *construir* 'to build', out of which we can form various types of nominalizations:

(142) a. La construcción del puente tuvo lugar en el siglo I.
the building of.the bridge took place in the century I
b. El constructor del puente era romano.
the builder of.the bridge was Roman
c. La construcción de madera es inestable.
the building of wood is unstable
'The wooden building is unstable.'

On the one hand, in (142a) the DP *la construcción del puente* 'the building of the bridge' denotes an event, as revealed by its combination with the predicate *tener lugar* 'to take place'. On the other, both *el constructor* 'the builder' in (142c) and *la construcción de piedra* 'the wooden building' in (142d), which are participant nominalizations, denote entities: the former refers to the agent of the event of building, while the latter refers to the theme. What all these data illustrate is that the domain of the arguments of the verbal base *construir* 'to build', namely, the event, the entity associated with the agent and the entity associated with the theme, constitutes the domain of the resulting nominalizations.[71]

[71] To be more precise, both event and participant nominalizations can denote in the domain of kinds too:

(i) a. La construcción es el motor de la economía española.
the building is the motor of the economy Spanish
'Building is the driven force of Spanish economy.'
b. Un constructor gana mucho dinero.
a builder earns a.lot.of money
'Builders earn a lot of money.'
c. Una construcción de piedra es muy resistente.
a building of stone is very tough
'Stone buildings are very tough.'

Although participant nominalizations usually designate agents and themes, in Spanish there are other nominalizations that designate, for instance, recipient arguments and even locative adjuncts:

(143) a. El prestatario llegó tarde.
the lend.SUF arrived late
'The borrower arrived late.'
b. El destinatario de la carta es Guillermo.
the send.SUF of the letter is Guillermo
'The addressee of the letter is Guillermo.'

(144) a. El dormitorio es grande.
the sleep.SUF is big
'The bedroom is big.'
b. El mirador está sobre la colina.
the look.SUF is on the hill
'The lookout is on the hill.'

(143) includes examples of nominalizations that name the recipient argument. For example, in (143a) the DP *el prestatario* 'the borrower' refers to the participant to whom somebody lends something and in (143b) the DP *el destinatario* 'the addressee' refers to the participant to whom somebody sends something. Regarding (144), it includes nominalizations that designate a locative adjunct: in (144a) *el dormitorio* 'the bedroom' refers to the place in which somebody sleeps and in (144b) *el mirador* 'the lookout' refers to the place from which somebody looks at something. The goal of this section is not to provide a complete examination of all types of nominalizations that can be formed in Spanish; rather, I intend to illustrate that the phenomenon of nominalizing is regulated by semantic constraints, and the arguments of predicative bases play a critical role. Certainly, the hypothesis needs to be refined in future investigations, since it turns out that there are nominalizations that designate locative adjuncts, as shown in (144). Nevertheless, what we can undoubtedly conclude is that the domain of the arguments of predictive bases constitutes the domain of the resulting nominalizations, which gives rise to interesting consequences.

In (ia) the DP *la construcción* '(lit.) the building' has a generic interpretation, so it does not refer to any particular event; by an extension of the analysis defended in this dissertation, we can posit that the DP denotes an event-kind (see chapter 5 for more details). Analogously, in (ib) and (ic) the nominalizations *constructor* 'builder' and *construcción* 'building' denote in the domain of entity-kinds because they have a generic interpretation too. By incorporating kinds into our semantic ontology, we can easily refine our hypothesis to make the correct prediction: the domain of the arguments of predicative bases, including both the token and kind domains, constitutes the domain of the resulting nominalizations.

The first consequence is that eventualities must be considered arguments; this is consistent with the Neo-Davidsonian view adopted here, in which eventualities are represented as arguments. The second consequence, on which I want to focus here, is that degrees must not be considered arguments. By virtue of the empirical evidence provided in this dissertation building on Fábregas (2016), deadjectival nominalizations can trigger either a quality or a degree reading, but in both cases they denote in the domain of states. As shown in chapter 3, nouns like *altura* 'height' and *coste* 'cost', which can only trigger a degree reading in the absence of an explicit mass quantifier or measure phrase, can combine with temporal modifiers, which demonstrates that they are subject to time and, therefore, express eventualities:

(145) a. la altura de las dunas en invierno
the height of the dunes in winter
b. el coste de los libros durante la crisis
the cost of the books during the crisis

Degrees, either defined as numerical representations, as in most degree-based theories, or as equivalence classes, are not subject to time. Thus, the DP *la altura de las dunas* 'the height of the dunes' in (145a) does not denote a degree on the scale of height, but rather the state of having some height; analogously, the DP *el coste de los libros* 'the cost of the books' in (145b) denotes the state of having some cost rather than a degree on the scale of cost. We can conclude that the fact that there are no nominalizations denoting in the degree domain corroborates that degrees are not basic objects of our semantic ontology and must be derived from a more basic notion: in this dissertation, building on Anderson & Morzycki (2015), I have argued that they are derived from state-kinds.

This conclusion challenges the influential analysis by Beck et al. (2009) according to which there are three parameters of cross-linguistic variation, the first of which I want to bring up here. This parameter is called the Degree Semantics Parameter and basically states that there are languages that have available degrees of type *d*, like English or Spanish, while there are other languages that do not, like Motu (in Papua New Guinea). The claim is based on the fact that Motu, unlike the other languages, lacks degree morphemes: for example, the comparative sentence *Ann is taller than Frank* is expressed by means of a conjunctive structure, e.g. *Ann is tall, but Frank is short*. However, on the basis of the analysis defended in this dissertation, Spanish does not include degrees in their ontology (nor does English by extension), so whatever the empirical differences between languages of the Motu type and of the Spanish type are, they must not be attributed to the Degree Semantics Parameter formulated by Beck et al. (2009). Of

course, further investigation is necessary in order to draw relevant conclusions as to how gradability is manifested in each language.

4.5. Summary of the chapter

In this chapter, I have described the internal structure of deadjectival nominalizations to account for their mass nature. Furthermore, I have provided evidence that the existence of kinds is crucial in order to account for the formation of state-kind, participant and event nominalizations.

In section 4.1, I have provided evidence that deadjectival nominalizations constitute mass nouns because they are associated with sets of elements that are ordered with respect to each other. However, canonical mass nouns like *agua* 'water' and deadjectival nominalizations are associated with different domains. On the one hand, canonical mass nouns are associated with join semi-lattices, which are partially ordered because its domain includes portions that are mereologically ordered and other portions that cannot be ordered with respect to each other. On the other hand, deadjectival nominalizations are associated with scales, which are defined as sets of totally preordered state-kinds: all elements of the scale can be ordered by pairs, but two different state-kinds can occupy the same place on the scale, since total preorders are not subject to the axiom of antisymmetry (Francez & Koontz-Garboden 2017a).

In section 4.2, I have argued against the standard analysis (since Mourelatos 1978) according to which there is a mapping from atelicity onto the mass domain. Based on the study of Spanish deverbal and deadjectival nominalizations, I have provided evidence that there is actually a mapping from gradability onto the mass domain, which holds because gradable predicates can also be taken as sets of elements that are ordered with respect to one another. Accordingly, gradable bases like *alto* 'tall' form mass nouns, while non-gradable bases like *pertenecer* 'to belong' form count nouns. Regarding morphological pluralization, this property entails countability, but the converse is not the case. The plural marking requires heterogeneity, but states are homogeneous by definition due to their atelic nature. However, heterogeneity can be achieved by different means: in the case of nominalizations derived from non-gradable predicates, these can exceptionally occur with the plural marking if they hold at different times, while, in the case of nominalizations derived from gradable predicates, these can appear in the plural if they hold at different times, if they hold to a different degree or if they are associated with different domains of state-kinds, where only the first case is exceptional.

In section 4.3, I have examined state-kind nominalizations, which differ from state-token nominalizations, analyzed in chapter 3, in that they are not predicated of a specific individual and trigger a generic reading. They do not accept either temporal or frequency modifiers with a temporal reading, but they can co-occur with frequency modifiers with a non-temporal reading

(in the sense of Gehrke & McNally 2015) and manner adjectives. With respect to definite nominalizations, conversely to what is argued by Roy (2010), I have proposed that the kind qua generic reading is the basic one and holds because AspP does not appear in the structure in the absence of the arguments of the nominalization.

Concerning quantified and indefinite nominalizations, based on Eguren & Pastor's (2014, 2015) syntactic analysis, I have assumed that quantified nominalizations project QPs, while indefinite nominalizations project NPs. In addition, following Schwarzschild's (2002) insights on count and mass nouns, I have argued that quantified nominalizations constitute mass nouns, while indefinite ones constitute count nouns. In the former, a mass quantifier or a measure phrase functioning as a mass quantifier operates over the totally preordered set of state-kinds denoted by the nominalization. In contrast, in the latter, there is a state-kind that results from the intersection of the set of state-kinds denoted by the nominalization and the set of state-kinds denoted by a manner adjective or a measure phrase functioning as a modifier; given that state-kinds are discrete objects, deadjectival nominalizations can also constitute count nouns.

The section concludes with an analysis of bare nominalizations, which are infrequent in Spanish because they demand a context that imposes a zero on the scale. In general, bare nominalizations are not assessed with respect to a standard of comparison and, therefore, do not give rise to entailments to the positive, but the ones that are derived from open scale evaluative adjectives do amount to entailments to the positive.

In section 4.4, I have examined participant and event nominalizations briefly. On the one hand, based on Fábregas' (2016) morphosyntactic analysis, I have assumed that in participant nominalizations the nominalizer does not attach to the adjectival structure, but rather it is base-generated in Spec-PredP; in addition, I have provided a semantic analysis on the basis of the kind-token distinction. On the other hand, based on Arche & Marín (2015) and Arche et al. (to appear), I have argued that event nominalizations can be derived from gradable adjectives by positing a covert event in Spec-PredP. In addition, I have proposed that the fact that event nominalizations do not accept aspectual modification is due to their lack of verbal structure, which prevents them from triggering a perfective interpretation and allows us to treat them in a parallel fashion as simple event nouns.

Finally, building on the fact that gradable adjectives can form state, participant and event nominalizations, on the one hand, and that eventive verbs can form event and participant nominalizations, on the other, I have defended that the phenomenon of nominalization is semantically constrained, according to which the domain of the arguments of predicative bases constitutes the domain of the resulting nominalizations. In addition, given that there are no deadjectival nominalizations denoting in the domain of degrees, regardless of their

characterization, I have provided additional evidence that degrees should not be treated as arguments with their own semantic type.

This chapter concludes the analytic part of this dissertation. The following chapter is devoted to the conclusions.

Chapter 5

Conclusions, extensions and issues for further research

In this chapter, I sum up the main insights of this dissertation, mention further extensions of the analysis, and lay out the far-reaching venues for investigation that this work has opened. The chapter is divided into two sections: in section 5.1, I summarize the main contributions of the dissertation, relating them to the questions that were posed in chapter 1. In section 5.2, I mention some extensions of the analysis and research lines that deserve further investigation.

5.1 Main contributions of this dissertation

As shown in chapter 1, deadjectival nominalizations have attracted the interest of researchers from different academic disciplines, like cognitive science, philosophy and theoretical linguistics, especially due to the fact that they express abstract concepts, which are elusive because they do not refer to tangible objects in the actual world. In this dissertation, the study of deadjectival nominalizations has led us to interesting conclusions that shed light on their semantic, morphological and syntactic properties, revealing that the elusiveness character of deadjectival nominalizations is not as such if we incorporate state-kinds and state-tokens in our semantic ontology.

From the semantic point of view, deadjectival nominalizations express abstract concepts because they have an eventuality nature, specifically they express states, which has important repercussions for the configuration of our semantic ontology, particularly about the role of kinds, degrees, qualities, tropes and states. Morphologically, deadjectival nominalizations show an interesting contrast with respect to deverbal ones, namely, that they do not include verbal morphology in their formation. In this dissertation, I have illustrated a critical consequence of this asymmetry in relation to viewpoint aspect, which casts serious doubts on the assumption that Spanish nominalizations cannot encode viewpoint aspect-related information. In addition, I have examined the mass nature of deadjectival nominalizations, concluding that it is explained because they are associated with a set of state-kinds that are ordered with respect to each other, which has relevant theoretical consequences related to the role of gradability and atelicity regarding the mass domain and morphological pluralization. Finally, from the syntactic point of view, I have explained the syntactic distribution of deadjectival nominalizations by classifying them into different types depending on their morphosemantic properties.

Thus, thanks to the study of deadjectival nominalizations, we can bring to light interesting consequences for theoretical linguistics that could serve as the base for future investigations

and for other academic disciplines. Having presented the main contributions from a general perspective, we can enter into details in what follows.

The unifying thread of this dissertation is the hypothesis that our semantic ontology must include state-kinds and state-tokens in order to offer a comprehensive characterization of the properties of all types of deadjectival nominalizations, with a particular look at what I have called state-token and state-kind nominalizations. The questions that are posed in chapter 1 and their corresponding answers in light of the investigation carried out in this dissertation are presented below. Let us start by reviewing the main contributions of chapter 2, in which I provide a specific definition of stativity and their interaction with causation, homogeneity and gradability, in order to properly construct a model that articulates the semantics of deadjectival nominalizations on the basis of stativity:

(a) What is the defining property of states? Following Vendler (1957) and Dowty (1979), I have defined states as temporal objects that do not involve any changes in their participants, in contrast to events, which are temporal objects that do involve change in at least one of their participants. Thus, in order to know whether an eventuality predicate is either a state or an event, we need to focus on their participants and to find out whether they undergo some kind of change, mainly a physical, an emotional or a spatial change.

(b) Do gradable adjectives, which constitute the base for nominalizations, express states? Yes, they do. On the one hand, they accept temporal and frequency modifiers, and aspectual ones when triggering a perfective interpretation, which means that they are subject to time, i.e. they constitute eventualities. On the other hand, they do not involve any changes in their participants, which reveals that they express states rather than events.

(*c) What lies behind the distinction among individual-level, stage-level and Davidsonian states?* Causation. In particular, individual-level states express non-caused properties; stage-level states express externally caused properties, where the external causer is a direct causer in the sense of Maienborn & Herdtfelder (2017); and Davidsonian states or stative causatives express internally caused properties following Leferman (2017). Thus, causation is not a defining property of stative predicates, since it can be manifested in different ways, but it plays a central role in configuring the typology of states. In this sense, my proposal is very innovative (although it certainly draws from insights by Sanromán 2003, 2012, Arche 2006 and Fábregas 2016), since I have provided evidence that the individual-level/stage-level distinction is not based on spatiotemporality, aspect or the relative-absolute distinction, as claimed in the literature.

(d) What is the role of strict homogeneity and gradability in relation to stativity? Like causation, they do not constitute defining properties of states, but they play an important role to provide a complete characterization of the typology of states. Concerning homogeneity, states are cumulative, but not all of them are strictly divisible or divisible in instants. Building on Dowty (1979) and Rothstein (2004), I have shown that stative predicates like *triste* 'sad' are divisible in instants, whereas stative predicates like *esperar* 'to wait' are, like activities, divisible in intervals, which gives rise to temporal readings when occurring in gradable structures. In relation to gradability, stative predicates can be either gradable, like *querer* 'to love' and *triste* 'sad', or non-gradable, like *pertenecer* 'to belong'; therefore, contrary to what is claimed by Baglini (2015), states are not characterized by being gradable in the relevant sense.

(e) What is the basic composition of gradable adjectives and their nominalizations? I have proposed, in line with Anderson & Morzycki (2015), that gradable adjectives are stative predicates that have an internal ordering according to which they are associated with units of measurement, which we can call degrees. However, unlike in most degree-based theories, where degrees are construed as numerical points (or intervals), for Anderson & Morzycki degrees are derived from state-kinds, which has the main advantages of accounting for the co-occurrence of gradable adjectives with manner modifiers and of dispensing with degrees as ontological objects, thus making the model simpler.

Nevertheless, I have proposed one refinement to their proposal. Given that this model, in which gradable adjectives encode a state variable *s*, would incorrectly predict that their different types of nominalizations express states too, I have proposed, in the spirit of Gehrke's (2011, 2015, 2017) insights on adjectival passives in German, that gradable adjectives are predicates of state-kinds that can trigger a state-token reading when an aspectual node attaches to the structure. I have also argued that the state-token reading is not unrestricted, but rather it holds when the adjectival property is predicated of an individual, in which case the property necessarily holds at a particular time.

Having provided a specific definition of stativity, which constitutes the backbone of the semantics of deadjectival nominalizations, in chapter 3 I have delved into state-token nominalizations, which have monopolized the literature and are characterized by being flanked by the definite determiner, by the presence of their arguments and by triggering an episodic reading. Specifically, in this chapter I have examined the interaction of state-token nominalizations with temporal, frequency, aspectual, locative and manner modification, as well as with measure phrases, providing evidence that they express *imperfective states*. In addition, I

have offered a morphosyntactic composition that captures their main properties and have discussed the semantic role of deadjectival suffixes. Let us examine the questions formulated in chapter 1 and the answers that I can offer now by virtue of my investigation:

(a) What do deadjectival nominalizations express? What implications does it have? My analysis belongs to the group of what we can call state-based analyses (Roy 2010; Villalba 2013; Borer 2013; Baglini 2015; Glass 2019), according to which deadjectival nominalizations express states. I have offered empirical evidence that the state-token reading holds when the arguments of the nominalization are present, in which case an aspectual node AspP is responsible for instantiating a state-kind. However, unlike the existing state-based analyses, I have proposed in line with Zato (2020) that deadjectival nominalizations express *imperfective* states, which explains why they are compatible with temporal and frequency modification, but they are incompatible with aspectual modifiers. Specifically, adjectives constitute a defective category that need the assistance of the copula in order to acquire a perfective interpretation, so they trigger imperfective interpretations by default; given that deadjectival nominalizations do not include the copula in the derivation, they express imperfective states as well.

The significance of this analysis is threefold: first, it allows us to dispense with qualities as ontological objects, since what other authors treat as qualities are actually either imperfective states or individual-level states. Second, contra what is claimed in Fábregas & Marín (2012), Spanish nominalizations can encode some viewpoint aspect-related information, in addition to lexical aspect-related information, which opens the way to the unexplored field of demarcating the role of viewpoint aspect in the domain of nominalizations in Spanish and, presumably, in other languages. Third, this analysis has been very useful to refine the tests that are used in the literature to identify eventualities: while temporal and frequency modification allows us to identify eventualities, aspectual modifiers allow us to identify *perfective* eventualities, so these three types of modifiers should not be treated homogeneously.

(b) Why is the kind-token dichotomy important to account for these nominalizations? With respect to state-token nominalizations, the kind-token dichotomy is important to account for their combination with frequency and manner adjectives as well as measure phrases. Regarding frequency adjectives, based on Gehrke & McNally (2015), I have shown that these can trigger temporal and non-temporal readings: in this dissertation, I have argued that frequency adjectives that co-occur with deadjectival nominalizations trigger temporal interpretations, in which the state-token holds frequently, in predicative, prenominal and post-nominal position; in contrast, they can trigger non-temporal interpretations, in which a certain state-kind is frequent,

in post-nominal position exclusively. Therefore, the kind-token distinction can explain the semantics and distribution of frequency modifiers when accompanying deadjectival nominalizations.

In relation to manner adjectives, I have argued that they are predicates of state-kinds and that the manner reading arises when they modify eventualities. In addition, I have shown that they do not give rise to entailments to the positive when combined with deadjectival nominalizations. Finally, measure phrases are, like manner adjectives, treated as predicates of state-kinds too, with the difference that the former are inherently ordered. Both manner adjectives and measure phrases can appear in predicative position, which can be accounted for by a model in which degrees are derived from state-kinds. Thus, the model defended here presents an important advantage over degree-based theories, because these rely on the assumption that degree adverbs/adjectives and measure phrases must be adjacent to gradable predicates in order to bind the degree variable, which is proven to be too restrictive.

(c) Are there any relevant distinctions between gradable adjectives and their nominalizations? Yes, there is one relevant difference. Following Fábregas (2016), deadjectival nominalizations can trigger quality or degree readings in the absence of explicit mass quantifiers or measure phrases; for instance, *la belleza del jardín* 'the beauty of the garden' can mean either 'the garden's quality of being beautiful' or 'the garden's degree of beauty'. However, contrary to Fábregas, I have not assumed the existence of qualities or degrees as basic objects, but rather I have argued that in both cases deadjectival nominalizations express states. In the quality reading, EVAL provides a standard of comparison, while in the degree reading EVAL does not appear in the derivation. Thus, *la belleza del jardín* 'the beauty of the garden' denotes the state of the garden's being beautiful in the quality reading and the state of having some beauty in the degree reading. In this respect, deadjectival nominalizations differ from their base adjectives, since the former do not have to be assessed with respect to a standard of comparison.

Furthermore, I have argued that underived nouns like *temperatura* 'temperature' and *coste* 'cost' and the exceptional nominalizations *altura* 'height' and *anchura* 'width' can only express degree readings in the absence of explicit mass quantifiers or measure phrases; in other words, these nouns cannot include EVAL in their derivation. However, they express states that select for their own arguments, which explains why two DPs like *la temperatura de Madrid* 'the temperature of Madrid' and *la temperatura de Barcelona* 'the temperature of Barcelona' do not refer to identical objects even if they are associated with the same degree on the scale of temperature, which accounts for the so-called *temperature paradox* or *identity conditions*.

Despite this relevant difference with respect to the standard of comparison, the rest of properties of deadjectival nominalizations are inherited from their base adjectives. In this respect, I have provided empirical evidence that deadjectival nominalizations can trigger individual-level, stage-level or stative causative readings depending on their base adjectives, so the resulting nominalizations do not alter the causal properties of their base adjectives. The same holds with respect to the scalar properties and the comparison classes involved; in other words, deadjectival nominalizations inherit the scalar properties of their base adjectives and invoke the same comparison class (either a *between-individual* or a *within-individual* comparison class in terms of Sassoon & Toledo 2011) of their base adjectives too.

(d) What is the semantic role of the nominalizer? I have argued that nominalizers can take the whole domain of their base adjectives, which is the most usual situation, or rather restrict it, but they cannot broaden it. What this analysis aims to capture is semantic narrowing or specialization, whereby there are some pairs of nominalizations, like *simplicidad* 'simplicity' / *simpleza* 'foolishness' or *frescor* 'freshness' / *frescura* 'vividness', that express specialized meanings. In particular, I have posited that the nominalizer is just an affix that changes the category of the base into a noun in most cases, like in *alto* 'tall' > *altura* 'height', but in a few cases the nominalizer can restrict the domain of the adjectival function, as in *simple* 'simple, fool' > *simplicidad* 'simplicity' / *simpleza* 'foolishness'. Although semantic narrowing can be captured as a regular morphosyntactic process, the bases to which it applies, the choice of the suffix and the proper subset of state-kinds that is taken by the nominalizer hinge on idiosyncratic factors and, therefore, cannot be predicted by regular principles or constraints.

Once I have provided empirical evidence that state-token nominalizations express imperfective states and have presented a morphosyntactic analysis that accounts for their main properties, in chapter 4 I explain their mass nature, delineating the role of gradability and atelicity with respect to the mass domain and morphological pluralization and setting out the factors that amount to the licensing of the plural marking. In addition, I have examined state-kind nominalizations, classifying them into four types, definite, indefinite, quantified and bare nominalizations, depending on their syntactic distribution and their morphosemantic properties. In this chapter, I have also provided a basic characterization of participant and event nominalizations in order to compose the whole typology of deadjectival nominalizations, which has allowed me to posit a fundamental constraint for the process of nominalization, according to which the number and type of nominalizations that a certain base is able to form depends on their arguments. Based on this constraint, I have provided another argument in favor of treating degrees as derived

rather than ontological objects. Let us examine the questions and answers concerning this chapter:

(a) Must the analysis of deadjectival nominalizations be subsumed under the analysis of canonical mass nouns? No, it must not. Although deadjectival nominalizations form mass nouns because they denote sets of elements that are ordered with respect to each other, their respective domains are not exactly the same. Canonical mass nouns like *agua* 'water' are associated with join semi-lattices, whose ordering is partial because it includes portions that are ordered by the part-whole relation and other portions that cannot be ordered with respect to each other. This property explains why they give rise to quantity and kind readings when combined with certain exclamative and interrogative determiners. In contrast, deadjectival nominalizations are associated with scales, which are defined as sets of state-kinds that are totally *preordered*, which means that they are not subject to antisymmetry, so two different state-kinds can occupy the same place on the scale. The fact that they are *total* explains why the quantity and the kind readings neutralize when combined with exclamative and interrogative determiners.

(b) What is the constraint that regulates the formation of mass nominalizations? In line with Grimm (2014), I have provided evidence that the standard analysis (Mourelatos 1978 and others) according to which there is a mapping from atelicity onto the mass domain is incorrect. Nevertheless, unlike Grimm, who does not propose any precise alternative analysis, I have argued that there is a mapping from gradability onto the mass domain, which holds because gradable predicates can also be taken as sets of elements (specifically, state-kinds) that are ordered with respect to one another. On the one hand, non-gradable bases like *pertenecer* 'to belong' form count nominalizations; certainly, these do not normally pluralize, but this is because morphological pluralization demands heterogeneity and states are homogeneous by definition. Thus, pluralization entails countability, but the converse is not the case. Nonetheless, stative nominalizations that are derived from non-gradable predicates like *pertenencia* 'belonging' can exceptionally pluralize if they hold at different times. On the other hand, gradable bases like *inteligente* 'intelligent' form mass nominalizations in normal circumstances. In this case, nominalizations derived from gradable predicates can pluralize if they express states that hold at different times, if they hold to different degrees on the scale or if they are associated with different domains of state-kinds, where only the first case is exceptional.

(c) Why is the kind-token dichotomy important to account for state-kind nominalizations? Because these nominalizations do not denote in the state-token domain, so the property expressed by

the base adjective remains in the domain of kinds. State-kind nominalizations are characterized by the fact that their arguments are not present and trigger a generic reading, so they reject temporal modification and frequency modifiers with a temporal reading.

Regarding definite nominalizations, these are preceded by the definite determiner, as *la honestidad* '(lit.) the honesty' in *La honestidad abunda* 'Honesty abounds'. Definite state-kind nominalizations were identified by Roy (2010), who calls them quality nominalizations. Unlike Roy (2010), who claims that the quality qua generic reading is derived from the state reading when an arbitrary Pro_{arb} is bound by a generic operator, I argue that the basic reading is the state-kind qua generic reading. Following Espinal & Borik's (2015) insights on DPs that denote entity-kinds like *el dodo* '(lit.) the dodo' in *El dodo fue exterminado* '(lit.) The dodo was exterminated, Dodos were exterminated', I have proposed that an analysis à la Roy (2010) would force us to posit that the determiner can also introduce a generic operator GEN in order to account for the DPs under examination; however, that would mean that the definite determiner has an additional denotation, given that it normally introduces the iota operator ι when entity-tokens are involved, as in *La silla se rompió* 'The chair broke'. On the contrary, assuming that gradable adjectives are predicates of state-kinds and that the absence of arguments prevents the insertion of an aspectual node that is responsible for instantiating a state-kind, we can maintain the same semantics for the definite determiner; accordingly, *la honestidad* '(lit.) the honesty' denotes the unique state-kind of honesty.

Indefinite nominalizations are flanked by the indefinite determiner *un(a)* 'a' and either by a manner modifier, as in *una belleza impresionante* 'an impressive beauty' or by a measure phrase functioning as an adnominal modifier, as in *una altura de dos metros* 'a height of two meters'. On the other hand, quantified nominalizations are preceded by a mass quantifier or a measure phrase functioning as a mass quantifier, as in *mucha altura* 'a lot of height' and *dos metros de altura* '(lit.) two meters of height', respectively. Following Eguren & Pastor's (2014, 2015) syntactic analysis, I have assumed that indefinite nominalizations project an NP, while quantified nominalizations project a QP. In addition, drawing from Schwarzschild's (2002) insights on English pseudo-partitives and compounds, I have provided evidence that indefinite nominalizations constitute count nouns, while quantified nominalizations constitute mass nouns. This double behavior of deadjectival nominalizations is possible, on the one hand, because they are associated with a set of totally preordered state-kinds, which captures their mass behavior, and, on the other hand, because state-kinds are discrete or atomic units, which captures their count behavior.

Finally, bare nominalizations, like *Esta partícula tiene altura* '(lit.) This particle has height', are exceptional constructions in Spanish because they require a context in which the individual in

question might not be associated with any degree on the scale or, in other words, a context that imposes a zero on the scale. In general, bare nominalizations do not give rise to entailments to the positive, which provides additional evidence that deadjectival nominalizations are not obligatorily evaluated with respect to a standard of comparison, as concluded in chapter 3 in relation to degree readings and the semantics of manner adjectives. However, the nominalizations that are derived from open scale evaluative adjectives do amount to entailments to the positive, since, in not being associated with objective units of measurement, they invoke *between-individuals* comparison classes.

(f) What are the constraints that regulate the process of nominalization? Based on the fact that gradable adjectives can form state, participant and event nominalizations and that eventive verbs can form event and participant nominalizations, I have proposed that the domain of the arguments of predicative bases constitutes the domain of the resulting nominalizations. Nevertheless, in order to account for the formation of event deadjectival nominalizations, it is necessary to posit that idiosyncratic factors can also be involved, namely, that certain mental state adjectives can select for subjects that denote in the domain of events. In fact, a deeper investigation is necessary in this respect, since we can find deverbal nominalizations formed out of locative adjuncts, such as *dormitorio* 'bedroom' (< *dormir* 'to sleep').

I have taken advantage of the constraints that regulate the phenomenon of nominalization to provide additional evidence that degrees do not constitute basic objects of our semantic ontology, since there are no deadjectival nominalizations denoting in the domain of degrees regardless of their characterization. This analysis casts serious doubts on the Degree Semantics Parameter formulated by Beck et al. (2009), according to which languages like Spanish do encode degrees as basic objects of type *d* because they make use of degree morphology in gradable constructions. In light of the empirical evidence shown in this dissertation, we are ready to state that even languages that make use of degree morphemes, like Spanish, do not encode degrees as primitives.

Having presented the main contributions of this dissertation, in the following section I mention several extensions and further venues that this dissertation has opened for further investigation.

5.2 Extensions and issues for further research

I close this dissertation by mentioning two interesting extensions of the analysis defended in this research that are related to the process of nominalization, where the incorporation of kinds and tokens in our semantic ontology opens a promising line of research.

The hypothesis defended here whereby stative predicates are predicates of state-kinds rather than state-tokens automatically raises the question of whether event deverbal nominalizations can receive the same treatment (see Ignjatović 2016). I believe that it is the case. For example, certain deverbal nominalizations derived from activity verbs, such as *natación* 'swimming' (< *nadar* 'to swim) and *patinaje* 'skating' (< *patinar* 'to skate'), can appear in generic contexts, see (1a), but they are never accompanied by their arguments, see (1b); do not accept temporal or locative modifiers, see (1c, c'); and are incompatible with *tener lugar* 'to take place', see (1d):

(1) a. La natación / el patinaje es saludable.
the swimming the skating is healthy
'Swimming/Skating is healthy.'
b. *la natación / el patinaje del niño
the swimming the skating of.the kid
c. *la natación durante el partido / en la piscina
the swimming during the game in the pool
c'. *el patinaje durante el partido / en la pista
the skating during the game on the court
d. *la natación / el patinaje tuvo lugar ayer
the swimming the skating took place yesterday

Analogously, other deverbal nominalizations that can take arguments in other contexts behave as *natación* 'swimming' when their arguments are not present:

(2) a. la construcción del puente durante la república
the building of.the bridge during the republic
b. La construcción (*durante la monarquía) es el motor de la economía española.
the building during the monarchy is the motor of the economy Spanish
'Building (during the monarchy) is the driven force of Spanish economy.'

(3) a. El reciclaje de los productos tuvo lugar ayer.
the recycling of the products took place yesterday
b. El reciclaje es beneficioso para el medio ambiente (*y tuvo lugar el año pasado).
the recycling is beneficial for the environment and took place the year last
'Recycling is beneficial for the environment (and took place last year).'

An extension of the analysis defended in this dissertation can capture the previous contrasts by positing that event predicates denote event-kinds and can express event-tokens when their arguments are introduced; in this case, an aspectual node would instantiate an event-kind from the set of event-kinds. Therefore, the application of the analysis defended in this dissertation to the study of (event) deverbal nominalizations may provide additional endorsement for the inclusion of kinds and tokens in our semantic ontology.

Another interesting extension of the analysis is that it may offer a satisfactory solution for the fact that complex words, such as nominalizations and compounds, constitute closed domains or, in other words, their constitutive parts are inaccessible to syntactic operations, such as extraction or binding. The property whereby words constitute a closed domain for syntax is often called the Lexical Integrity Hypothesis or similarly (see Lapointe 1980; Di Sciullo & Williams 1987; Lieber 1992, 2004, 2016; Lieber & Scalise 2006; Fábregas 2011) and poses a serious challenge for constructionist theories, in which the formation of words holds in the syntax and, therefore, is regulated by syntactic rules. Constructionist theories explain lexical integrity effects by positing that words constitute phases in the sense of Chomsky (1995) or islands in the classical theory (Chomsky 1981). However, as Fábregas (2011) notes, although this hypothesis could account for extraction phenomena, it cannot explain binding phenomena, since islands do not block binding. Observe the following examples:

(4) a. The person [$_{CP}$ that Mary introduced to John$_i$] already knew him$_i$.
b. John is a [$_{NP}$ truck$_i$ driver]. *It$_i$ is a type of vehicle.

(Adapted from Fábregas 2011: 12)

In (4a) the complementizer phrase (CP) constitutes an island, but the antecedent *John* can be referred to by the anaphoric clitic *him*. In contrast, in (4b) even assuming that the compound word *truck driver* constitutes an island, the lexical base *truck* cannot be referred to anaphorically by the clitic *it*. Although Fábregas observation is correct, we must note that binding effects are subject to another factor. The contrasts in (4) rely on the assumption that *truck* is a predicate of entity-tokens, which are referential; however, the fact that there is no anaphoric access to it can be accounted for by positing that *truck* is a predicate of entity-kinds, which are not referential. Thus, by incorporating kinds into the domain, the contrasts in (4) receive a natural explanation. As claimed in this dissertation, the process of derivation, and compounding by extension, involves bases that denote in the domain of kinds and, only when the nominalization is already formed, a functional node can attach to the whole structure to realize a token. What this means is that the constitutive parts of nominalizations, unlike the resulting nominalizations, denote in

the domain of kinds, which blocks anaphoric reference because kinds are not referential. Certainly, Fábregas is aware that the kind hypothesis is a strong candidate to explain the blocking of binding phenomena, but the author precludes it on the basis of examples in which a noun that is supposed to denote in the domain of entity-kinds can be referred to anaphorically:

(5) Juan tiene coche$_i$. pro$_i$ está en el garaje.
Juan has car pro is in the garage
'Juan has a car. It is in the garage.'

In (5) the count noun *coche* 'car' appears in singular and combines directly with the verb *tener* 'to have' without the mediation of a determiner. Although *coche* 'car' denotes in the kind domain by hypothesis, it can bind the empty category *pro*. However, as Espinal & McNally (2011) claim for other similar examples in Spanish and Catalan, the licensing of examples like (5) depends on pragmatic factors according to which the antecedent is accommodated by the hearer in the common ground, where the common ground comprises common knowledge, beliefs and another type of information assumed by the participants of a conversation. More specifically, we can claim that *pro* in (5) does not pick up the entity-kind *car*, but rather a specific car that is present in the common ground, which explains why it can be located spatially (cf. **Juan tiene coche en el garaje* '(lit.) Juan has car in the garage'). In sum, an extension of the analysis defended in this dissertation could derive the Lexical Integrity Hypothesis by means of the interaction of syntactic islands and kinds.

Last, but not least, let me mention several future theoretical and empirical lines of research that my investigation on deadjectival nominalizations has opened. First, one important contribution of this dissertation is that it provides a precise characterization of stativity according to which the essential property that characterizes states is that they do not involve any changes in their participants. Notions like causation, strict homogeneity and gradability are relevant to distinguish different types of states, but they do not constitute defining properties of stativity. Thus, the difference between states and events is not that the latter are dynamic strictly speaking, but rather that the latter impose some kind of change on their arguments; hence, if dynamism does not characterize events, we may wonder whether events are as basic as states or they can be derived from them. In line with some of Leferman's (2017) reflections, we could derive events from states; specifically, events would consist in a succession of heterogeneous states that may give the false impression that they involve dynamism when transitioning from one state to another one. Cartoons offer an illustrative simile insofar as they consist in a

succession of heterogeneous images that give the false impression of moving when transitioning from one image to another one.

Think for example about the event of swimming: there is an individual, an agent, that moves their arms and legs in the water in a specific way and, as a consequence, that individual changes their position. The event itself is not dynamic, but rather it is the agent that undergoes a change of position; accordingly, the event of swimming can be decomposed into a succession of different states in which the agent is associated with a different position in each of the constitutive states. I cannot offer here a precise characterization of events on the basis of states, but I believe that the complexity that characterizes events in comparison with states may be due to the fact that the former are precisely composed of heterogeneous states, so this is an interesting hypothesis to be explored in the future.

A second interesting line of research is linked to figuring out what constraints regulate the formation of deadjectival nominalizations. In this dissertation, I have assumed that it is gradable adjectives that form deadjectival nominalizations, which is true with few exceptions that can be treated as lexical gaps: for example, the gradable adjective *lleno* 'full' does not form any nominalization in contemporary Spanish. More interestingly, it must be noted that there are non-gradable predicates that can form deadjectival nominalizations:

(6) a. la rectangularidad del campo
the rectangularity of.the field
b. la esfericidad del planeta
the sphericity of.the planet

(7) a. la soltería / viudez del policía
the bachelorhood widowhood of.the cop
b. la españolidad de Ceuta
the Spanishness of Ceuta

In principle, the nominalizations included in (6) and (7) are derived from the non-gradable predicates *rectangular* 'rectangular', *esférico* 'spherical', *soltero* 'bachelor', *viudo* 'widow' and *español* 'Spanish'. In this respect, Roy (2010) claims for French that gradability is not the critical property that regulates the formation of deadjectival nominalizations, but rather the adjective's ability to appear in predicative position. Accordingly, we could posit that the predicates in question can form nominalizations because they can appear in predicative position:

(8) a. El campo es rectangular.
the field is rectangular
b. El planeta es esférico.
the planet is spherical

(9) a. El policía está soltero / viudo.
the cop is single widowed
b. Ceuta es española.
Ceuta is Spanish

However, I am not convinced that this hypothesis is entirely applicable to Spanish, since there are many relational adjectives that can appear in predicative position but cannot form nominalizations:

(10) a. Esta empresa es algodonera. (> **algodoneridad* 'cotton.growerity')
this company is cotton.grower
b. Esta lesión es muscular. (> **muscularidad* 'muscularity')
this injury is muscular
c. Esta estructura es molecular. (> **molecularidad* 'molecurality')
this structure is molecular
d. Este cuadro es abstracto. (> **abstracticidad* 'abstracticity')
this painting is abstract

The relational adjectives that appear in (10) can appear in predicative position, but they cannot form nominalizations. I do not have any clear explanation yet to account for the existence of the nominalizations in (6) and (7), but I can contribute two reflections: first, the adjectives *rectangular* 'rectangular' and *esférico* 'spherical' do not really pose any problems for the hypothesis that deadjectival nominalizations are formed out of gradable adjectives, since they can be gradable when used figuratively or approximatively:

(11) a. El ataque del Real Madrid es muy perpendicular.
the attack of.the Real Madrid is very perpendicular
'Real Madrid's attack is very offensive.'
b. El forastero tiene una cara muy esférica.
the foreigner has a face very spherical
'The foreigner has very spherical face.'

Second, it is not clear that the nominalizations occurring in (7) are derived from the adjectives included in (9); perhaps they could be gathered with nominalizations like *capitalidad* '(lit.) capitality, capital status' (< *capital* 'capital') and *ciudadanía* 'citizenship' (< *ciudadano* 'citizen'), which are denominal. Hence, *soltería* 'bachelorhood', *viudez* 'widowhood' and *españolidad* 'Spanishness' could be rather derived from the nouns *soltero* 'bachelor', *viudo* 'vidower' and *español* 'Spaniard'.

There is another set of nominalizations that deserve a future investigation, namely, those that can refer to temporal periods, especially when occurring without their arguments, as in *durante la niñez / vejez / juventud / antigüedad* 'during infancy, old age, youth, antiquity', etc. The problem that these nominalizations pose is whether temporal periods should be considered ontological semantic objects or rather they can be derived from other more basic notions.

Another line of investigation that this dissertation has opened is related to the analysis of adjectives in attributive position. Traditionally, adjectives are considered predicates of individuals of type <e,t>, but an extension of the analysis defended here would be to posit that they denote properties of state-kinds of type $<s_k,t>$; given that adjectives do not have arguments when occurring in attributive position, the aspectual node AspP would not intercede. In that case, the question is how to account for their combination with entity-denoting predicates, which would be of type $<e_k,t>$. Moreover, adjectives can also modify event-denoting nouns in attributive position, so the analysis becomes more complicated. Consider the following data:

(12) a. la hermosa torre
the beautiful tower
b. la hermosa tormenta
the beautiful storm

In (12a) the noun *torre* 'tower' is a predicate of entity-kinds and the adjective *hermosa* 'beautiful' is a predicate of state-kinds, so they cannot combine intersectively. In (12b) there is a similar problem, with the difference that the noun *tormenta* 'storm' denotes a property of event-kinds. One possible solution to the problem is to postulate the existence of a new semantic rule that allows us to combine different sets of ontological objects. Another possible solution is to posit that adjectives are just predicates of kinds that have an unspecific type $<\alpha,t>$. In addition, in order to account for their stative nature when occurring in predicative position and when forming nominalizations, we could posit that they can project, when necessary, an additional functional node whose function is to specify the kinds denoted by the adjective as state-kinds.

Finally, another interesting field to be explored in future investigations is the semantics of the structures involving gradable adjectives preceded by the neuter determiner *lo* 'the' (see Bosque & Moreno 1990, Gutiérrez-Rexach 1999, Alexiadou & Iordăchioaia 2012, 2014 and Villalba 2013 for Spanish; Beauseroy & Knittel 2007 and Lauwers 2008 for French; Alexiadou 2011b for Greek; Arsenijević 2011 for Serbo-Croatian; Glass 2014, 2019 for English; McNally & de Swart 2015 for Dutch; Richtarcikova 2017 for Slovak). According to Bosque & Moreno (1990), Spanish has available two main structures:

(13) a. Lo interesante del libro es el primer capítulo.
the.N interesting of.the book is the first chapter
'The interesting part of the book is the first chapter.'
b. Me asusta lo peligroso de la empresa.
me frightens the.N dangerous of the mission
'It frightens me how dangerous the mission is.'

According to the authors, in (13a) the DP *lo interesante del libro* '(lit.) the.N interesting of the book' refers to the unique entity, which is part of the book, to which the adjectival property is ascribed; in contrast, in (13b) the DP *lo peligroso de la empresa* '(lit.) the.N dangerous of the mission' involves degree quantification on the scale invoked by the adjective. The challenge for the analysis defended here would be to offer a semantic composition for the DPs in question based on the hypothesis that gradable adjectives are predicates of state-kinds, ideally by positing only one denotation for the neuter determiner.

To conclude, in this dissertation I have addressed the analysis of deadjectival nominalizations in Spanish, providing evidence that our semantic ontology must include state-kinds and state-tokens. My contributions range from an explanation of their abstract nature to their syntactic distribution, drawing interesting conclusions with respect to lexical and viewpoint aspect, their combination with different types of modifiers, their morphosyntactic composition, their semantic structure and their interaction with the mass and count domains and the constraints that regulate them. An extension of my investigation could have interesting implications for morphological theory, specifically to account for the process of nominalization as a constrained phenomenon in which kinds and tokens play a crucial role. In addition, this dissertation opens a promising way for other unsolved issues that will be presumably tackled in future investigations.

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