

Ecological economics in the age of fear

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Abstract

Far right political movements are rising and seizing power in many influential countries, affecting not only the governance of democratic regimes but also the science-policy relationship and the global environmental agenda. Here we disentangle the roots of such ‘far right insurgency’ and discuss the implications for ecological economics as a field. We propose that in order to be able to understand and address this phenomenon, ecological economists should devote attention to analyse how the evolution of value systems (including environmental values) is related to the profile and governance of contemporary global capitalism. By means of developing a relevant research agenda, ecological economics could contribute to the academic support of the ‘politics of hope’, in response to the ‘politics of fear’ on which emerging authoritarian regimes rely.

Keywords: Sustainability, post-truth politics, authoritarian regimes, far-right insurgency

1. Introduction

We are witnessing the rise of a global political far-right wave. This phenomenon has important consequences not only for the governance of democratic regimes and the science-policy relationship but also for national, regional and global environment agendas. Very conservative candidates and far right political parties have risen to power via elections in the U.S., Poland, Hungary, Italy, India, Turkey, the Philippines and Brazil, to name a few, while in other democratic countries they are increasing their political representation and influence. These political phenomena are the result of different socio-economic and cultural processes (Çarkoğlu and Kalaycıoğlu, 2009; Skocpol and Williamson, 2012; Buzogány, 2017; Main, 2018; Maxwell, 2018), but they are increasingly self-aware, interconnected and unified worldwide (Castelli and Pirro, 2018).¹

Although they do not hold homogenous positions, the leaders and political parties that constitute this ‘far-right insurgency’ share at least ten common features: (1) A negative responsive stand towards ‘globalism’, and preference for economic nationalism; (2) opposition to immigration; (3) very conservative positions towards gender relations and sexual preferences; (4) opposition to affirmative action and rights differentiation favoring underprivileged social groups; (5) anti-elitist sentiments, particularly towards traditional political and intellectual elites, though their economic policies tend to favor the economic elites; (6) disregard or low concern for environmental issues, and in several instances, denial of global environmental problems, including climate change; (7) symbolic appeal to a golden national past that has been lost, associated with historical revisionism; (8) an ideological basis often supported by unproven propositions and conspiracy theories; (9) preference for an authoritarian and aggressive leadership style contesting political correctness in discourse and habits; and (10) disregard for scientific evidence, historical facts and empirical data that contradict their ideological positions and core values. The election of authoritarian leaders has become one of the paths to the emergence of hybrid political regimes that hold characteristics of both autocracies and formal democracies, a political phenomenon that has been coined as ‘competitive authoritarianism’ (Levitsky and Way, 2002; Cameron, 2018)

Here we aim to discuss the origins and consequences of this phenomenon and the implications for the research agenda of sustainability science and ecological economics in particular. The basic questions that guide the current article are: (1) is the simultaneous emergence of the far-right and reactionary movement in different parts of the world a coincidence or does it reflect deep social phenomena with common underlying causes?, and (2) how should sustainability science in general, and ecological economics in

¹ This is shown, for instance, by the establishment of "The Movement", a think tank recently founded by Steve Bannon and headquartered in Brussels, which aims to link, strengthen and provide strategic data to European far-right political parties.

particular, deal with a rising influential movement that holds a confrontational stance towards both the environmental agenda and the role of science in decision making? First, we characterize the far-right insurgency, including its origins and psychological foundations. We then turn into its implications for the environmental agenda and the policy-science interface. Finally, we discuss the consequences that this phenomenon may have for sustainability science and outline a responsive research agenda for ecological economics.

2. The roots of the current far-right insurgency

In high-income countries, far-right political ideology had its peak in the 1930s. Nevertheless, since the end of the second World War (WWII), and more particularly after the end of the Spanish and Portuguese dictatorships, far-right political movements were morally repressed and ostracized in Europe and the U.S. In other world regions, such as in Latin America, far-right dictatorships took much longer to be overthrown, but after re-democratization during the late 1980s, far-right ideology experienced relative political isolation.

After WWII, high income countries experienced an inter-generational change in worldviews. According to Inglehart (1977), during the post-war period there was a progressive rise of the proportion of people holding what he called ‘post-materialist values’, particularly among the middle class youth, which had greater access to education, as compared to the previous generation. The shift from materialist to post-materialist values refers to a change of emphasis (in basic values) from law and order and economic prosperity to self-expression, free choice, cosmopolitanism and a higher concern for global public goods, including the environment. This change in value system induced effects on a variety of issues, including, for instance, greater tolerance towards outgroups, openness towards sexual preferences, as well as the thrive of feminism and the emergence of green political parties. The inter-generational cultural shift was explained as the result of a particular set of conditions in high income countries during the post-war period (which coincided with the golden age of capitalism), such as a good economic performance, a consolidation of the welfare state and sustained peace. These conditions, the argument follows, created enough social stability and sense of security for enabling the spread of post-materialist values.

Inglehart’s (2000) theory stresses the role of the feeling of physical and economic security in determining value orientation. The recent backlash against post-materialist values, reflected in the election of Donald Trump in the U.S., and the rising support for xenophobic, populist and authoritarian movements in high income countries, has been explained by Inglehart and Norris (2017) and Inglehart (2018) as the consequence of declining existential security during the past decades, related to the ‘winner-takes-all’ profile of the knowledge economy, jointly with extreme and rising income inequality, declining real income of the working class, and increasing job insecurity in a context of a rapid process of economic

globalization that also spurred demographic changes through migration. Following Bourdieu (1998) and along a similar argumentation line, Bauman (2000; 160) states that "precariousness, instability, vulnerability is the most widespread (as well as the most painfully felt) feature of contemporary life conditions". Michel Foucault is also part of an intellectual tradition that sees insecurity as a structural feature of the capitalist mode of production. Danger, or insecurity, was seen by him as a structural cost in liberal governance regimes. According to Foucault (2008; 67), "there is no liberalism without a culture of danger". From this perspective, the rising sense of existential insecurity would be the result of the radical expansion of neo-liberal policies in the recent history of global capitalism.

The globalization of neoliberal policies has exacerbated the uncertain condition of labor in the capitalist production system, particularly in high income countries, while reduced the bargaining power of labor vis-a-vis capital in general. With the intensification of capital mobility and the emergence of information technologies, capitalism in core countries has entered a new phase, in which employment is becoming increasingly short-term and precarious. Additionally, public administrations in high income countries are losing capacity to address cared matters for citizens, resulting in a weakened welfare state and increasing discontent with the political elite (Bauman, 2005). Beck (2000) coined the term 'second modernity' to describe the phase of capitalism that arose after the fall of the fordist society in high income countries. The new phase is characterized by the dissolution of previous 'securities' that were sought after, such as the economic sovereignty of the nation-state, job stability and full employment, and a safe environment, among others (Sørensen and Christiansen, 2013). In the second modernity what prevails is a "political economy of inequality, uncertainty and loss of boundary" (Beck, 2000; 75). This is coupled with precarity, or loss of the security associated with the welfare state (Casas-Cortés, 2014), including the reduction of welfare provisions and labor rights (Masquelier, 2018).

The term 'precariat' (Standing, 2011; Jorgensen, 2015) as applied in high-income countries, refers to labourers with a significant higher degree of precariousness (in terms of duration, labor rights and salary), as compared to the previous phase of capitalism. The precariat perceives that their working conditions have deteriorated when compared with previous generation. Indeed, during past few decades there has been a sharp decline in social mobility across generations in several high-income countries (Stuhler, 2018), and an important share of the working class can be considered to be among the main losers of economic globalization (Milanovic, 2016). On the contrary, the ultra-rich, both in high income and emerging countries have been among the main beneficiaries. Another source of existential insecurity in high-income countries is related to the inward flow of a non-native labor force, generally constituted by immigrants that do not share the domestic dominant cultural and religious backgrounds. The discourse of far-right in Europe and the U.S., founded on anti-cosmopolitanism and on outgroup prejudices, tend to portray immigrants as threats for both national and individual security. The identification of social groups that are the subject of stereotyping, strong prejudices and scapegoating is a common feature in far right

authoritarian regimes. The identification of enemies is a core imperative in the politics of fear. As in many authoritarian far-right regimes, such as in Brazil which has relatively low rates of immigration, so-called ‘thugs and communists’ tend to be portrayed as main sources of social threats by the far-right political discourse.

The phenomenon of the precariat, however, cannot explain significant changes in the values or political preferences in developing countries. Even though undeniably there have been improvements in the condition of labor during the past century, low-skilled workers in developing countries have never gained enough bargaining power in order to achieve working conditions similar to the ones ensured by the welfare state of high income countries during the golden age of capitalism. Both high levels of precarity among low-skilled workers and a high share of the labor force being allocated to the informal sector (and therefore without labour rights) have been structural conditions in peripheral countries since their insertion into the global capitalist system (Breman, 2013; Lannen et al 2019). Most developing countries never experienced a complete ‘first modernity’ in Beck's (2000) terms as they never became full fordist societies. Although as compared to high income countries social mobility in developing countries has been lower and such mobility has largely stalled since the 1960s (Narayan et al., 2018), during the past two decades there has been a remarkable rise of the middle class in Asia (Brandi and Büge, 2014), and during the period 2001-2011 most Latin American economies experienced a peculiar historical phase characterized by high rates of economic growth, declining income inequality and significant reductions in income poverty rates (Lustig et al., 2013)². Hence, in developing countries, the core source of existential insecurity is not necessarily associated with an increasing sense of deterioration of working conditions.

Although the nostalgia of the fordist mode of production and consumption is not present in most developing countries, the surge of far-right political movements in these regions can be associated with a phenomenon shared with high-income countries: the contemporary crisis of liberal democracies, driven by mistrust in traditional political elites (Castells, 2018). In Latin America, the recent election of Jair Bolsonaro in Brazil constitutes an exemplary case of far-right insurgency fueled by massive mistrust in the political system. The backdrop of Bolsonaro election has been the convergence of several crises during the period 2014-2018: (1) a severe economic downturn due to the end of the commodity boom, inducing stagnation of social mobility and higher unemployment rates; (2) the emergence of large-scale corruption scandals; (3) a high and rising incidence of violence and criminality, especially in urban areas; and (4) a political legitimacy crisis that resulted in the impeachment of the president Dilma Rousseff. Large scale corruption scandals and the rapid deterioration of public services due to the economic decline have

² At least in Brazil however this tendency has been reversed, with a steady increase in income inequality since the end of the commodity boom

exacerbated the feeling of abandonment of the citizens by the state and the perception that the political elite does not serve the interest of lay people. In addition, the long-term dissemination of evangelical churches that seized direct political representation and exert strong media influence (Machado, 2012; Carranza and Da Cunha, 2018) have created a fertile ground for Bolsonaro's far-right populism.

Despite the fact that the specific socio-political and economic backdrop of far-right insurgency in different parts of the world differ, there seems to be some common elements: a relative high incidence on the population of mistrust in political representatives, the perception of internal or external threats, and a strong sense of insecurity, uncertainty and fear, either in the domain of physical integrity, worldviews or economic performance. The discourse of a lost better past is also a common element. For example, in the case of Brazil, the far-right imaginary has adopted the period of the military dictatorship (1964-1985) as the reference.

3. The psychology of fear and authoritarianism

3.1 Constructs for assessing authoritarian preferences

Why are periods of crisis, and the related increase in the sense of insecurity, associated with a shift of preferences by lay people towards authoritarian and far-right political options? The field of political psychology has made important contributions trying to answer this question by analyzing empirically the relationship between psychological profiles and political preferences (including those for authoritarianism). Two important analytical constructs assumed to reflect authoritarian attitudes are 'Social Dominance Orientation' (SDO) and 'Right Wing Authoritarianism' (RWA). SDO refers to preferences for dominance of some social groups over others and for inter-group inequality (Pratto et al., 1994); RWA reflects individuals' preferences for coercion, social control of deviant behavior, conventionalism, submission to authority, and hierarchical leadership styles (Altemeyer, 1996). Scholars that have assessed the incidence of SDO and RWA in the population are part of an academic tradition concerned about the political implications of the 'authoritarian mind'.³ This research strand aims to understand why authoritarian political ideologies find more resonance in some individuals and social groups than in others (Jost et al., 2009), an issue that can offer insights for explaining the current rise of authoritarianism in liberal democracies (Pettigrew, 2017). Two key underlying assumptions of this stream are that people are drawn to belief systems that best resonate with their psychological motives, and that specific psychological traits, such as social attitudes, can largely determine adherence to authoritarian leaders and support for authoritarian political views and values (Hennes et al., 2012).

³ This research strand started after the end of WWII with the work of scholars such as Theodor Adorno who was interested in understanding the psychological foundations of the rise of fascism in Europe (Adorno et al., 1950).

Both SDO and RWA use metrics based on the intensity of agreement by people toward proposed statements. Both have been found to be positively related to conservative social and political attitudes, ideologies and values (Whitley and Lee, 2000; Pratto et al., 2006; Sibley and Duckitt, 2010; Ho et al., 2011; Wilson and Sibley, 2013). SDO and RWA indicators also tend to be positively correlated with experiencing insecurity, threat and danger (Dhont and Hodson, 2014; Jugert and Duckitt, 2009; Shook et al., 2017). This concurs with other studies that report a positive relationship between the sense of fear and a propensity to hold conservative and authoritarian views (Duckitt and Fisher, 2003; Nail et al., 2009; Jost et al., 2007a; Jost et al., 2009; Jost et al., 2017b). This might partly explain why the ‘politics of fear’ is more frequent in the conservative side of the political spectrum (Jost et al., 2017c). Individuals under a psychological state of insecurity and feeling of external threat also tend to defend their views vigorously (Webb, 1998). Authoritarianism has also been reported to be associated with cognitive rigidity and intolerance to ambiguity (Duncan and Peterson, 2014), which might in turn explain skepticism towards scientific evidence, including disbelief in climate change (Jessani and Harris 2018).

In addition, recent studies report that conservative individuals tend to have more homogenous online networks (Jost, 2017a), possibly related to an underlying psychological tendency to block information and data that challenge their core beliefs and interests. Compared to other groups, conservative individuals also tend to systematically overestimate more the prevalence of their own opinions in the wider population (Jost, 2017c), and to resist revising or correcting their opinions when they perceive that these are shared within their social networks (Lewandosky et al., 2017).

3.3. The vagaries of post-materialist values in western liberal democracies

SDO and RWA were initially proposed as personality traits (Altemeyer, 1998). That is, stable features consolidated at early stages of individual development. Inglehart also initially proposed that basic values, either post-materialist or materialist, are consolidated during individuals’ formative years and early socialization stages, and tend to endure the whole life, therefore becoming personality traits. According to him, this would explain why the rise of post-materialist values took place at a slow pace in western liberal democracies, in the context of generational replacement after WWII (Abramson and Inglehart, 1995). Nonetheless, more recently, SDO and RWA have been assumed to reflect rather social attitudes (Duckitt, 2015), and therefore are expected to be influenced by socio-economic conditions. Indeed, the experience of threat and fear can increase the levels of SDO and RWA in the short-term (Sibley et al., 2007) and hence individuals perceiving economic or social uncertainty as well as physical or symbolic threat, might rapidly increase their preferences for authoritarianism and the associated inter-group prejudices. This might partly explain the recent backlash of post-materialist values in the U.S., resulting in the election of Donald Trump (Inglehart and Morris, 2017).

Based on the evidence raised by the social psychology literature (reviewed above), showing a relationship between authoritarian social attitudes and the sense of existential insecurity, threat and fear, we posit that the increase of the political influence of far-right movements in liberal democracies is likely associated with a rise in SDO and RWA among the population. This hypothesis has still to be empirically demonstrated in different world regions. Research using the SDO and RWA constructs has been mainly conducted in the U.S. (with an over-representation of college students in the samples) and longitudinal studies (assessing these indicators across time) are scant (for a recent example see Stanley et al., 2019). The psychological foundations of authoritarianism associated with left-wing political preferences have considerably been less investigated, as compared to right-wing authoritarianism (Conway et al., 2018). This is a subject that deserves further investigation (being Venezuela and Nicaragua recent examples of left-wing authoritarian drifts in democratic settings).

Summarizing, the rising ‘far-right insurgency’ across world regions might be an indication that we are living an age of fear, a proposition that coincides with sociological interpretations of contemporary capitalism (Bauman, 2006; Bordoni, 2017). The drivers (causes) of this situation may vary from place to place, but the experience of indignation, mistrust and threat seems to be a common feature. We posit that while the changes in socio-economic conditions underlying individual perception of existential insecurity are diverse, the emergence and consolidation of global communication and political networks, enabled by information technologies, is helping to shape, unify and reinforce a global far-right political movement, rooted in both authoritarian and anti-environmentalist political preferences.

3.4. Authoritarianism and anti-environmentalism

The Trump and Bolsonaro administrations are good examples of a far right insurgency movement coming to power with both an authoritarian profile and a policy agenda that dismisses important environmental issues, including those that have long been crafted through multilateral agendas. They mimetically share a number of anti-environmental stances, including inter-alia, a sceptic and even denial position on climate change, clear preferences for short term economic growth over longer term environmental protection, the belief that current environmental regulations are excessive and deterrent to economic prosperity, opposition to indigenous rights over their territories, and an aggressive attitude towards environmental activists and NGOs, who are considered to be threats to the desired social order.

The contemporary association between authoritarian and anti-environmentalist political preferences, reflected in the profile of the Trump and Bolsonaro administrations, might have a psychological foundation. Social psychology has found a positive relationship between authoritarian and anti-environmental attitudes (Stanley and Wilson, 2019). Empirical evidence suggests that SDO is a good

determinant of climate change denial (Jylha and Akrami, 2015), even better than self-declared political orientation (Hakkinen and Acrami, 2014). The overrepresentation of white conservative males among climate change deniers (McCright and Dunlap, 2011; Bjonberg et al., 2017) could partly be explained by their relatively higher levels of SDO (Jylha et al., 2016). Milfont et al. (2017) also found that SDO is negatively related to engagement with environmental citizen action and pro-environmental behaviour across a wide range of cultural backgrounds. Similarly, Stanley et al. (2017b) report that individuals revealing higher levels of the SDO-dimension ‘intergroup anti-egalitarianism’ are less likely to believe in anthropogenic climate change and are also less likely to value environmental protection, thus being less willing to make consumption sacrifices for the environment. In another study, Stanley et al. (2017a) also show that individuals who reported higher levels of RWA tend to have lower scores for pro-environmental attitudes and higher levels of climate change denial, with RWA being a strong predictor of environmental concerns more generally.

The same psychological mechanisms that explain how group-based social hierarchy is formed and maintained (Pratto et al., 1994) seem to be related to anti-environmental attitudes. Some political psychologists propose that a hierarchical view on human-nature relations is intrinsically related to the support for social inequality (Milfont et al., 2013; Milfont and Sibley, 2014). Psychological preferences towards hierarchy and social domination might then explain both tolerance towards social injustice and environmental destruction (Feygina, 2013), as domination and even annihilation of both underprivileged social groups and nature is justified by authoritarian worldviews. One of the contributions of political psychology has been the social dominance theory (Pratto and Steward, 2012), which stresses the notion of ‘legitimizing myths’. That is, compelling cultural ideologies that permeate worldviews and human relations, and that frame and legitimize different aspects of the social structure, including social and human-nature relations. Myths legitimizing human superiority vis-a-vis non-human species justify human entitlement to dominate nature and ecosystems, including via private ownership on them. This human-nature relational model is characterized by a perception of nature as separated and subordinated to humans and a source of threat, thereby interactions with it being generally based on social norms that justify its appropriation, exploitation, and ultimately, its destruction (Muradian and Pascual, 2018).

4. The (sustainability) science-policy interface under post-truth politics

4.1. The nature of the science-policy interface

Rationality is a high order aspiration associated with policy making in western liberal democracies. The assumption that scientific knowledge is a fundamental ingredient of the policy formulation process is also a core tenet of modernity (OECD, 2015), particularly in fields characterised by a high degree of complexity as it is the case of the governance of social-ecological systems (Rose *et al.*, 2017). Despite

sometimes scientists being criticised for not producing information considered useful for policy design, and policy makers and activists frequently complaining about the mismatch between the pace of scientific progress and their knowledge demands for decision making (Hanssen et al 2009), impartiality, objectivity and reliance on scientific evidence have remained core principles for gaining influence and legitimacy in policy design and advocacy (Johnston and Soulsby, 2006). These social values and conventions have entitled scientists to hold a privileged capacity to influence policy (Nelson and Vucetich, 2009). In contemporary societies, despite relatively low levels of scientific literacy among the lay population, scientists have traditionally played the role of epistemic authorities when it comes to formal knowledge generation and dissemination, and such role has been largely endorsed by the modern state (Harambam and Aupers, 2015).

The science-policy interface is more complex than a mere linear flow of information or knowledge from generators (scientists) to recipients (policy makers or other policy actors). Indeed, the deficient uptake of scientific evidence for policy design is not the result of an 'information-deficit' (Bilotta, et al, 2015; Likens, 2010, Iyengar and Massey, 2018) but a structural issue related to the interests and attitudes of both powerful actors and lay people (Iyengar and Massey 2018). Most problems that require social decision making cannot be addressed only with the generation of more and better information or knowledge (Marshall *et al.*, 2017). In fact, there is a sizeable literature dealing with frameworks, theories and models explaining science-policy interactions (Sebatier, 2007). Scholars normally acknowledge that policy participants are goal-oriented and have limited cognitive abilities, and thus are influenced by their ideologies and belief systems when processing information, and that these participants are guided by both emotions and rational reasoning (Weible *et al.*, 2012). But the formal discourses around the science-policy interface (in the U.N. or the E.U., for instance) are still dominated by a modernist and positivist mood. The prevailing vision seems to be that policy makers are enlightened from the knowledge generated or/and synthesized by scientists. In this vein scientists can objectively help policy makers adjust what they should understand and value. In other words, using the metaphor of Weiss (1977), the role of scientists is regarded as favouring the 'sedimentation of knowledge' by a gradual build-up of evidence, while trying to take advantage of windows of opportunity for policy change (Rose et al., 2017). From this perspective, scientific evidence can be used to help settle political disputes, including socio-environmental controversies, by means of providing objective and neutral knowledge (Sarewitz, 2004; Pielke, 2007). Such vision is common in the formal discourses of environmental science-policy bodies such as in the IPCC and IPBES that inform the UNFCCC and the CBD and in so doing exert influence over national policies (Turnhout et al., 2017; Díaz-Reviriego et al., 2019).

However, in practice, the policy-science relationship is messier. In liberal democracies, policy makers weigh the costs and benefits of policy change mainly in terms of their interests and influence, particularly with regards to obtaining votes and popular support influenced by political and electoral cycles. That is,

it should be noted that often the commitment of policy makers to their strategic interests is more important than their commitment to upholding scientific evidence. Put it slightly differently: science becomes a source of legitimacy only when it supports the strategic interests (and power) of the worldviews and ideology shared by policy makers (Marshall et al., 2017; Iyengar and Massey, 2018). The way scientific knowledge influences policy decisions is, to a large extent, conditioned by the worldviews, belief systems and normative values of policy makers (Ostrom et al. 1993), which in turn are mediated by the perceptions of stakeholders about issues such as the role of state intervention vs. the role of markets, ideas of what constitutes fairness and justice, and attitudes towards what stands as legitimate knowledge, data, and ultimately, evidence. Such belief systems and normative values are articulated in ‘advocacy coalitions’ to defend or oppose policy designs while making a strategic and selective use of information provided by science (Weible et al 2012).

The particularity of the current wave of ‘post-truth politics’ (PTP) is that it exacerbates this selective use of information in policy design, by means of the deliberate social construction of truth (lies) that support the preferred (official) political stances, even though this implies sowing doubts about or simply challenging empirical evidence that is widely accepted by the scientific community (Samet et al., 2017). In the context of PTP, both politicians and policy influencers can blatantly lie and deny scientific facts (Higgins, 2016; Lubchenco, 2017). PTP constitutes then a challenge to basic principles of modern liberal democracies (still founded on positivist tenets) as it undermines the expectation of evidence-based, well-informed and rational decision making, and concomitantly reduces the capacity of scientists to engage in and influence policy processes.

4.2. The emergence of new epistemic authorities

The PTP phenomenon can be partly explained by the rise of authoritarian orientation in a significant share of the population, and partly by the development of new information ecosystems spurred by online social networks and big data technology (Lockie 2017). While all humans are fallible in processing information and scientific evidence due to confirmation biases (Klayman, 1995), it appears that individuals that score high in SDO, and conservative individuals in general, tend to be considerably less tolerant to cognitive uncertainty (Hinze et al., 1997; Jost et al., 2018b), and therefore have a stronger tendency to avoid information that challenges their own belief system.

The actors that subscribe to the current far-right insurgency do disseminate myths and information that often contradict and question scientific consensus, while they support their worldviews on which they rely to legitimize their political views. In fact, open antagonism in the official political discourse towards both intellectuals and journalists is a common characteristic of the emerging authoritarian regimes (Carlson, 2018). This is being possible by social media and networking services that enable the formation

of isolated information ecosystems, distant from both science and the professional media (Ault et al., 2017; Alsaad et al., 2018). Such information ecosystems become trusted sources of information because they are founded upon emotional feedback loops (Boler and Davis, 2018) and friendship networks (Jost et al., 2018a). This phenomenon is largely breaking apart the traditional role of intellectual and journalist elites (often part of the well-educated and liberal middle class who tend to be supportive of the role of science in society) in controlling information generation and dissemination, and reflects a shift of epistemic authorities. When information and knowledge provided by traditional epistemic authorities (scientists, professional journalists) challenges their belief system, lay people can nowadays more easily shift to other epistemic authorities, mainly through alternative communication channels, for example through the social media. Enabled by modern information technologies and big data, influencers, populist politicians and minority intellectuals (often out of the academic establishment) are nowadays being able to create powerful and influential information ecosystems that challenge the scientific evidence and scientific consensus. Global information networks supporting climate change denial is a good example of this phenomenon.

It is a common practice under PTP to disqualify scientists' views not on the basis of well-articulated arguments and evidence, but instead by appealing to conspiracy theories (Harambam and Aupers, 2015), e.g., far-right politicians denying the reality of anthropogenic climate change and calling it a Marxist plot. In fact, the psychological motives behind the adherence to conspiracy theories and the adoption of authoritarian attitudes are similar (Douglas et al., 2017; van Prooijen and Douglas, 2017). Furthermore, we posit that group behavior based on the discourse of 'us' (the powerless that never had voice) against 'them' (the powerful that always dominated the official voice), reinforces the sense of rebellion against traditional epistemic authorities. The rebellion takes place in the form of a contestation by lay people of the domination of 'truth' and information by the illustrious intellectual elites (often politically non-conservative). The result has been a clash about very dissimilar value systems and parallel conceptions of reality, reflected in very salient political polarization, including political stances towards the environment.

In summary, the guiding principle that has dominated the science-policy interface during the past decades — namely that more and better scientific evidence can improve the quality of social decision making processes — needs to be critically revisited. The PTP phenomenon, especially in emergent far-right authoritarian regimes is drawing attention to the fact that the influence of scientists in society is conditioned by changing worldviews and shared value systems, and therefore the privileged position of scientists to influence public decisions should not be taken for granted. In this context, we should wonder what the role for ecological economists should be. The following section addresses this matter.

5. Ecological economics in a context of science denial and anti-environmentalism

In the context of a global far-right insurgency the ecological economics community needs to tackle a double reflection: The first one has to do with the role of ecological economists in terms of analyzing the relationship between the role of power, communication and evidence. This can help us better understand how the knowledge and evidence that we produce can be effectively shared with and used by the general population, and how we should best engage in any relevant (sustainability) science-policy bodies and processes, such as those associated with the IPCC and IPBES. We posit that in order to enhance our capacity to exert effective advocacy for sustainability, we should invest more in framing knowledge and evidence in a way that is culturally meaningful to diverse social groups and target audiences. This leads to a second reflection about how to best tailor the ecological economics research agenda to address the main contemporary drivers of changes in environmental values underpinning social decisions in different political contexts.

With regard to the first issue, we have to take into consideration both the current consolidation of isolated information ecosystems (of people that think and perceive the world alike) and the fact that individuals selectively look and assess scientific evidence in order to reflect and reinforce their group identity (Kahan, 2015). In this context, polarization of attitudes towards the evidence we generate is more likely to occur, especially when the position on factual information is perceived as a matter of loyalty to a particular social group. We thus need to realize that the cultural meaning of the information we provide is a crucial element for generating and reinforcing in-group identity given the core values of social groups. As Kahan et al. (2012) noted, when the evidence we provide as scientists is seen as a threat to group identity and shared core beliefs, it will most likely be rejected or simply neglected, no matter the level of our scientific quality or level of technical reasoning of the target audience. Thus, the issue is not so much about the kind of evidence we generate or the technical abilities to process it, but about how such evidence interacts with social conventions defining group identity. In other words, we should take into account that besides the efforts in generating and disseminating data and knowledge, this will only have a chance of being considered in social decision if it reinforces the cultural predispositions of the receiver, be it a policy maker or lay people in general. Further, we concur with Kahan et al. (2011) who argued that it is advisable to organize plural advocacy groups or coalitions (in terms of core values and political preferences), since people tend to reject information that is advocated by experts whose values they reject. In addition, they state that since the way individuals assimilate information depends to a large extent on how it fits in pre-existing narrative frameworks, messages have to be crafted aiming to evoke narrative templates congenial to the target audiences. Therefore, we should take into account that what it matters is not only the cultural meaning of the information, but also who disseminates it, and how it is narrated.

Regarding the second issue (the overall research agenda of ecological economics), we posit that we need to better engage with the question about how shared values and cognitive frameworks shaping human-nature relations are constructed and reconfigured in different social groups. In so doing, we need to pay more attention to understanding the current ‘authoritarian syndrome’. This calls to explicitly embark in the analysis of the economic, historical, sociological and psychological causes of existential insecurity in contemporary capitalism, and to acknowledge appropriately the role of emotions in creating political preferences underpinning social decision-making. Hence, we favour building bridges with academic traditions and disciplines with which ecological economics has had relatively weak connections, such as social and political psychology.

The current authoritarian syndrome reveals that tackling global environmental problems requires understanding contemporary sources of anxiety and existential uncertainty structurally related to the current phase of global capitalism. While ecological economics needs an overarching theory to understand the psychological and sociological foundations of the age of fear, we also ought to acknowledge and analyse the impacts of different sources of fear, as these may vary significantly among world regions. We expect different drivers and patterns in high and lower income countries. But there is a remarkable knowledge gap with regard to the causes of the rise of authoritarianism (and the associated anti-environmentalism) in developing countries, since most recent theoretical and empirical studies on this issue have been done in Europe and the U.S.

A second related aspect in shaping the research agenda concerns the role of environmental valuation. Ecological economics has devoted considerable efforts to develop and apply methods for eliciting values, including those that stress the role of deliberation and participation (Zografos, 2015; Kenter, 2017). The key role of valuation is to facilitate the articulation, expression and incorporation into social decision making of the values held by different actors, and by doing so improve the chances of achieving more sustainable and fairer decision making outcomes (Spash, 2017). We contend that in a context of rising anti-environmentalism by authoritarian regimes, supported by post truth politics, a plea for investing in refining current valuation techniques may be a futile and misleading strategy to advance in the pressing global sustainability agenda, in the same way that in a context of climate change denial more and better evidence (on top of what we already know) about the causes and consequences of climate change is not likely to be effective to help understand how to best transform the economic model that underlies global warming. A shift of emphasis is then needed from investing in better value elicitation approaches to better understanding how values conditioning human-nature relations are socially constructed and evolve over time (Muradian and Pascual, 2018). Moreover, when it comes to the big contemporary challenge of how to develop more harmonious human-nature relations, as ecological economists we need to engage with non-western cultural backgrounds and non-scientific forms of knowledge (Narby, 1999; Kopenawa and Albert, 2013). In this sense, ecological economics does not only need to continue pursuing

transdisciplinarity, but also to undertake an exercise of humility vis-a-vis other knowledge systems, something that generally scientists are not used to do.

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