

COGNITION AND NORMS: A CONCEPTUAL FRAMEWORK TO ADDRESS DENIALISM AND DISSONANT COMMUNICATION IN SOCIAL DILEMMAS



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ABSTRACT

How to explain denialism, resistance to health measures, and the proliferation of narratives contrary to what was supposed to be common sense? Although a possible answer to this question points to demographic, social and economic differences, the article aims to expose the decisive influence of individuals' mental models and value systems. In preparation for testing these connections, we have introduced a conceptual framework that integrates the Habermasian approach to communication with the psychology of moral development and the Bloomington School of institutional analysis. Results from experiments reported elsewhere support the hypothesis that the ability to resolve social dilemmas communicatively, without coercion, requires social perspectives and cognitive structures that emerge late from the order of individuals' moral development.

Keywords: Social dilemmas. Discourse ethics. Evaluative memes. IAD framework.

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INTRODUCTION

The positive effect of communication on the governance of common-pool resources and the provision of public goods has been demonstrated for a long time in the literature on social dilemmas and collective action (Bowles, 2016; Mak and Rapoport, 2013; Balliet, 2009; Bochet and Putterman, 2008; Sefton et al., 2007; Bicchieri and Lev-On, 2007; Cardenas et al., 2004. Camerer, 2003, Ostrom and Walker, 2003).

The opportunity for these studies was initially related to the prediction failures arising from the canonical model of rational choice in economic theory. Given the basic conflict between individual and collective gains that characterizes those situations, the rational choice model predicts that communication opportunities will have no influence on participants' choices, and are useless to avoid the overexploitation of common resources (CPRs) or the undersupply of public goods (Harsanyi and Selten, 1988).

Habermas was one of the first theorists to identify the epistemological nature of the problem and to bring a cognitivist approach to normative choices to the task of explaining the logic of collective action (Heath, 2001). Through his critique, Habermas reestablishes the internal connection (rational and dialogical) between the moral content of the proposed norms and the justifying foundations used in the argumentation of the agents who interact in the public sphere, seeking to reach agreements to collectively manage matters of common interest.

The most recent developments in the analysis of the conditions and incentives that affect the normative choices of individuals in social dilemmas give increasing attention to cognitive processes, mental models, value systems, and language (Aligica, and Boettke, 2009; Ostrom, 2005; Mantzavinos, et al, 2004). However, these developments still operate almost entirely under epistemological assumptions that deny cognitive content to "moral questions" and lead to an exclusively instrumental conception of rationality (Heath, 2001).

The effects of communication opportunities among participants are interpreted in the context of strategic interactions and attributed to the incorporation of information about the current situation of the resource, the consequences of past choices and the reputations of the others involved, for example, to the decision-making process of agents with limited rationality (Simon, 1955). Moral norms and value judgments that affect the choices of subjects are seen as a repertoire of habits, instincts, or moral feelings fixed through adaptive (evolutionary) processes displaced from the arena of present action (Nowak and Highfield, 2011; Ostrom, 2005; Bowles and Gintis, 2002; Boyd and Richerson, 1990, 1992).

In other words, according to the conventional approach, communication is seen as a simple mechanism for exchanging signals, and not as an event that, in the words of Marcondes Filho (2019, p. 11), although rare, "has the ability to promote changes in values, political positions, moral orientations, including a reordering of life in the person".

The difficulties in promoting the behavioral changes necessary to face the Covid-19 pandemic (e.g. wearing a mask, maintaining social distancing, getting vaccinated) have given new significance to the epistemological critique of the communicational phenomenon, especially that which sustains the Habermasian approach to social dilemmas. Denialism and resistance to vaccines, in particular, denote choices that go beyond greater or lesser knowledge of the technicalities involved or access to other relevant information. We argue that these are decisions driven by complex cognitive structures, composed of different social perspectives, concepts of authority and justice, expectations and motivations to act, and whose rationalities are established through argumentations and narratives built within different collectives (Latour, 2020).

From this perspective, we can understand the rarity of the qualitative transformations that mark authentic communication processes, in the view of Marcondes Filho (2011, 2019), as resulting from modes of intentionality and motivational dispositions closed to the new, and to the other.

In the realm of experimental research, the division of labor, proposed by Habermas (1990), between the moral philosophy that underpins his discourse ethics, on the one hand, and developmental psychology, on the other, provides a robust theoretical basis for the formulation of testable hypotheses involving the choices of individuals in social dilemmas, including the problems of adherence to the measures to control the Covid-19 pandemic. In this paper, we develop this argument and present an empirical strategy based on experiments on public goods provision and collective management of common resources (CPRs).

At first, we situate the nature of choices in the face of the health crisis as belonging to the class of collective action problems. Next, we summarize Habermas' epistemological critique, establish the theoretical basis of voluntary adherence to normative commitments in social dilemmas, and gather this basis to the conceptual framework of the Bloomington School. The article concludes with brief considerations on the empirical strategy to test the predictive/explanatory power of the Habermasian approach, in the face of the current crisis.

HEALTH CRISIS: THE NEW "TRAGEDY OF THE COMMONS"

Social dilemmas include a variety of situations in which individual and collective interests conflict. In a social dilemma, the rational choices of individuals generate the paradoxical result that everyone is worse off. Individuals are said to face a "dilemma" because a better situation for all can be achieved through cooperation for coordinated action². But, given the institutional conditions that configure the dilemma³, there is no incentive for participants to accept the costs of sustaining such cooperation that can be achieved through cooperation for an action (Ostrom, 2007).

The archetypal illustration of social dilemmas was made famous by Garret Hardin (1968), in his famous article in *Science: The Tragedy of the Commons*. Right at the beginning, the author situates social dilemmas as members of a class of problems for which there is no technical solution, and whose solution requires changes in values and ideas of morality (Hardin, 1968, p. 1243). Ostrom (2005) also notes that the moral nature of choices in social dilemmas demands theories that deal with the formation of intrinsic values – attributed to actions themselves – and the subjective valuation of collective interests, needs and results.

Several authors have recognized that behavioral alternatives for coping with the Covid-19 pandemic have a structural correspondence with the archetype of the tragedy of the commons, configuring a large-scale social dilemma (Harring et al., 2021; Meyer, 2021; Kovac et al., 2020; Lunn et al., 2020; Chiaravalloti, 2020; Silva, 2020). Limitations on access to public roads and places, for example, are problems related to the governance of common resources, and the use of masks implies the acceptance of an individual cost for the provision of a public good (collective health). Maaravi et al. (2021), in particular, investigated how individualistic and collectivist attitudes have influenced coronavirus spread rates in different societies. In the authors' study, those attitudes were accessed through the Hofstede index of individualism of national culture, that is, in aggregate form.

In this study, we situate these postures within the scope of Habermas' (1990) typology of actions, and in connection with the transformations that mark the development of the moral conscience of individuals, towards the ethics of discourse. This framework

² In the case of common resources (CPRs), coordination aims to limit the private appropriation of the resource. In the case of public goods, it aims to increase the supply of the good.

³ In the case of common resources, the conditions cause the costs of using the resource to be distributed among all users (negative externalities), while the benefits are private. In the case of public goods, the conditions prevent those who do not accept the private costs of offering the good from being excluded from its benefits (positive externality).

leads to testable hypotheses regarding the chances of producing the behavioral changes recommended by science to face the health crisis, through the moral discourse of awareness.

The significance of those tests, however, requires admitting the rationality of moral justifications and the voluntary fulfillment of verbal agreements in collective action dilemmas. The basis for this admission is provided by the Habermasian critique of foundationalism. The acceptance of this critique allows the integration of Habermas' theory into the analytical scheme of the Bloomington School on communication and institutional change in social dilemmas.

HABERMAS AND THE OSTROMS: REMOVING THE EPISTEMOLOGICAL BARRIER TO THE CONSIDERATION OF COMMUNICATIVE ACTION IN STUDIES ON SOCIAL DILEMMAS

As indicated in the Introduction, our methodological proposal for the treatment of social dilemmas requires integrating the Habermasian, communicational, dialogical approach to collective action problems, with the conceptual framework provided by the Bloomington School. Under the leadership of Nobel Laureate Elinor Ostrom⁴, the Bloomington School has emerged as one of the most dynamic, recognized, and productive centers of the New Institutional Theory movement (Aligica and Boetkkle, 2009). Well rooted in the intellectual heritage provided by authors such as Locke, Montesquieu, Hume, Adam Smith, Hamilton, Madison, and Tocqueville, the School's prominence is attributed to the success of its unique way of combining multiple theoretical approaches with an uncompromising empiricism. This mode is provided, to a large extent, by the analytical framework called Institutional Analysis and Development (IAD) framework.

The IAD framework provides the conceptual basis through which the analyst can investigate the predictive power of competing or complementary theories or analytical models, in view of the different contexts in which agents' decisions take place, concretely (Ostrom, Gardner and Walker, 2002). The research conducted by the IAD framework explores theoretical limits and complementarities across a broad range of social sciences and humanities, including classical political economy, modern microeconomic theory, transaction cost economics, institutional economics, public choice theories, law, sociology,

⁴ In 2009, for her analyses of economic governance, Elinor Ostrom shared the Nobel Prize in Economics with Oliver E. Williamson.

and political theory. For Baiard (2011), Elinor Ostrom's award had the character of recognition of her "unified vision of the human sciences". However, what the Bloomington School does not do is overcome the epistemological barrier that leads to moral non-cognitivism. In the entire spectrum of analyses guided by the IAD framework, moral judgments are seen as an expression of habits, customs or socializing emotions that can effectively influence the decision-making process to the extent that they integrate the preferences of the agents (Bowles and Gintis, 2002), but which cannot be rationally justified.

Heath (2001) explains that the belief in the impossibility of rational justification of following moral norms (moral non-cognitivism) depends on a specific conception of rationality and justification known as foundationalism, and that it seeks to provide an answer to the fundamental problem of epistemology: the problem of infinite regress.

The problem expresses the understanding that, when trying to justify any statement, there are only two ways to interrupt the cycle of infinite regress of arguments: either one uses the conclusion as a premise (circular reasoning) or simply breaks the chain of reasons by means of a statement accepted as self-evident, that is, one that dispenses with any justification.

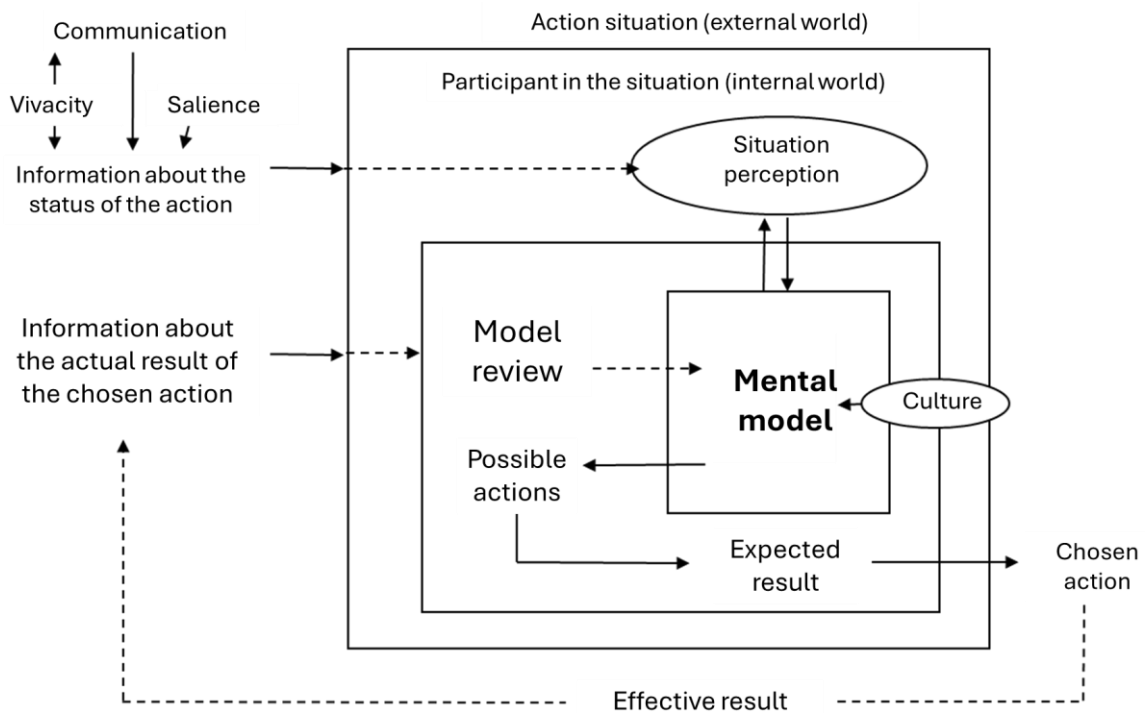
Foundationalism represents an example of the latter strategy (Heath, 2001, p. 197), arguing that there is a class of fundamental (or foundational) beliefs that are intrinsically justified (self-evident) by virtue of their empirical content (based only on sensory perceptions). Since claims to the validity of moral judgments and normative commitments cannot be based on perceptions of the physical world, the foundationalist view concludes that these judgments are essentially non-cognitive.

The tacit adherence of the Bloomington School to moral non-cognitivism is evident in the way Elinor Ostrom (2005) incorporates the suggestion of Frohlich and Oppenheimer (2001) about the role played by the "liveliness" and "salience" of the signals perceived in a given situation, to introduce the opportunities for communication in the model provided by the new "institutional cognitivism" (Denzau and North, 2001; Mantzavinos et al. 2004), which deals with institutional change from the perspective of cognition and learning (Figure 1).

In the scheme of Figure 1, mental models are understood as representations that the agent makes of the situation of the action and as the basis of his expectations regarding the results of the chosen actions. In isolation, agent learning is seen as a process of revision of

mental models, according to Skinnerian logic, that is, on the basis of the reinforcement (positive or negative) of expectations. According to this scheme, the beliefs of the agents basically consist of mental models crystallized by repeated expectations that are positively reinforced (Mantzavinos et al., 2004).

Figure 1: Effect of communication on the revision scheme of the mental models of agents with limited rationality.



Source: Ostrom (2005), adapted from Denzau and North (2001).

Admitting that "paying attention is costly", Frohlich and Oppenheimer (2001, p. 8) explain that liveliness and saliency are attributes that function as a kind of "key" in the displacement of attention from one element to another, within the variety of signs present in the environment of the action. In Figure 1, the most vivid and salient signs concern the effective results of the chosen actions.

Since the epistemological foundation does not admit the possibility of justifying normative commitments, communication between agents is prevented from providing rational support for claims of validity of a given rule of interaction (e.g. social distancing, vaccine passport), in preference to any feasible alternative. The interpretation of the nature of communication has the focus diverted from the normative issue, central to all institutional analysis, to focus on the correct representations of causal chains and feedback circuits (e.g. relationship between social distancing and Covid-19 cases, for example).

It is then admitted that the information exchanged about these causal relationships affects the perception that the agent has of the situation of the action and contributes to the convergence of the participants' mental models. This convergence eventually crystallizes in the form of institutions that, seen from their "internal" side, are nothing more than mental models of shared solutions to recurring problems.

The so-called "cognitive approach" of institutions also does not insist on the rationality of the choices that lead to the rules of interaction, preferring to treat the social order as an emergent (unintentional) result of the following of conventions, rules or moral norms stabilized in the way described (Mantzavinos et al., 2004, p. 77).

However, by placing itself in the field of moral non-cognitivism, this position frustrates the greater purpose of the Bloomington School (Ostrom, V. 1991, p 3), which seeks to provide a positive answer to Alexander Hamilton's question, in the opening paragraph of *The Federalist*, about "whether or not societies are really capable of establishing good government based on reflection and choice, or whether they are forever destined to depend on chance and force for their political constitutions" (Aligica and Boettke 2009, p. 83).

It so happens that foundationalist epistemology has been increasingly discredited, largely due to the so-called linguistic turn⁵, with Habermas being one of the first theorists to apply a non-foundationalist conception of rationality and justification to explain the logic of collective action (Heath, 2001. p. 2).

Following Heath's (2001) outline, Habermas's view has two basic components. First, Habermas asserts that non-cognitivist concerns about the truth of moral judgments are only important if we assume that truth indicates some kind of correspondence between sentences and the state of affairs in the world⁶. If we deny that this kind of "objectivity" plays any role in the truth claims associated with beliefs, then our ability to justify beliefs has nothing to do with references to the physical world. In the same way, when the relativist questions the final justification of moral judgments, the argument is only persuasive if we presuppose a monological conception of rational justification, that is, when justification is

⁵ The so-called linguistic turn is a metaphor, whose contours are not very clear, referring to the failure of logical positivism and the representationalist conception of language in the field of epistemology. For Habermas (1990a), the linguistic turn expresses a change in the epistemological paradigm, which shifts the focus from the "subject" to the "language", questioning universalisms and essences, and emphasizing the linguistic and historical construction of worldviews (Fontes, 2020).

⁶ Habermas is referring to the Correspondence Theory.

tacitly treated as a process that refers, essentially, to the relationship between the agent's cognitive states and the objects of representation.

It is noted that these assumptions have the effect of reducing all public practices of justification to a secondary or derivative role. However, if we assume, like Habermas, that justification is always dialogical—a process that involves trying to justify something to someone else, so that justification to others is taken as the primary phenomenon—then there is no a priori reason to think that moral questions are any less soluble than empirical or scientific questions.

Despite the revolutionary tone of this epistemological (linguistic) turn, Heath (2001, p. 198) observes that the reason why many theorists have accepted to take this more radical step is that foundationalism offers no persuasive justification for any type of belief, including empirical ones. In fact, the dialogical conception of justification contributes more to the understanding of the problem, pointed out by Mantzavinos et al. (2004, p. 76), about the persistence of mental models that do not seem to correctly interpret the phenomena. In the same way, the dialogical conception provides a rational basis for understanding denialism and the proliferation, in social networks, of conspiracy theories and more dissonant narratives on all subjects, as expressions of the modes of justification characteristic of the different collectives or interest groups in which they are formed.

Regarding our purpose of integrating Habermas' communicative action into the conceptual framework of the Bloomington School, the first thing to note is that Habermas' theory is a typological theory (Heath, 2001, p. 13). Habermas does not reject, nor exclude instrumental rationality, but rather takes as a starting point that agents have access to a set of different patterns of choice or logics of action.

Habermas' basic typology of elementary and social actions is illustrated in Figure 2. Communicative action is an action governed by a specific norm or logic, that is: to achieve mutual understanding, while instrumental action is an action governed by a different standard: that of achieving success or achieving an intended result.

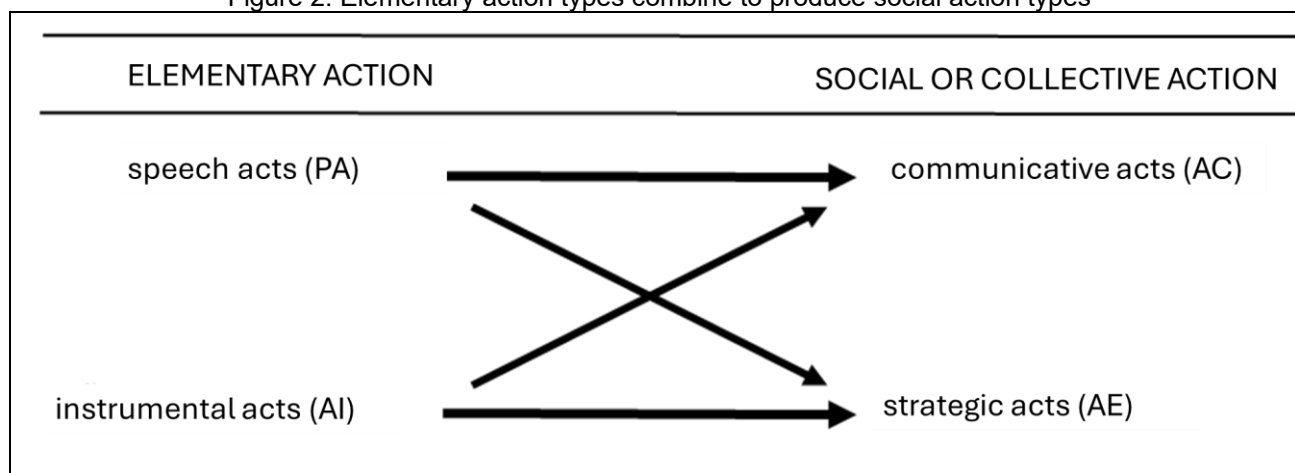
According to Habermas' typology, rational agents engaged in social action always face the problem of the interdependence of expectations, which can be solved based on the resources of instrumental action or speech. When actors are primarily interested in outcomes, social action becomes strategic action, in the standard sense of game theory, in the framework of the Bloomington school. However, when speech is used to coordinate

expectations, the form of interaction that Habermas calls communicative action is produced (Habermas, 1990b, p. 133).

This basic scheme is indicated by the straight lines in Figure 2. The ascending oblique line indicates that communicative action is not the same as speech. Like strategic action, communicative action also presupposes the basic teleological structure of action, insofar as actors continue to conduct their plans to achieve a certain state of affairs. In Habermas' words, the two types of social action differ in that "for the strategic action model, a structural description of the action directly oriented to the result is enough, while the model of action oriented to understanding must specify the propositions of an agreement to be reached communicatively", in order to coordinate the expectations of the agents in interaction. In other words, when engaged in communicative actions, the actors assume that they are "prepared to harmonize their action plans by internal means, committing themselves to pursue their objectives only on the condition that an agreement – already exists or one to be negotiated – on the definitions of the situation and the expected results" (Habermas, 1990b, p. 134). The production of this agreement does not mean that the agents have reached a consensus on substantive issues (e.g. value judgments), differently perceived in the common dilemma, but only that they have agreed to comply with the norms of the agreement reached.

It so happens that both common experience and the results of controlled experiments (Ostrom et al., 2003; Meyer 2010) prove that verbal agreements in collective action dilemmas are often disrespected. In Figure 2, this possibility is shown by the descending oblique line. The line indicates that speech acts can also be used in strategic interactions, precisely in order to influence the expectations and actions of other agents in a way that is advantageous to the objectives of the actor in question.

Figure 2: Elementary action types combine to produce social action types



Source: adapted from Heath (2001, p. 25)

It is at this point, when considering the empirical differences regarding the extent to which different collectives or societies depend on explicitly discursive procedures to ensure social integration, that Habermas finds in developmental psychology – notably in the models of Laurence Kohlberg and Robert Selman – an indirect verification of the validity of his historical reconstruction of the development of communicative action ⁷ (Chart 1).

The objective of this reconstruction is to demonstrate that communicative action requires more complex socio-cognitive capacities than those required for strategic action, and for this reason emerge later in the order of the moral development of individuals. According to Habermas (1990), it is these late structures, in the post-conventional stage, that enable individuals to interact and resolve disputes through argumentation. In this phase, the individual must be able to compare the authority vested in the existing norms in society with that which emanates from his ideals, and resolve the motivational conflict between autonomy and heteronomy through the proposition of solutions based on principles and processes of justification of norms.

Conversely, in the pre-conventional and conventional stages of interaction, compliance with recommended modes of behavior requires following rules or norms presented by external authorities. In the pre-conventional stage, the concepts of authority, motivation, and justice coalesce into a self-centered social perspective. In this phase, adherence to social rules or norms typically occurs in the face of expectations of obtaining

⁷ This reconstruction is based on an interpretation of the studies of Emile Durkheim and George Herbert Mead.

individual advantage or avoiding disadvantage resulting from criticism, reprimands, or other credible penalties.

The conventional stage is defined by the ability to support the following of rules in the intimate feeling of responsibility (e.g. com public health). In dilemmas of collective action, this feeling, when it exists, is opposed to inclination, as a motive that emerges from the possibility of obtaining greater or more immediate personal gains. The conformity of choices and actions to rules that contradict this inclination presupposes the internalization of concepts of supra-individual or collective authority, to which the individual adheres out of loyalty or recognition of his legitimacy (Chart 1).

Once the epistemological critique that supports the possibility of rational justification of normative commitments (moral cognitivism) is accepted, Habermas' typology of actions (Figure 1) and its connections to the psychology of social-cognitive development (Exhibit 1) can be coherently integrated into the Bloomington School's approach to making the link between communication, learning, and institutional change (Figure 1). This integration is illustrated in Figure 3.

Chart 1: Connections between Habermas' types of action and Kohlberg's cognitive structures associated with moral judgments

Types of action (Habermas)	COGNITIVE STRUCTURES				
	Perspective structure	Concepts of authority	Motivation concepts	Social perspectives/concepts of justice	Stages of moral judgment (Kohlberg)
Pre-conventional					
Authority-Driven Interactions	Reciprocal interconnection of perspectives for action (Selman – Level 2)	Authority of the reference person: externally sanctioned will	Loyalty to the referee: reward and punishment orientation	Self-centered perspective / Complementarity between order and obedience	1. Punishment and obedience
Cooperation based on self-interest.				Self-centered perspective / Symmetry of offsets	2. Naïve instrumental hedonism

Conventional Behavior controlled by social role	Coordination of participant and observer perspectives (Selman – Level 3)	Internalization of the authority of the supraindividual will: loyalty	Obligation <i>versus</i> inclination	Primary Group Perspective / Compliance with rules	3. Good Boy, Good Girl Morality
		Internalization of the authority of the collective impersonal will: legitimacy		Perspective of the collectivity / Conform to existing standards system	4. Morality of law and order
Post-conventional Communicative action (Discourse Ethics)	Integration of the perspectives of the agent and the world (Habermas – decentered orientation of the world)	Ideals <i>versus</i> social validity	Autonomy <i>versus</i> heteronomy	Principles Perspective / Guiding Principles of Justice	5. Morality of the Democratic Contract
				Procedure Perspective / Guidance by the justification of norms	6. Morality of individual principles

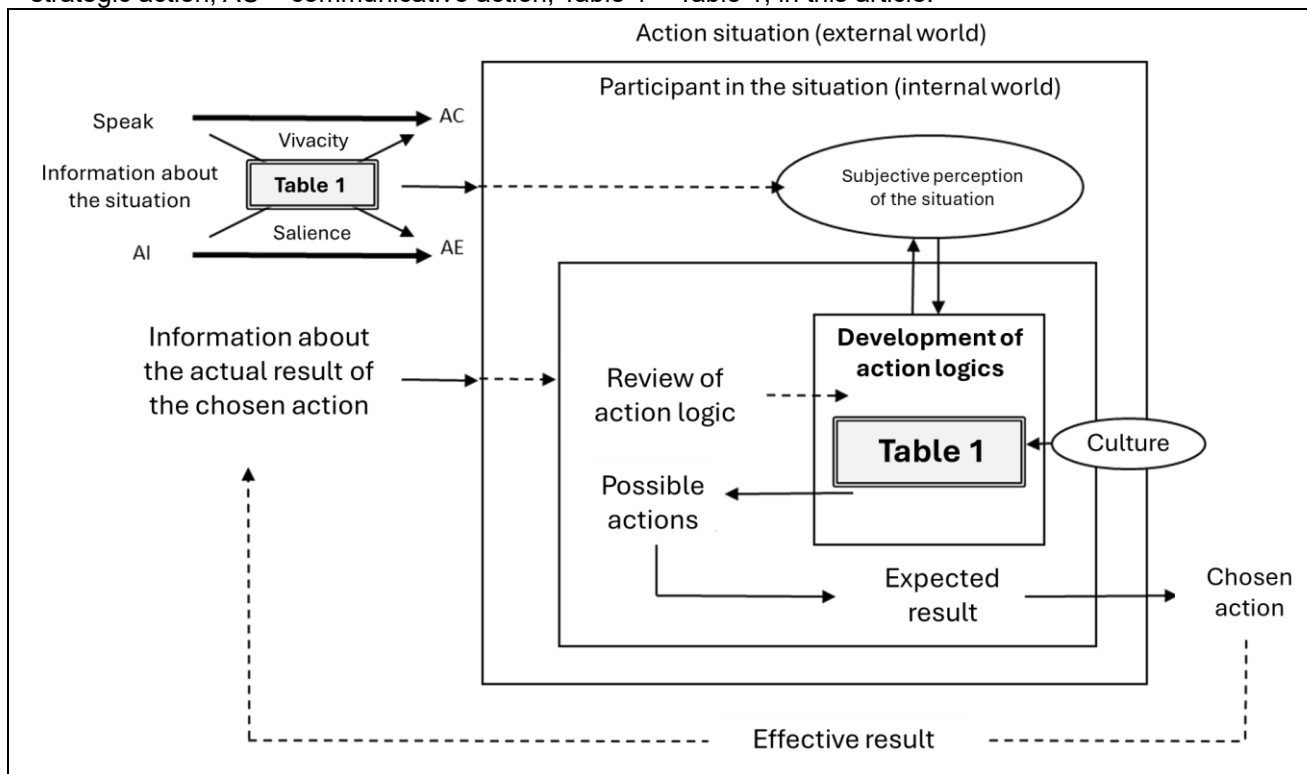
Source: adapted from Habermas (1990b, p. 166).

In Figure 3, the Habermasian typology that relates elementary actions to social actions (Figure 2) is integrated into the Bloomington School scheme for the analysis of communication in social dilemmas (see Figure 1).

This integration maintains all the previous relations related to communicative exchanges through which agents review their mental models of the causal relationships between actions and results. However, by replacing the monological (foundationalist) conception of justification with the dialogical conception, the scheme is expanded to encompass the logic of communicative action (CA), in addition to the logic of strategic action (EA), making room for the rational justification of normative commitments (without the need for coercion).

In the face of communication opportunities, the adoption of one pattern or another of interaction, as well as the perception of what is most lively or salient in the situation of the action, is directed by the internal logic of the transformations of socio-cognitive capacities, vis-à-vis the present situation of each agent (Chart 1).

Figure 3: Integration of Habermas' typology of actions into the Bloomington School's frame of reference for analysis of the relationship between cognition, learning, and institutional change: IA = instrumental action; AE = strategic action; AC = communicative action; Table 1 = Table 1, in this article.



Source: authors' configuration based on Ostrom (2005).

EMPIRICAL STRATEGY AND RESULTS OF PREVIOUS RESEARCH: FINAL CONSIDERATIONS ON THE (IN)COMMENSURABILITY OF NARRATIVES IN THE FACE OF THE HEALTH CRISIS

The effects of communication on social dilemmas have traditionally been investigated through controlled experiments that simulate problems of governance of common resources and provision of public goods. Typically, the results of these studies indicate that, on the one hand, communication opportunities have a visible impact on improving the governance of those interactions, but that, on the other hand, these improvements remain vulnerable to the individualistic attitudes of those who do not honor the commitments made verbally, that is, without coercion (Ostrom et al., 2003).

The tacit adherence to the thesis of moral non-cognitivism has hindered the researchers' view of the interest of using models of socio-cognitive development, such as Chart 1, to predict the disparate attitudes of the participants in the face of communication in social dilemmas. In one notable exception, Meyer (2010) reports results that corroborate Habermas' prediction of the capacities required to resolve collective action dilemmas, communicatively. Employing a hierarchical development model of evaluative memes

(vMemes), in which individualistic and collectivist attitudes alternate dialectically, the author showed that the chances of solving social dilemmas communicatively are positively correlated with post-conventional socio-cognitive structures.

In times of "post-truth" and flat-earthism, the impression is that, as Latour said about the anti-vaccine movement in an interview with El País, "facts are useless" (Latour, 2019). But what lurks behind immeasurable mental models is perhaps the epistemological fact that our ability to justify beliefs and values really has nothing to do with references to the physical world, being primarily a dialogical phenomenon, along the lines of Habermas's critique.

Instead of an exacerbated relativism that sustains the incommensurability of narratives, the Habermasian view of an internal logic of transformation of socio-cognitive structures opens the way for the prediction and explanation of the discrepant choices of agents in the face of the same incentives, controlled experimentally. In the context of health crises, this seems to be a promising strategy to advance knowledge and the formulation of communication strategies capable of overcoming the resistance of certain groups to the measures necessary to control the disease, or so many other crises and conflicts that emerge from the apparent incommensurability of values and worldviews.

REFERENCES

1. Aligica, P. D., & Boettke, P. J. (2009). *Challenging institutional analysis and development: The Bloomington School*. London: Routledge. 168 p.
2. Baiard, A. (2011). Elinor Ostrom: A premiação da visão unificada das ciências humanas. *Caderno CRH, Salvador*, 24(61), 203-216.
3. Balliet, D. (2009). Communication and cooperation in social dilemmas: A meta-analytic review. *Journal of Conflict Resolution*, 54(1), 39-57. Available at: <https://doi.org/10.1177/0022002709352443>. Accessed on: 15 Aug. 2021.
4. Bicchieri, C., & Lev-On, A. (2007). Computer-mediated communication and cooperation in social dilemmas: An experimental analysis. *Politics, Philosophy & Economics*, 6(2), 139-168. Available at: <https://doi.org/10.1177/1470594X07077267>. Accessed on: 15 Aug. 2021.
5. Bochet, O., & Putterman, L. (2008). Not just babble: Opening the black box of communication in a voluntary contribution experiment. *SSRN Electronic Journal*. Available at: <https://ssrn.com/abstract=1220397>. Accessed on: 15 Aug. 2021.
6. Bowles, S. (2016). *The moral economy: Why good incentives are no substitute for good citizens*. New Haven: Yale University Press. 272 p.
7. Bowles, S., & Gintis, H. (2002). Prosocial emotions. Santa Fe Institute. Working Paper, 28. Santa Fe. Jun. 21.
8. Boyd, R., & Richerson, P. J. (1992). Punishment allows the evolution of cooperation (or anything else) in sizable groups. *Ethology and Sociobiology*, 13(3), 171-195.
9. Boyd, R., & Richerson, P. J. (1990). Group selection among alternative evolutionary stable strategies. *Journal of Theoretical Biology*, 145(3), 331-342.
10. Camerer, C. F. (2003). *Behavioral game theory: Experiments in strategic interaction*. Princeton: Princeton University Press. 568 p.
11. Cardenas, J. C., Ahn, T. K., & Ostrom, E. (2004). Communication and cooperation in a common-pool resource dilemma: A field experiment. In S. Huck (Ed.), *Advances in understanding strategic behaviour: Game theory, experiments, and bounded rationality* (pp. 258-286). London: Palgrave Macmillan.
12. Chiaravalloti, R. M. (2020). O dilema do isolamento: Como a ciência ajuda nessa decisão. *Nexo*. Available at: <https://www.nexojournal.com.br/ensaio/debate/2020/O-dilema-do-isolamento-como-a-ciencia-ajuda-nessa-decisao>. Accessed on: 15 Aug. 2021.
13. Denzau, A. T., & North, D. C. (2001). Shared mental models: Ideologies and institutions. In A. Lupia, M. D. McCubbins, & S. L. Popkin (Eds.), *Elements of reason – cognition, choice, and the bounds of rationality* (3rd ed., pp. 23-46). Cambridge: Cambridge University Press.
14. Fontes, F. F. (2020). O que é virada linguística? *Trivium: Estudos Interdisciplinares*, 12(2), 3-17.

15. Frohlich, N., & Oppenheimer, J. A. (2001). Choosing: A cognitive model of economic and political choice. Winnipeg, MB: University of Manitoba, Faculty of Management. Working Paper.
16. Habermas, J. (1990a). Pensamento pós-metafísico. Rio de Janeiro: Tempo Brasileiro. 271 p.
17. Habermas, J. (1990b). Moral consciousness and communicative action. Cambridge, MA: MIT Press. 225 p.
18. Hardin, G. (1968). The tragedy of the commons. *Science*, 162(3859), 1243-1248.
19. Harsanyi, J. C., & Selten, R. (1988). A general theory of equilibrium selection in games. Cambridge: MIT Press. 396 p.
20. Haring, I., Jagers, S. C., & Löfgren, Å. (2020). Covid-19: Large-scale collective action, government intervention, and the importance of trust. *World Development*, 138, 105236. <https://doi.org/10.1016/j.worlddev.2020.105236>.
21. Heath, J. (2001). Communicative action and rational choice. Cambridge, MA: MIT Press. 363 p.
22. Kovac, M., Elkanawati, A., Gjilkolli, V., & Vandenberghe, A.-S. (2020). The Covid-19 pandemic: Collective action and European public policy under stress. *Law & Economics of Covid-19. Working Paper Series*, Rochester, 3(Apr), 1-21. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3573417. Accessed on: 15 Aug. 2021.
23. Latour, B. (2019). O sentimento de perder o mundo, agora, é coletivo. *El País*, 31 mar. Available at: https://brasil.elpais.com/brasil/2019/03/29/internacional/1553888812_652680.html. Accessed on: 15 Aug. 2021.
24. Latour, B. (2020). Os estados (da natureza) entre guerra e paz. In B. Latour, *Diante de Gaia: Oito conferências sobre a natureza no Antropoceno* (pp. 345-397). São Paulo: Ubu.
25. Lunn, P. D., Belton, C. A., Lavin, C., McGowan, F. P., Timmons, S., & Robertson, D. A. (2020). Using behavioral science to help fight the coronavirus. *Journal of Behavioral Public Administration*, 3(1), 1-37. Available at: <https://doi.org/10.30636/jbpa.31.147>. Accessed on: 15 Aug. 2021.
26. Maaravi, Y., Levy, A., Gur, T., Confino, D., & Segal, S. (2021). The tragedy of the commons: How individualism and collectivism affected the spread of the COVID-19 pandemic. *Frontiers in Public Health*, 11, Feb. Available at: <https://doi.org/10.3389/fpubh.2021.627559>. Accessed on: 2 Sep. 2021.
27. Mak, V., & Rapoport, A. (2013). The price of anarchy in social dilemmas: Traditional research paradigms and new network applications. *Organizational Behavior and Human Decision Processes*, 120(2), 142-153. Available at: <https://doi.org/10.1016/j.obhdp.2012.06.006>. Accessed on: 15 Aug. 2021.
28. Mantzavinos, C., North, D. C., & Shariq, S. (2004). Learning, institutions, and economic performance. *Perspectives on Politics*, 2(1), 75-84.

29. Marcondes Filho, C. (2011). Duas doenças infantis da comunicação: A insuficiência ontológica e a submissão à política. Uma discussão com José Luís Braga. *Matrizes*, 5(1), 169-178. Available at: <https://www.revistas.usp.br/matrizes/article/view/38314>. Accessed on: 4 Jul. 2022.
30. Marcondes Filho, C. (2019). Hora de reescrever as teorias da comunicação. In *Encontro Anual da Associação Nacional dos Programas de Pós-Graduação em Comunicação* (28, Porto Alegre, RS). Anais... Porto Alegre: COMPÓS.
31. Meyer, L. F. F. (2021). Isolamento social e a tragédia dos comuns: Uma abordagem sistêmica. In E. M. Senhoras (Ed.), *Covid-19: Consequências econômicas e organização social* (pp. 1-13). Ponta Grossa: Atena. ISBN 978-65-5983-336-8. DOI: <https://doi.org/10.22533/at.ed.368210508>
32. Meyer, L. F. F. (2010). The commons dilemma revisited: An experimental inquiry linking trustworthiness, moral conscience, and willingness to cooperate. Saarbrücken: LAP LAMBERT Academic Publishing. 297 p.
33. Nowak, M., & Highfield, R. (2011). *Super cooperators: Evolution, altruism, and human behaviour (or why we need each other to succeed)*. Melbourne: Text Publishing. 330 p.
34. Ostrom, E. (2007). The challenge of crafting rules to change open access resources into managed resources. In E. C. Teixeira & M. J. Braga (Eds.), *Instituições e desenvolvimento econômico* (pp. 285-333). Viçosa: Departamento de Economia Rural/Universidade Federal de Viçosa.
35. Ostrom, E. (2005). *Understanding institutional diversity*. Princeton, NJ: Princeton University Press. 376 p.
36. Ostrom, E., Gardner, R., & Walker, J. M. (2002). *Rules, games, and common-pool resources*. Ann Arbor: The University of Michigan Press. 369 p.
37. Ostrom, E., & Walker, J. (2003). *Trust & reciprocity: Interdisciplinary lessons from experimental research*. New York: Russell Sage Foundation. 409 p.
38. Ostrom, V. (1991). Some ontological and epistemological puzzles in policy analysis. In *Workshop in Political Theory and Policy Analysis*, Bloomington, IN: Indiana University. Working Paper W82-16.
39. Sefton, M., Shupp, R., & Walker, J. M. (2007). The effect of rewards and sanctions in provision of public goods. *Economic Inquiry*, 45(4), 671-690. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1022728. Accessed on: 15 Aug. 2021.
40. Silva, M. F. G. da. (2020). Uma história sobre pandemia (Covid-19), isolamento e fundamentos microeconômicos de políticas públicas. *Cadernos Gestão Pública e Cidadania*, 25(80), 1-11. Available at: <http://bibliotecadigital.fgv.br/ojs/index.php/cgpc/article/view/81290>. Accessed on: 15 Aug. 2021.
41. Simon, H. A. (1955). A behavioral model of rational choice. *Quarterly Journal of Economics*, 69(1), 99-118.