

Between “Empowering” and “Blaming” Mechanisms in Developing Political/Economic Responses to Climate Change

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This conceptual paper reviews four dimensions of the climate change (CC) debate concerning perception, framing, and political and economic dimensions of CC. It attempts to address the question posed by sociological research as to what can be done to reduce the social forces driving CC. In doing so, it attempts to uncover mechanisms that delay or prevent the social change required to combat CC. Such mechanisms call into question the Ecological Modernization Theory’s assumption that modern societies embrace environmental sustainability with no radical intervention to change the social, political, and economic order. It specifically considers how the representation of CC as a distant phenomenon, in both temporal and physical terms, might contribute to social disengagement. A reflection on the interdependencies among science, political economy, media, and individual perceptions guides this paper. All these social forces also shape the CC discourse in diverse ways according to the evolution of the phenomenon over time (in scientific, but also in political and economic terms) and in relation to its spatial dimension (global/national/local). The variety of climate discourses contributes to increasing political uncertainty; however, this is not the only factor that generates confusion around the CC. Multiple and contrasting information might trigger a “blaming/empowering game” that works at various levels. This mechanism simultaneously promotes the necessity for sustainable development and perpetuates “business as usual-oriented” practices. Implementing sustainable development is therefore constantly undermined by a difficulty in identifying “heroes” and “devils” in the context of CC.

Introduction

This conceptual paper considers what can be done to reduce the driving social forces of climate change (CC) (Rosa et al. 2015) by identifying some processes that slow down the social changes required to rebalance the society–nature relationship. It sheds light on a “blaming/empowering game” in attributing responsibilities for both causing and tackling climate change, which is reflected at multiple levels of society. At the macro level, it involves blaming/

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empowering pressure between developing and developed countries. At the meso level, it involves blaming/empowering pressures between organizations, businesses, social movements, and local governments. Finally, at the micro level, it involves a reciprocal blaming/empowering game between governments and citizens who describes the climate issue as a “government responsibility” (Boulianne, Lalancette, and Ilkiw 2020). In contrast, similar to the practice of blaming consumers for non-healthy choices in public health policies (Lotte 2003), CC framing tends to individualize risks by holding citizens responsible for protecting the environment and blaming them for environmental crises (Nihlén 2009). However, in contrast to the public health context, in which individual choices are promoted for personal advantages, in the case of CC, citizens are simultaneously empowered to limit direct consequences on the individual, societal, and environmental levels.

The blaming/empowering contradiction derives from a conceptualization of political and economic development that reinforces the structural dimensions of unsustainability (Lorraine, O’Neill, and Lorenzoni 2011) because it is nested in societal patterns and habits that are dependent on the exploitation of natural resources (Beck, Giddens, and Lash 1994). Such a development concept is based on “ecological modernization theory” (EMT) (Mol Arthur 1995), which optimistically attributes the ability to address environmental issues to modernization processes. The central tenet of EMT is that modern institutions, including economic bodies and governments, will increasingly incorporate ecological values into economic decisions (Richard, Rosa Eugene, and Thomas 2010). As a result, modernization processes will gradually enable capitalist societies to become sustainable (Mol Arthur 1995, 2001; Mol Arthur and Spaargaren 2010). Therefore, from a sociological perspective, such a contradiction also corresponds to the discrepancy between individual agency and societal trends. However, individual choices are embedded in a network of exchanges with institutional, political, economic, and cultural contexts (Rosa et al. 2015), and households are also influenced by the available mitigation options (Ehrhardt-Martinez et al. 2015a). The tendency to rely upon individual agency (Shove 2010) collides with the broader organization of social practices and the framing of CC as a distant problem. Part of this contradiction might be explained by a power play between processes of individualization and globalization typical of the world risk society (Beck 1999; Anthony 1990; Niklas 1993). In this direction, the dismantling of (structural) certainties typical of late modernity and the end of meta-narratives (Jean-François 1979) might explain this increasing process of the individualization of responsibilities (but also blame). These contrasting forces between deregulation/individualization and globalization/de-spatialization might shift the focus on individual choices, but not necessarily cancel structural constraints. In other words, the de-structurization of the welfare state by neoliberal

conceptualizations has produced structural uncertainties, which in turn make it difficult to identify devils and heroes. In contrast, uncertainties become structuralized by producing an “ontological (in)security” (Anthony 1991) that is embedded in a risk-stratified system in which individuals can be simultaneously perpetrators and victims. The origins of such uncertainty might be interpreted in light of constructivist approaches that view the environment as politically and normatively “constructed” (Benton 2001). The literature shows how cultural constructions of space, for example, can influence individuals’ perceptions of their responsibility for emissions (Frantz and Mayer 2009; Marie 2011). The blaming/empowering reasoning might be interpreted as a result of a shift toward constructivist analyses in the climate change debate (Costance 2008) that have been instrumentally used by more conservative think tanks over time (Bruno 2004). From an ethical point of view, some interdisciplinary literature debates on attributing responsibilities to individual morality (Dale 1992), the structural level (Scavenius 2018)—including both political and corporative bodies (Nihlén 2009)—or the interaction between individual/contextual dimensions (Gardiner 2011). In contrast, this paper fills a gap by providing a macro-conceptualization of the mechanisms behind the slow advances made to tackle CC at both global and local levels by focusing on the interplay between four core dimensions, which are represented by (1) individual perception, (2) political and (3) economic dimensions and (4) CC framing. Contemporary studies on CC still highlight a need for a sociological conceptualization of CC that engages with other disciplines/dimensions (Thomas, Shwom, and Whitley 2020), and our research moves across these lines.

Allison (2019) concept of *environmental subjectivities* captures the interplay between structure and agency by combining the roles of power, ideology, and agency in shaping climate perception. This concept helps identify how a combination of multilevel factors might explain individual knowledge of CC. This study adds to this discussion by conceptualizing the interplay between agency and structure as biased by an unclear blaming/empowering game between three levels (macro, meso, and micro). Overall, the literature highlights that citizens are informed by incongruent information, especially those who are to blame (Hameleers and van der Meer 2019). Therefore, this paper adopts a different angle by focusing on a blaming/empowering paradox between parties, which is rooted in the persistence of a constructivist conceptualization of CC that makes it closer to an abstract concept rather than reality and makes it vulnerable to interpretation. In turn, such relativism can become instrumental in serving certain economic interests in keeping the status quo unaltered (based on a withdrawals-additions scheme, see Schnaiberg 1980).

While individual action is emphasized as essential by political bodies, four dimensions come into play in producing social disorientation, represented by

political and economic components, climate framing, and individual perception. As a result, the sustainable development concept is constantly undermined by an unclear attribution of responsibility and what should be done, as well as the perpetuation of anti-environmental lifestyles at the global level. Therefore, the interaction between these four levels generates a blaming/empowering game that is bidirectional from the political/economic to the individual level, and vice versa. Given these contrasting messages, individuals may opt to delegate the responsibility of tackling the problem to local/national/global institutions, organizations, businesses, and social movements (by blaming/empowering them).

To examine this contradiction, this study investigates how the key dimensions of (1) CC perception, (2) political, (3) economic dimension of CC and (4) framing CC in certain ways might undermine intervention against CC at the individual, collective, and institutional levels. Diverse strands of the literature will be considered to contribute to the debate on the directions for social change and sustainability. This study conceptualizes the combination of these dimensions as a paradox generated by contrasting messages that hamper engagement. This also challenges the assumption that modern societies can embrace environmental sustainability without any radical intervention to transform the social, political, and economic order, as proposed by EMT. Indeed, while societies are urged to adopt sustainable lifestyles, they are bombarded with contrasting messages (Hameleers and van der Meer 2019), such as the severity of CC and necessary global actions, and this generates a misalignment between the perception of individual agency and the “social ordering of practices” (Evans, McMeekin, and Southerton 2012, p.114), which in turn suggests uncertainty and confusion about individual/collective responsibility. This is also supported by contrasting debates, particularly in environmental sociology, about the global versus local dimensions required to address climate change. Some scholars argue that the global dimension of CC obscures what happens at the local level; the lack of a macro-perspective may favor unbalances due to some micro realities “withdrawing” more natural resources than others and producing more “additions” (in terms of pollution) to the environment (see Buttel, 2010 for a review).

The second section introduces methodological notes and the two that follow focus on the key aspects of the debate on individual perceptions of CC and CC framing processes. The fifth section connects these aspects to the political and economic valences of CC, and the sixth formulates reflections on the forces that contribute to the opposing forces at work in producing both empowering and blaming mechanisms.

Methodological Note

This study aims to develop a conceptualization of the blaming/empowering mechanisms in the context of CC that can help interpret (and enhance) climate

perception and engagement. The interdisciplinary studies included in this paper were employed to develop such a conceptual tool. Differently from a literature review, which is focused on the analysis of “what has been done,” and eventually “what can be done in the future to fill the highlighted gap,” this paper adopts a conceptual approach by focusing on specific dimensions that can help the process of conceptualization (Gilson and Golberg 2015). Following this approach, a conceptual piece should propose a brief overview of the state of science, but the sections should be tightly focused and moved to tackle the area that needs theoretical development. Therefore, following Gilson and Golberg (2015), this conceptual study is based on the connections between multiple bodies of literature that support the construction of the blaming/empowering argument (Callahan 2010). For this reason, this paper is organized into sections that focus on specific aspects and consider the main interdisciplinary approaches to the issue under analysis. Each section moves to the conceptualization of the blaming/empowering mechanism behind each dimension considered. This paper cannot pretend to be exhaustive in including the extensive corpus of interdisciplinary literature on CC, but it adopts a sociological perspective to understand the interplay between social forces in generating blaming/empowering mechanisms. More specifically, this study focuses on the key dimensions of (1) CC perception, (2) the political, and (3) economic dimensions of CC to investigate how (4) framing CC in certain ways might undermine intervention against CC at the individual, collective, and institutional levels.

Individual Perception of Climate Change

Sociology has increasingly focused on how to activate both individual and collective behavioral changes by considering individual dispositions and behaviors in relation to social networks, cultural norms, and material infrastructure (Boström 2020). Sociology has recognized the relevance of individual consumption in contributing to CC (see Saidul and Kieu 2021 for a review). The *Treadmill of Consumption* is one of the pillars of economic growth (Rosa et al. 2015). The aforementioned inequality mechanisms established between rich and poor countries are also mirrored within nations, with overconsumption by certain more powerful groups and increased vulnerability to the effects of environmental change for other poorer groups.

The literature recognizes the pivotal role of CC concerns in supporting climate-related policies (Arıkan and Günay 2021; Brhane 2019) and engaging in environmentally friendly behaviors (Smith and Mayer 2018). To promote collective action, several studies have been devoted to identifying socio-psychological traits of climate skeptics by showing that skepticism might be driven by a more conservative orientation to secure current societal structures

(Hornsey, Harris, Fielding 2018). Despite these efforts, skepticism persists. Figure 1 shows a division between “skeptics” and those “worried” about the consequences of CC in 30 countries. The vertical axis shows the number of respondents who did not perceive CC as a threat to their country. The horizontal axis reports the number of respondents who stated that CC is a “major threat” (Pew Research Center, 2019). Concerns regarding CC differed across the countries studied. In Figure 1, the red line separates countries where most respondents believe that CC is a major threat from those where <50% of respondents believe that CC represents a major threat, and the blue line separates countries where the frequency of skeptics is relatively low (under 10%) from the countries where the percentage of skeptics is higher. In 17 out of 30 countries, which may be defined as the “worried and low polarized countries,” the absolute majority believes that CC is a major threat and the percentage of those completely skeptical is low (Figure 2).

In countries (such as the United States, South Africa, and Tunisia), which may be defined as “worried and moderately polarized countries,” most people believe CC is a major threat, but some people believe CC is not a threat at all. In the “least worried countries” (Russia, Israel, and Nigeria), the percentage of respondents who believe in the reality of CC is only the relative majority. By contrast, a relatively large group believes that CC is not a problem. Finally, India stands alone in a situation where skeptics are rare, but the relative majority consider CC to be a minor threat. These data that reinforce multiple dimensions are at play in generating different perceptions, not only between countries (given their contextual specificities) but even within the same country. The

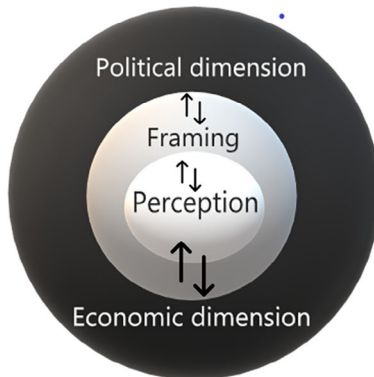


Figure 1 Interactive dimensions that generate the blaming/empowering paradox.

processes (Hulme 2015), existing worldviews (Thomas and Porter 2019), personal experiences (Bergquist, Nilsson, and Schultz 2019), plus religious and political factors (Sarithchandra and Haltinner 2020), seem to have a higher influence on risk perception than education or knowledge (McCright 2011). Some scholars focus on individual core values, such as solid faith in economic growth and the potential limits imposed by climate mitigation strategies (Kahan et al. 2012). In contrast, egalitarian and communitarian values lead people to be skeptical about industry activities and therefore perceive potential CC deriving from them. Finally, among the barriers to CC awareness, research into individual opinions on CC attitudes distinguishes between personal and global levels of threat (Helm et al. 2018). The literature indicates a tendency toward temporal pessimism (Robert 2011) and psychological detachment (Wang et al. 2019). According to these studies, there is a growing awareness of environmental change, but CC is also likely to be perceived as a distant/global problem, due to high media coverage of global facts rather than local impact (Candice and Anderson 2019).

As a result, while the debate over CC perception generates contrasting results in terms of the role of individual and external factors, these studies have in common the social construction of CC meaning, which is determined by a variety of intertwined variables from science, politics, economics, and media communication processes. These findings stimulate reflection, which is developed in the following section, on the variety of bodies that play a role in framing the political–economic debate on CC and influencing CC perception.

Framing Climate Change

News frames can be defined as “patterns of meaning articulated in news content” (Brüggemann 2014). Frames provide trajectories for interpreting problems by focusing on certain aspects while ignoring others (Stanley 2011). The previous section suggested that frames are not only produced by the media but are also filtered by media users through several individual variables. Hence, climate-related frames might be interpreted as the result of multiple frames emerging in journalistic, public, scientific, and economic–political contexts. The literature has extensively explored the factors that can make CC framing successful by producing various results. Media communication that combines narratives of CC consequences and the provision of solutions is recognized as appealing for individual engagement (Emilia and Carolina, 2014). However, Arlt, Hoppe, and Wolling (2011) found that media effects do not necessarily produce long-term behavioral change, partly because dealing with the CC emergency is often perceived as the “government’s responsibility” (Stoddart Mark and Tindall 2015). Governments tend to be held responsible for regulating both collective and individual behaviors through policymaking and preventive

measures. However, the literature promotes meta-theoretical approaches that consider the interdependencies of different systems (cultural, economic, physical, political, historical, and social) (Olausson and Berglez 2014) and are based on interdisciplinary efforts (Ballantyne 2016). This suggests that the success of a strategy is likely to depend on the flexible combination of different approaches, according to specific goals, audiences, resources, and contexts. However, despite the recognition of the multidimensionality of CC, the debate scarcely considers the macro-mechanisms that might be activated by the combination of personal/institutional dimensions and global/local dimensions. The literature on CC framing processes emphasizes that the perception of CC is influenced not only by individual attitudes but also by the political and economic structures in which the individual perception is embedded. If governments are held accountable for developing regulations to control CC by both citizens and businesses (empowerment mechanism), but individual perception is negatively influenced by (economic) losses resulting from the implementation of stringent policies (blaming mechanism), a vicious cycle is created. In this cycle, the political and economic actors might switch roles by blaming the collective (Western) lifestyle for the current environmental degradation and empowering single individuals to act. This blaming/empowering interplay between individual perception and the political/economic dimension of CC will be further clarified in the next section.

Coverage of the Political and Economic Dimensions

The debate surrounding the coverage of CC highlights that both economic factors and political agendas play a primary role in influencing discourses on CC (Anderson, 2009). Climate, Economics and Politics are interconnected on at least four levels: (1) the international political and economic environment; (2) the political orientation of the media; (3) the perception of the problem according to individuals' political orientation; and (4) the influence exercised (explicitly or implicitly) by political and economic bodies on CC communications. Therefore, this paragraph considers these two different but intertwined dimensions in the same section. However, these dimensions of the political economy of CC are often considered independently in the scientific debate, and as such, they lack an understanding of the mechanisms activated by the combination of these processes at the macro level of conceptualization.

At the international level, the conflictual frame surrounding CC represents a power play between nation-states (Risto and Eide 2012). While developed countries have struggled to reduce their emissions, developing countries have become increasingly dependent on GHG emissions for economic growth and are less willing to make sacrifices to improve global environmental quality (Timmons and Parks 2006). This is also emphasized by the theory of

ecologically unequal exchange (Rosa et al. 2015), which distinguishes between developed countries that withdraw resources from developing countries and developing countries that suffer environmental damage. However, developing countries respond to these imbalances by refusing to support the growth of Western economies and claiming that their resources should be used for internal growth.

Similar to EMT, some economic approaches have examined capitalist societies' ability to embrace sustainability by employing the "Environmental Kuznets Curve" (EKC) hypothesis (Grossman and Krueger 1991, 1995). The EKC assumes that as incomes rise, so will the global demand for environmental quality. As a result, the policy implication for addressing CC behind this hypothesis is simply "inaction," because if economic growth is not hampered by stringent regulations, an increase in living standards will automatically drive an increase in demand for environmental quality. This is also emphasized by EMT, which interprets the emergence of environmentally friendly regulations in light of certain stable socioeconomic conditions that encourage rapid technological innovation to combat environmental degradation (Mol Arthur 1995). The EKC hypothesis has produced conflicting results (Cem, Ongan, Özdemir 2019; Stern 2004). Huaping et al. (2020a, 2020b) tested the EKC hypothesis by using panel data techniques for 35 sub-Saharan countries. They conclude that this conjecture was verified in these countries. Interestingly, they also showed that environmental entrepreneurship is associated with decreasing carbon dioxide emissions. Sustaining the development of this type of entrepreneurship could reduce environmental pollution during the rising phase of the EKC. In contrast, according to Susmita et al. (2002), low- and middle-income countries reduce pollutants more rapidly and efficiently than wealthy countries do.

However, the evolutionary perspective underlying both the EKC and EMT fails to account for the urgency of CC and the interaction of socio-political and economic forces, which can delay intervention at multiple levels, even when economic well-being has been achieved. At the international level, the distribution of responsibilities causes fractures between developed and developing countries (Gunster 2011). The dominant "Western media construction" of the problem blames developing nations for not understanding the importance of reducing emissions by representing them as the most vulnerable to CC effects (Kate 2010). In contrast, developing countries blame developed nations for their vulnerability (Sangita, Kate, and Grant 2014) and perceive themselves as entitled to receive compensation (Rhaman, 2016) and produce emissions (Billett, 2010). For example, Lück et al. (2019) found that Western media (such as in Germany and the United States) portrays developing countries as victims of CC and attributes responsibility to "others" (either developed or emerging

countries such as China). By contrast, the media in developing countries (such as South Africa, India, and Brazilian newspapers) describe themselves as victims and suggest that developed countries are responsible for CC. However, in both developed and developing countries, the media portray CC not only as a political and economic issue (Stoddart Mark, Haluza-Delay, and Tindall 2015) but also as an “international problem” that should be tackled through international agreements (Suzannah 2016; Chinenye and Stella 2016). This suggests that a vague attribution of responsibility at the international level also impedes CC governance at national and local levels (Johanna, Preston, and Maloney 2015). The literature associates a lack of clear attribution of responsibility with various rationales and conceptualizations of “effectiveness, efficiency, legitimacy, and fairness” (Heleen 2017). In international law, the responsibility of CC is subject to many uncertainties. The voluntary nature of the implementation of international agreements and their limited binding character (e.g., the United Nations Framework Convention on Climate Change, Kyoto Protocol, and Paris Consensus) undermine the effectiveness of such cooperation (Mona et al. 2018). This is further supported by a report published in February 2021 by the United Nations on Nationally Determined Contributions (NDCs), which synthesizes the NDCs by 75 parties (30% of global greenhouse gas emissions) and indicates that the decrease in total emissions would be $<-1\%$, in 2030 compared to 2010.

Moreover, in 2021, the French Government was sued by four environmental groups (after a petition signed by 2.3 million people) and convicted for not respecting the commitments of the Paris Agreement. This further supports the multilevel blaming/empowering game. On the one hand, citizens perceive climate change as a “government responsibility” (Boulianne, Lalancette, and Ilkiw 2020). On the other hand, the French government denied responsibility, claiming that “the state could not be held uniquely responsible for CC when it was not responsible for all global emissions” (Willsher 2021).

The attribution of responsibilities in the international arena is also connected to the second level of the relationship between Climate, Economics and Politics, which is related to the media’s political orientation. According to the literature, the media implicitly defend mixed political and economic interests (Murphy 2015) by emphasizing the political understanding of the phenomenon rather than its scientific meaning (Schmidt and Schäfer 2015). The “politicization” of CC is also reflected in its representation as a “secondary” technical problem that can be managed through innovative technologies (Hvidtfelt and Schmidt 2011). This reflects a heated debate in economics, which has introduced the idea of “technical safety” (based on contradictory techno-economic approaches) that substitutes social–political security (Beck 1992). However, such an approach scarcely considers the technological gap between developed

and developing economies (Huaping et al., 2019) and relies on a narrative that is mainly dictated by Western countries and disseminated by Western media. The criticisms expressed by Nicholas (1971, 1979, 1986) and the Club of Rome (Meadows et al. 1974) of the neoclassical model of economic growth and techno-optimism are well known. On the one hand, proponents of “strong sustainability” argue that there are limits to substituting natural resources with human-made capital (Daly 1997). The opposite position, sustained by the advocates of “weak” sustainability, emphasizes that the only way to deal with environmental degradation is to grow globally (Beckerman 1992; Stiglitz 1979). Even within ecological economics, various positions exist, such as Spash’s (2007) and Stern’s (2006) estimations of the benefits and costs associated with reducing carbon emissions. The mutually exclusive definitions of sustainable development and economic growth are evidence of institutionalized political contradictions, which in turn become the content of media reporting on the environment and CC. For instance, Huaping et al. (2019, 2020a, 2020b) repeatedly showed how environmental efficiency is enhanced by investments in renewable energy technologies for environmental growth. The controversial aspects of CC at both the political and economic levels constitute the substratum for a concept of development that is structurally unsustainable (Lorraine, O’Neill, and Lorenzoni 2011). For example, in the UK context, when CC-related solutions are a focus of newspapers (Catherine et al. 2013), attention is often focused on the technical and economic aspects of the issue, while the potential cultural and social effects of a broader “sustainable living” are marginalized (Catherine et al. 2013). This is because the concept of development is based on the exploitation (or reduction in exploitation) of natural resources. Accordingly, given that media coverage might also serve economic stakes according to their partisan affiliation, the media reflect this contradiction. Sometimes, they blame individuals or societies at multiple levels (from local to global) for their anti-environmental habits and the necessity of limiting human impact on the environment. At other times, they empower governments and economic bodies by emphasizing the necessity of implementing policies at the global level (Suzannah 2016; Chinenye and Stella 2016). Finally, they might emphasize the need to trust technological development and mistrust individual capabilities to deal with the problem. Therefore, such a discrepancy between agency and contextual opportunities/constraints produces a power play between processes of individualization and globalization of the problem (Beck 1999; Anthony 1990; Niklas 1993), as well as blaming and empowering.

This reflection also involves considering the third level of interaction between Climate, Economics and Politics in terms of the perception of the problem according to different political orientations, which can cause “culture wars” (McCright and Dunlap 2011) in attributing blaming and responsibilities.

This is also evident in social media, in which the flourishing and contradictory debate around how to tackle CC is reflected in the political polarization of citizens (Xiaoquan, Justin, and Kotcher 2016). This is consistent with Becks' interpretation of how the welfare state's "safety systems" have been weakened by increasing uncertainty about causality, blame, and liability in the face of new (global) threats. Following this interpretation, the insecurity derived from techno-economic progress has been translated into "manufactured uncertainties" (Beck and Kropp 2007). Such manufactured and ruling uncertainty relies on persuasive methods (e.g., through politicized representations of conflictual science revolving around the known, unknown, and distant possibility of damage) to determine whether the probability of accidents associated with risks is acceptable. In this regard, Beck and Kropp's (2007) interpretation of "risks are as big as they appear" could be translated as "risks appear as confused as they are represented" by the cascade of actors involved (including the media). However, this uncertainty can also produce certainties in specific social groups because of the political framing of blaming/empowering provided by the media. In a recent editorial piece in the *Environmental Sociology Journal*, Stewart (2022) referred to the increasing focus of sociological studies on climate discourse and beliefs. These studies have found evidence of highly politicized representations of climate change in the media and a self-reinforcing dynamic of political identification. Social groups are equipped with their political values, which are in turn embedded in structural contradictions that are also filtered by the media (and surrounding social-cultural-economic pressures) (McCright and Dunlap 2011). However, the fact that the media tend to support or contrast government actions and corporate interests according to their political and economic orientation, by sometimes explicitly insisting on or implicitly defending the "status quo" (meaning "no action") (Anne and Nathan 2011) supports the hypothesis of using CC to reaffirm the power of dominant economic and political bodies (Erich and Ben-Yehuda 2009).

All previous points are connected to the fourth level in relation to the influence exercised (explicitly or implicitly) by political and economic bodies on CC communications. At the same time, it is unclear whether the media are primary or secondary definers, or whether they are equally responsible for creating "circuits of communication" (Chas 2003) aimed at defending certain economic and political interests. On the one hand, research in the United States found no significant differences in the representation of skeptical voices between conservative and liberal media (Schmid-Petri et al. 2015); on the other hand, both the US and the UK newspapers were found to give considerable space to skeptical voices, with marked differences between left-leaning and right-leaning newspapers (right-leaning newspapers were more likely to include uncontested skeptical voices) (Ruiu 2021).

Multidimensionality of Climate Change

The CC debate shows the interdependencies between science, political/economy, media, and individual perceptions (Peter, Anita, and Petra 2000). These spheres are embedded in a wider context (physical, social, and cultural), which in turn can be influenced by several factors, including political–economic interplay, technological knowledge, alliance structures in international organizations, and possession of resources (Risto and Eide 2012). Moreover, policymaking might also be influenced by a political reluctance to produce legislation that might generate discontent among the electorate (Capstick et al. 2015). Furthermore, CC communicators and reporters tend to promote specific values among their audiences to make news appealing and obtain financial support from external economic bodies (e.g., through advertisements) (Dahlstrom 2014). Therefore, their performance might be conditioned by their dependency on specific political systems and markets (Risto and Eide 2012).

Therefore, science, the media, and political economy seem to be interconnected in producing knowledge about CC through specific frames. However, sometimes this interaction can be affected by “interferences of discourse” (Peter et al. 2000). On the one hand, both experts and policymakers might blame the media for generalized ignorance around the CC (Smith 2005). On the other hand, the media need to translate the complexity of climate science into their codes. Finally, media users use their frames to deconstruct contradictory information (Williams et al. 2015).

In addition to personal traits and contextual characteristics, media users may be influenced by the content and format of CC messages, claim makers, and the potential benefits derived from accepting specific pathways of action. Moreover, the debate on the perception of CC shows that the representation of CC as a distant phenomenon (Endre et al. 2020) in both temporal and physical terms tends to produce disengagement. The literature shows that CC is often represented by Western media as occurring in faraway places (e.g., developing countries) or as a future-oriented problem (Marie 2011). Moreover, when considering the types of representation of a global phenomenon, such as CC, which requires multilevel actions (at both global and local levels), political and economic pressures should also be considered. They can influence the types of communication and messages around CC, which in turn promotes contrasting views on CC. Research into media representation of CC showed that this tends to be politicized in developed countries by focusing on political approaches rather than policy solutions. In contrast, poorer countries are likely to frame the issue as an international problem given their lack of resources for tackling CC (Tien, Yuchen, and Vin 2019).

The dynamics described so far partially support the treadmill of production theory (ToP) put forward by Schnaiberg (1980), which works at both

transnational and national levels (Gould, Schnaiberg, and Weinberg 1996), at least in relation to the first phases that lead to reaching the maximum capital accumulation before collapsing. This is further supported by competition to access resources at the international level, upon which the global capitalist economy is based, which causes unequal access to natural resources and unequal distribution of the effects of such exploitation (Timmons and Parks 2006). According to the ToP, the exploitation of sources by private businesses is based on the support provided by the state that “socializes” the costs of infrastructures and other necessary conditions for exploitation to happen. The state favors the accumulation of capital, which, in turn, ensures electorate support. However, following this theoretical model, the automation of processes, technological progress, and social and environmental costs of such growth will decrease employment levels. At this stage, the state will be forced to tackle the increasing social problems linked to these phenomena and deal with a financial crisis, which will, in turn, lead to taxpayers’ opposition. Therefore, creating a nebulous aura around the attribution of responsibilities may be interpreted as an attempt to maintain social peace until maximum growth is achieved. However, this also generates a paradox. While citizens are urged to adopt sustainable lifestyles, they are bombarded with contrasting messages about CC, which generates uncertainty and confusion regarding individual and collective responsibility. The multidimensionality of CC communication and the emphasis on a temporally and physically distant problem trigger a blaming/empowering game that functions at various levels and challenges the techno-optimism advanced by EMT.

Ehrhardt-Martinez et al. (2015b) identified some interdependencies and changes required at the macro, meso, and micro levels to tackle CC. The macro level involves international actors and policies. Following Ehrhardt-Martinez et al. (2015b), developed countries are responsible for leading international efforts and influencing the culture of environmentalism. However, blaming/empowering logic has produced contradictory results. Such a mechanism involves developed and developing countries, which reciprocally attribute responsibility and blame. Developed countries (e.g., the USA and the EU) accuse developing countries (e.g., China, Russia, and India) of polluting the environment (Good Morning Britain 2019) and empowering them to limit their existing harmful practices. In contrast, the most vulnerable countries request compensation because of the damage caused by CC consequences (South China Morning Post 2018), which in turn results from the emissions of developing countries (Sangita, Kate, and Grant 2014).

An intermediate level involves organizations, businesses, social movements, and local governments. However, economic conditions can impact investments in sustainable practices by entrepreneurs, suggesting that where elite economic interests prevail, less space is left for green policy intervention

(Thomas et al. 2012). At this meso level, the blaming/empowering logic is nested in the uncertainty of responsibility attributions. Following Ehrhardt-Martinez et al. (2015b), these entities must operate together in political and economic terms by creating networks and coalitions that can develop concerted actions. While the policy context is generally held responsible for creating the conditions for green practices to emerge at the organizational level, NGOs and social movements blame the power of some economic actors to limit such green evolution. Conversely, economic elites attribute the impossibility of changing their practices to the policy's incapacity to handle environmental problems. This level might represent the space in which networked approaches can be developed by actors and entities operating at both macro and micro levels. However, as various authors argue (see Dunlap and Brulle 2015 for a review), even the Intergovernmental Panel on Climate Change does not sufficiently stress the importance of social and governance approaches to tackle CC by simultaneously considering inequality issues at both the international and national levels. The individual level involves households whose behavior can reduce emissions. Their consumption practices can inspire the rise of citizen mobilization, which in turn has been demonstrated to play a primary role in influencing political directions (Sidney 1998). However, at the individual level, this "blaming/empowering game" simultaneously empowers and blames citizens for environmental degradation. Citizens are held responsible for amending the problem by adopting environmentally friendly lifestyles, but they are also blamed for causing environmental degradation derived from sustaining their well-being. However, climate communication is not clear around the target of both individual and collective hostility, citizens simultaneously being identified as "devils" and "heroes." Therefore, this power play between levels reinforces what Beck (1995) defined as "organized irresponsibility," which our reflection interprets as a result of structural/individual insecurity because of the impossibility of attributing responsibilities—cause and guilt—for risk. This scenario generates a blaming/empowering game, as described earlier, and reinforces the idea of political and economic development that undermines material benefits (Beck, Giddens, and Lash 1994). In such a process of normalization of uncertainties, it becomes difficult to identify "devils" and "heroes" and, as a result, the "dangers grow through being anonymous" (Beck 1999:32).

This mechanism suggests a paradox, on the one hand, the global political economy asset promotes the necessity for sustainable developments, on the other hand, the politicization of environmental problems, and the consequent "blaming/empowering," undermine this attempt. The uncertainty that derives from this confusion favors a "no action orientation" and, therefore, the *status quo* which in turn perpetuates "business as usual-oriented practices."

Therefore, the increasing globalization of environmental issues (which, however, does not neglect the individual level) might represent an opportunity to increase awareness of environmental problems and, consequently, affirm a new ecological paradigm (Catton and Dunlap 1978) based on a rebalanced human–nature relationship. In contrast, it risks reaffirming the conviction of human exceptionalism due to a marked constructivist approach that emphasizes pluralism in interpreting CC and its related discourses (Dunlap and Catton 1994a, 1994b). However, scientists and environmental groups insist on the importance of adopting critical approaches toward the construction of environmental problems (such as CC) (Buttel, Hawkins, and Power 1990; Buttel and Taylor 1992) contributing to the multidimensionality of CC. This has favored the emergence of contrarian scientists (Dunlap and McCright 2015), who aim to create uncertainty by using the complexity of scientific research as evidence of the unreliability of CC science and attacking the authority of CC scientists. Additional actors such as industrialists, media, and politicians have instrumentally used relativism in climate science to undermine environmental advances.

In contrast to the optimistic foresight of a progressive ecological restructuring of the environmental reform agenda, thanks to processes of ecological modernization and the affirmation of postmaterialist values (Ronald 1997) since the 1990s (Mol Arthur 1995; Mol Arthur, Sonnenfeld, and Spaargaren 2010; Spaargaren, 1997), no balances between “withdrawals” and “additions” have been produced in the human/nature relationship worldwide. This, in turn, has contributed to increasing uncertainty and the attribution of multiple meanings (as well as misinformation) around the reality and severity of such a socio-environmental problem. This is also emphasized by Spaargaren and Mol (2008), who recognize the transnational character of environmental issues, the high speed of social and economic transformations at the global level, the easily accessible flow of information on the causes and consequences of environmental disruptions, and the transnational character of environmental policy-making as difficult to integrate into national environmental regimes. On the one hand, interpreting CC through the lens of the sociology of networks and flows (Castells 1996, 1997a, 1997b; Sassen 1994; Urry 2003), which is based on a networked conceptualization of global climate governance, might help understand CC as multilevel and redefine authority beyond nation-state borders. Therefore, this helps to develop a transnational approach that is necessary to tackle such a global issue. However, this approach does not provide adequate explanations for the failure of multilevel and concerted local/global efforts (such as international agreements and their local application) to contain rising global temperatures and environmental depredation.

Conclusion

The debate around CC suggests that its meaning is shaped by a multiplicity of elements, among which climate economy and policies, media, and individual perception play a relevant role. Considering all these forces together means shaping the CC discourse in diverse ways according to the evolution of the phenomenon over time (in scientific, but also in political and economic terms) and its spatial dimensions (global/national/local). For example, the fact that developed countries (the main polluters) is depicted by developing countries (likely to be more vulnerable to CC impacts) as responsible for the current situation, suggests a “blaming game.” This game interferes with both global and national efforts to tackle CC, causing uncertainties about what to do to limit CC effects. By contrast, from the standpoint of developed countries, developing countries are empowered to make environmentally friendly decisions. However, such a blaming/empowering narrative perpetuates social and environmental inequality and favors stasis because of the need to find international agreements. For example, this is particularly evident in the context of events related to the Ukrainian war that started in 2022. The war has emerged at the center of global debates by obscuring issues such as CC, despite the weather extremes of 2022 and flooding in Pakistan (August 2022) which are in line with climate change predictions of recurrent extreme events. Moreover, the Russian–Ukrainian war has shown that the international economy is still based on the logic of the ToP, or as Gregory and Smith define it, the Treadmill of Destruction (ToD) (2004). In addition to the military footprint per se (Brett, Jorgenson, and Kentor 2010), the war has shown the unpreparedness of countries to deal with the scarcity of resources caused by international sanctions that limit western countries’ access to Russian energy sources. This has led to competition to find and exploit new energy reserves, especially in developing countries (Gyude and Moss, 2022). This supports what is highlighted by the theory of ecologically unequal exchange (Rosa et al. 2015) in terms of unequal exchanges between developed countries that withdraw resources from developed countries and developing countries receiving additions in terms of environmental damage. However, developing countries are no longer willing to sacrifice their resources to support Western economic well-being and they have increasingly claimed the use of their own resources for internal growth. The blaming/empowering game in this context originates from international requests, such as those made by the United Nations, encouraging and empowering developing countries to invest in renewable energy rather than fossil fuels. Simultaneously, developing countries recognize that European countries are not prepared to meet their energy demands through renewable resources and are unwilling to sacrifice their economies in exchange for such unequal treatment.

On the one hand, at a societal level, the fact that CC is often described as a distant problem (at least in Western societies) might make it difficult to promote environmental awareness and stimulate individual actions. This leads to reflection on the sustainability of CC. The concept of sustainable development imposes certain degrees of “deprivation” in the present to ensure the availability of natural resources and ecosystem services in the future. However, conceiving CC as a temporally distant phenomenon may affect the equilibrium between humans and natural systems if people are not sufficiently motivated to adopt sustainable ways of life.

The debate around CC shows that climate narratives include different voices ranging from scientists to environmental groups, politicians, industries, and sources of information. The uncertainty derived from such multidimensionality does not seem to produce appropriate reactions either at the individual level or in the adoption of restrictive policies. The incalculability and invisibility of this “new risk” do not connect the problem to human and societal values. This was also the main criticism of Nicolas Georgescu-Roegen, the father of ecological economics. Specifically, he never provides a measure of entropy in an economic system, making it difficult to collocate when the economic process, as currently conceived, becomes unfeasible. From this, sustainable development remains a target in principle, but its implementation might be undermined by blaming mechanisms triggered at both global and local levels, which make it difficult to identify “heroes” and “devils” in the context of CC.

In empirical terms, the multidimensionality of CC requires investigating blaming/empowering mechanisms at multiple levels (micro, meso, and macro) by considering opposing narratives proposed by the constellation of stakeholders at each level. While discourse analysis can help explore political and economic constructions of the meaning of CC as well as media framing of the problem, additional useful contributions can be offered by action research. Such an approach is mainly used in social science at the micro level to support communities in the development of adaptation strategies, but it might also create platforms of dialogue between opposite agents at the meso and macro levels to reflect contrasting narratives of CC. This requires interdisciplinary efforts that can help create favorable conditions for these actors to unmask the forces at play when blaming/empowering mechanisms produce contrasting perceptions of CC, political and economic interpretations, and conflicting CC framing.

To respond to the question proposed by the introduction of this work in terms of “What can be done,” there is a need for policy terms to frame CC-related issues by adopting a scientific-informed approach that emphasizes the empowerment component (intended as the positive contribution that both individual agency and institutional framework play in enhancing sustainability) of the paradox highlighted in this paper. Framing action as empowerment supports

the idea that neither technological progress nor localized actions and individual agency alone can enhance environmental efficiency growth. In contrast, an integrated approach needs to consider individual/institutional agency in relation to structural constraints (existing socioeconomic, environmental, and cultural backgrounds at multiple levels) and how the interaction between the two might produce environmental advances. Further research is needed to identify how environmental efficiency growth can be integrated into economic policies. Therefore, positive framing, aimed at empowering, requires transparency and a need for dismantling such a blaming/empowering paradox.

ENDNOTES

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