

Frames in the Social Sciences

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Abstract

The purpose of this overview is to provide a multi-disciplinary introduction to existing notions of frame and framing in the social sciences. In doing this, we review main interpretations of the concept provided by different disciplines, and focus on their main knowledge spillovers for other fields of scientific inquiry. Finally, we discuss why frames and framing are one of main tools in the building of relational social sciences.

Keywords: Frames, Framing, Framing effects, Frame Analysis, Relational Social Sciences.

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How to cite this article: Diego Lanzi. Frames in the social sciences 14(2) 94-103. Retrieved from <https://jmseleyon.com/index.php/jms/article/view/744>

Received: 19 April 2024 **Revised:** 20 May 2024 **Accepted:** 26 June 2024

1. Introduction : The Myth of Framework

In a collection of addresses and lectures published at the end of his life, Sir Karl Popper provided a valuable guide to the elements of his philosophy of science [1]. The eponymous essay of the book deals with the myth of the framework: roughly, the idea that agents with different views and understandings cannot really communicate with each other. Their ways of thinking are incommensurable. According to Popper, such a position is flawed because it does away with the notion of objective truth and replaces it with a relative one, appropriate for each framework. This was a sort of anathema to Popper whose metaphysical conviction was one of objective truth, the same for everyone. Science is about rationality and critical discussion, and the latter can take place even among discussants with very different frames of reference. Thus, scientific knowledge and objectivity require a “view from nowhere” which is both description and position independent [2].

Regardless of this admonishment, during the last decades, the notion of frame has become one of the most influential concepts in several branches of social sciences and research. In the last half a century, the ideas of frame and framing have been applied in the most diverse disciplines and research areas, among which: sociology, cognitive sciences, psychology, political science, behavioral economics and linguistics, artificial intelligence, communication and media studies. Worth noting the notion of frame has been also applied outside social sciences, not only, as we shall briefly recall, in computer science, but also in mathematical sciences

or electrical engineering. For instance, on frames theories in mathematics see [3].

In 2002, David Kahneman won the Nobel Prize in Economics exactly for having discovered the framing effects problem, i.e., what issues arise when the manner in which alternatives are presented matters for choice [4]. Since then, not only frames and framing have ceased to be unsound entities in scientific research, but they have been one of main tools in the building of relational social sciences [5].

Hence, the purpose of this paper is to provide a multi-disciplinary overview of existing notions of frame in social sciences. In doing this, we review main interpretations of the concept provided by different disciplines, and focus on their main knowledge spillovers for other fields of scientific inquiry.

2. Frames in the Social Sciences

Contemporary uses of notions of frame and framing are multi-folded and reciprocally sustaining, even maintaining a common conceptual core. Any new piece of scientific knowledge they allow to discover in one field of research supports the application of both notions in other areas. Any interdisciplinary route of analysis they reveal connects branches of social sciences previously unlinked. Our discussion is organized as follows. Firstly, we offer an overview of frame notions in different fields of social sciences, by starting from sociology and finishing with rational choice theory. Secondly, we depict the multiverse of frame and framing notions, and their main cross-

borders spillovers in social research. Finally, we discuss how frames can make more relational social sciences' research program.

2.1 On Frame Analysis

Erving Goffman's Frame Analysis was one of the first contributions to bring the notion of frame to the attention of scholars [6]. Goffman was persuaded that frames were a useful analytical tool for analyzing communication, interaction and cognition.

In his seminal book, he refers to Bateson's paper [7] "A Theory of Play and Fantasy" as the source of his definition of frame as inherently metacommunicative and "involv[ing] the evaluation of the message it contains, or merely assist[ing] the mind in understanding the contained message". In particular, Goffman is interested in "the basic frameworks of understanding available in our society for making sense out of events and to analyze the special vulnerabilities to which these frames of reference are subject ([6], p.10)".

Frames assist the mind in understanding the message they contain, and, because of this, they not only are metacommunicative, but also manipulative. He also defines frames of reference as "schemata of interpretation" (ibidem, p.45) giving to the expression a quite mechanical meaning. Just to say, when framing effects operate some consequences in terms of action/cognition are unavoidable. As Goffman writes: "we can hardly glance at anything without applying a framework, thereby forming conjectures as to what occurred before and expectations as to what is likely to happen now (ibidem, p.38)".

Frames are modulated by keys, i.e., systems of conventions that can transform an activity, or object, and re-frame it. These keys can be properly activated by agents, and lead to a precise strip of occurrences, a "cut from the stream of ongoing activities [...] that one wants to draw attention to as a starting point of analysis (ibidem, p.10)". Below the definition of frame he provides: "I assume that the definitions of a situation are built up in accordance with principles of organization which govern events – at least social ones – and our subjective involvement in them; frame is the word I use to refer to such of these basic elements [...] My phrase "frame analysis" is a slogan to refer to the examination in these terms of the organization of experience (ibidem, p.11)".

Goffman distinguishes between natural and social frames. The former do not depend on human actions or social interactions; the latter depend on social actions that result from human actions, conventions and intentions. Clearly, from a sociological perspective, social frames are paramount.

According to Goffman's case studies, main social frames are: (i) the frame of pretending (like in jokes); (ii) the frame of competition (like in games); (iii) the frame of ceremony; (iv) the frame of special performing (like in

demonstrations); (v) the frame of re-contextualization; and (vi) the frame of conversation.

Furthermore, in writings collected in [8], verbal language is often defined by the author as a symbolic system used for building social interaction. Goffman does not refer explicitly to linguistics or semantics, but the linkages between his thought and Charles Fillmore's frame semantics would be revealed soon.

2.2 Semantic Frames

Charles Fillmore introduces the idea of frame semantics as a theory of understanding [9]. In his own definition: "by the term "frame" I have in mind any system of concepts related in such a way that to understand any one of them you have to understand the whole structure in which it fits; when one of the things in such a structure is introduced into a text, or a conversation, all the other are automatically made available ([9], p.3)".

Following Fillmore's theory, a frame is a "schematization of experience", or a knowledge structure, held in long-term memory and theoretically conceptualized. They represent elements and entities associated with a culturally, or socially, embedded codification of human experience, and, as detailed knowledge structures, operate like schemas emerging in particular contexts [10]. Fillmore argues that: "nobody can really understand the meanings of words in that domain who does not understand the social institutions or the structure of experience which they presuppose (ibidem, p.31)".

This implies, consistently with Goffman's analysis, that the use of words, as acts of framing, is embedded in a broader institutional/social setting.

Semantic frames can be invoked or evoked, and once they are activated language users start to fill frame's slots with details. Slots are, thus, bound with fillers, i.e., not arbitrary conceptual objects, or elements of representation of a situation. Slot-filling processes allow specifying, and putting in action, framing effects through which prior experience of the world and expectations are linked to new perceptions and emotions. For example, the frame of commercial competition can be fill with words like "buy", "sell", "cost", "revenue", "spend", "tender", "quality" and the like, which provide, at the same time, a framework of meaning and the background for categories these terms represent. Here, default values play a crucial role. A default value is the most typical filler of a slot. If no other information is available, language users will perform slot-filling consistently with these values, automatically compiling the frame of the situation [11].

Expectations violation or unexpected fillers yield what is called frame shifting, that is, a re-interpretation of a text or conversation induced by incongruity, unexpectedness and surprise. Consider, for instance, the following statement: "by the time Mary had had

fourteenth child, she'd finally run out of names to call her husband ([12], p.49)".

The presence of the word husband at the end of the sentence forces a lexical re-interpretation of the word "names" as "derogatory epithets", a re-assessment of meaning with respect to that initially expected which opens new mental spaces [13]. Clearly, both conceptual blending and meaning construction depend on the mental space applied to social interaction [14].

At this regard, the cases of metaphorical expressions and conceptual metaphors are paradigmatic. According to the cognitive linguistics, a conceptual metaphor consists of two domains, the source domain and the target one, being interpreted one in terms of the other. The selection of a metaphor's source domain highlights some aspects of the target domain, and obfuscates others; thus a conceptual metaphor frames in a certain mental space some aspects of the object or experience represented [15],[16].

The same function of metaphors is performed by linguistic "cue and markers" which signal the presence of a specific frame [8]. Other "symbolic devices" that signify the use of frames are exemplars, catchphrases, depictions, and visual images. Recently, Burgers et al. have introduced the expression figurative framing for indicating complex mixtures of above elements [17].

2.3 Interactive Frames

In sociolinguistics, frames are one the main "means of speaking" [18]. Tannen and Wallat use an interactive notion of frame, and conceive framing as the structuring of expectations [19]. In particular, a frame refers to a definition and description of what is going on in the interaction without which interpretation is impossible. Two are main functions of frames, they "make it possible to perceive and interpret objects and event in the world [...] shape those perceptions to the model of the world provided by them ([20], p.29)". By using them, we can "select some aspects of the perceived reality and make them more salient [...] in such a way to promote a particular problem definition, causal interpretation, moral evaluation and/or treatment recommendation ([21], p.52, italics added)".

Hence, frames and framing shape the understanding of a given model of the world, a situation or a communicating text through both cognitive and ethical responses of participants for the item described. They work as mechanisms to make sense of what is going on, to construct a precise understanding of reality and/or a behavioral response to it. Interactions between perceptions, expectations, signals and meaning markers will lead to a precise re-construction of the experience consistent with the kind of operating frame.

For instance, in communication studies, frames are used to analyze how a content producer constructs a message, for news, media or other, to generate a certain cognitive representation and reaction by its receivers.

Biased (or constrained) interpretation and "influenced understanding" are, thus, outcomes of well-functioning framing effects as recent debates on sustainability and globalization or new technologies clearly show [22].

Thus, frames and framing not only are extensively and pervasively disseminated through mass media, political communication or social interaction, but they become social constructs that influence and shape a community's culture through selective focalization. Moreover, frames and framing effects, even strongly influential, usually tend to be undetected or covert. Thus, the analysis of how covert frames operate and influence decisions is crucial in many branches of the social sciences.

2.4 Frames and the Birth of Artificial Intelligence

Nowadays, debates and discussions about artificial general intelligence systems (AI) and the technological singularity are well-spread on mass-media and academic journals. With no doubts, the development of early AI has largely benefited from the use of the frame notion. Let us briefly mention why.

In a seminal paper circulated in 1974, MIT computer scientist Marvin Minsky provides principles and a framework for creating an intelligent, self-improving machine [23]. At the beginning of the essay, he provides the following definition of frame: "a data-structure for representing for representing a stereotyped situation" (ibidem, III), a sort of remembered framework of meaning selected by memory in front of certain circumstances.

Few years later, Shank and Abelson prefer the term script to the word frame, even if they refer to the same entity, i.e., a representation of knowledge about events consisting of a pre-determined, remembered and stereotyped sequence of actions that define a well-known situation and its context [24].

Differently, Van Dijk maintains the word frame, and conceives it as a conceptual structure in the semantic memory [25]. An organizational principle formed by "the set of propositions characterizing our conventional knowledge of some more or less autonomous situation (activity, course of events, state) (ibidem, p.99)".

Hence, in AI systems, a frame, or script, is a guide for information processing which provides pre-existing, stored data structures against which to assess new data or information; a sort of non-human structure of expectations that drives decisions and computations. Hayes has shown how to write a script in formal logic terms, giving to the computer scientists' community a way for coding frames [26]. Once again, the influence of Goffman and Fillmore on these scholars is evident.

2.5 Media and News Frames

In two classic studies on newsgathering, Tuchman and Gitlin explored at length the use news frames in the presentation of events or topics regarding

1960s women and students movements [27],[28]. Both books contested the idea of journalistic objectivity and unmasked ways in which, through media frames, format conventions, news values, and cultural values shape patterns of selection, emphasis, and exclusion.

The relevance of the two essays for communication studies and social movement research has been unquestionable. On one hand, as we shall review in the next Section, by blending Tuchman and Gitlin's concept of news framing with Goffman's notion of frame, research on social movements has attained important advances [29]. On the other hand, the idea of media frame has been placed at the center of many research programs in the field of communication.

A media frame is a written, spoken, graphical, or visual message modality used to contextualize a topic, or an issue, within a text transmitted to receivers by means of mass media [30]. Usually, it aims to persuade message receivers, and to shape how individuals and groups think, interpret, evaluate, an act on a topic. Media frames are, therefore, frames of reference which organize and connect some topic-relevant information.

Not surprisingly, from a communication studies' standpoint, we have both audience frames, i.e., mentally-stored patterns of topic-related associations that drive message receiver's processing of information, and persuasion frames, i.e., frames of reference artificially created by the message creator and communicator. As Internet-based mediation clearly shows, the former can enter the information environment and interact with the latter. Depending on communicative goals, communicators can use emphasis framing or equivalency framing. In the first case, certain pieces of information are emphasized, while others intentionally omitted, in an effort to purvey a precise judgment about a topic. In the second, the communicator frames an issue, usually conceived from a given perceptible, in a logically-equivalent, but not reaction-equivalent, way (e.g., a risky choice presented in terms of reasonable gains and not of possible losses). Moreover, even emphasis frames may encode such a valence effect. For example, a policy issue (e.g., healthcare) can be framed in a value (e.g., equality), and its effects spelled out in terms of expected gains (e.g. saved lives) instead of losses (e.g. number of deaths). As it will be clearer below, valence framing is exactly what causes Kahneman and Tversky's framing effects on decision-making.

Finally, issue frames refer to any topic-specific frame based on consideration, i.e., a justified reason for favoring one side of an issue over another [31]. Historically, these frames originate from issue advocates and reach their targets through different communication channels. Further, they are collective frames in the sense that they should stimulate a collective, common, response by the audience.

Political scientists by first have investigated the contest and effects of issue frames, and one fruitful field

of application of the concept was social movement research.

2.6 Social Movements and Collective Action Frames

Frames and framing entered in the analysis of social movements in the 1980s through the works of several framing theorists [32], [33]. They draw their conception of framing from Goffman's work, and apply it to diagnostic, prognostic and motivational components of political mobilization. Collective action requires shared purposes and vision, as well as joint commitment, all elements that can be built through framing and "frame alignment" processes.

From this viewpoint, a frame has been conceptualized as the interpretative package activists develop to mobilize actors and authorities on a certain social issue [34]. By distinguishing "us" from "them", effective frames make clear the social identity of contenders and they are, at once, empirically credible, experientially commensurable, and narratively faithful [35]. They offer, at the same time, persuasive devices and an interpretative framework that are dynamic in nature and group-oriented. Moreover, they are ideational because "not only perform an interpretative function [...] but are decidedly more agentic and contentious in the sense of calling for action that problematizes and challenges existing [...] framing of reality ([35], p.198)".

Benford and Snow identify nine master frames that can be appropriated by activists [36]. A master frame is an "enduring cultural theme" on which more targeted frames can be forged, like, for instance, notions of civil rights, freedom of choice or environmental justice. Furthermore, four frame-alignment processes are used to get mobilization: (i) bridging, i.e., linking previously unconnected frames regarding an issue; (ii) amplification, i.e., amplifying some values or beliefs; (iii) extension, i.e., enlarging a frame's reach to encompass new points of view; (iv) transformation, i.e., using counter-factual framing for changing old meanings and understandings.

Frames alignment, frame sharing and the failure of frames coordination are thus central topics in this strand of social research. A field of inquiry in which the focus on the strategic use of pre-existing interpretative frames risks to feed a sort of reification of the framing notion [37]. This tendency can lead to overstate the relevance of outcomes and results at the expenses of ongoing processes of framing as meaning co-construction.

As we shall see below, the idea of framing as interactional co-construction of meaning and interpretation is largely used in organization theory and management studies.

2.7 Frames, Institutions and Organization

In the management and organizational literature, three different levels of application of frames and framing notions exist [38].

On one side, at the macro level, neo-institutional theory uses the idea of framing for capturing the institutionalization of enduring meaning structures, and for providing macro-structural cues for individual agents' motivations and decisions. As Beckert points out, by broadening the notion of institution, we can emphasize "the role of cognitive frames and meaning structures as decisive for the explanation of economic outcomes [...] institutions are defined as inter-subjectively shared meaning and thereby become almost indistinguishable from cognitive frames ([39], p.607)".

These meaning structures yield power arrangements, interaction patterns, expectations that individuals elaborate to decode roles, norms and behavioral scripts associated with a particular frame [40]. Hence, frames operate as the background structure of shared reality. Nevertheless, at the same time, framing settlements and re-definitions (re-framing) are crucial in sustaining technological and organizational change. Thus, frames are also tools for strategic and creative behavior within organizations [41].

On the other side of the spectrum, at a micro-level, since the original Carnegie line of research on decision-making in organizations, the relevance of understanding "frames of reference" through which agents "screen and filter" the environment has been widely acknowledged [42]. Frames of reference are activated to guide the perception of cues and stimuli, and they describe how cues are attributed to larger cognitive frames. They describe how perception and behavior are influenced by the manner in which regularities are detected in experience. Most of these works on framing follows cognitive science's results on cognitive frames like those obtained by Minsky or Tannen. Individuals use cognitive frames as part of their thinking and reasoning to develop expectations, to make inference in context, to make default assumptions and predictions of their actions [43], [44]. In the words of Weick: "frames tend to be past moments of socialization and cues tend to be present moments of experience [...] the content of sense-making is to be found in the frames and categories that summarize past experience, in the cues and labels that snare specifics of present experience, and in the way these two settings of experience are connected ([43], p.111)".

Consistently, the collapse of sense-making highlights the failure of the activated frame to guide meaningful inferences, associations and assessments. As discussed below, an important stream of management research on framing has been thus focused on such a micro-level. Several contributions have analyzed how individuals subjectively frame an outcome, a choice or a transaction, discussed "framing biases" and their effects

on decision-making.

In between the two mentioned levels of inquiry, at a meso-level, some papers deal with the idea of frames as interactional co-constructions, rather than considering frames as individual knowledge structures. Like in social movement research and sociolinguistics, frames are conceived as collective, interactional and socially-constructed entities. In this direction goes, for instance, the proposal of Nadkarni and Narayanan of a strategy frame as something referring to "a set of cause-effect understandings about industry boundaries, competitive rules, and strategy-environment relationships available to a group of related firms in an industry ([45], p.689)".

These strategic frames are socially constructed in interaction between managers of firms, leading to a common cognitive understanding, and they can blind organizations to a set of actions or capabilities.

2.8 The Framing of Individual Decisions

In decision theory, the framing effect is a well-known cause of failure of the transitivity property of individual preferences [4],[46],[47]. The violation of transitivity depends on the sensitivity of chooser's decisions to the manner in which the alternatives are framed. We can take a choice problem, frame it in two different, but logically-equivalent, ways and observe how systematically divergent choices are made referring to the two descriptions. For instance, we can imagine that someone has to choose between two alternatives, say x and y , where x gives \$15,000 with probability $1/1500$ and y gives \$10 with certainty. In such a situation, it is very likely that the chooser will be unable to identify a strict order relation between the alternatives, and so he/she will choose randomly, or on the basis of his/her response to the framing of the choice problem. Next, suppose we introduce a third alternative, say z , which gives \$10.01 with certainty: if the choice is between x and z it is quite plausible that the above incommensurability will remain. Hence, by transitivity, we should have that x is indifferent to z , y to x and, therefore, z to y . Nevertheless, experimental results show that, in choice problems similar to this one, experiment participants actually choose z .

Kahneman and Tversky propose a famous experiment to test the validity of Expected Utility Theory. They want to show that different framing of the choice between two lotteries can distort their stochastic equivalence. The choice problem they describe is the following. Two alternative programs, x and y , can be adopted to contrast an epidemiological crisis in a town of 600 people. These two alternatives are differently described, or framed, to two groups of people. To group one, x is described as a public intervention able to save 200 lives with certainty, and y as an alternative program that, once implemented, ensures with a probability of $1/3$ that 600 people

are saved and with a complementary probability that none survive. To group two, the same programs are presented in terms of lost lives. Under this experimental design, Kahneman and Tversky note that, regardless of the stochastic equivalence of the lotteries, within the first group, 72% of respondents declare that x is preferable to y while, in the second group, only 22% indicate the same preference. Hence, Kahneman and Tversky conclude, choice behavior is sensitive to the description of the choice, and to the way in which alternatives are framed. When these effects are in action, choice theory predictions frequently fail to be true. More precisely, Kahneman and Tversky distinguish between pure and valence (or equivalency) frames. A pure frame generates an alternative, but objectively equivalent, description of a certain situation; a valence frame presents the same situation in a good or bad light. Equivalency frames trigger effects that occur when different, but logically equivalent phrases cause individuals to alter their preferences, and they involve casting information in either a positive or a negative light [48].

According to Kahneman and Tversky's results, choice behavior is sensitive to how alternatives are framed, i.e., described and presented. This is particularly common when choices are highly uncertain and when the chooser is psychologically sensitive to the frame of choice. Therefore, when these framing effects are important, it is a mistake to conceive the problem of choice as described in Expected Utility Theory. In these cases, there is a need of a more complex choice theory in which the responsiveness of choice behavior to different contextual/descriptive conditions, or frames of choice, is modeled. As is well-known, to this aim, Kahneman and Tversky have proposed the Cumulative Prospect Theory [49].

Framing effects have not only been analyzed by scholars interested in refining decision theory. The sensitivity of individual choices to contextual conditions is an important issue for other branches of economic analysis. For instance, several contributions concerning consumer behavior deal with the notion of frame.

2.9 Frames, Choice and Embeddedness

In a series of papers, I have presented a formal way to relate frames, individual choices and strategic games [50],[51],[52],[53]. In those works, by stealing a term from the Marxian tradition, I have discussed as frames can be conceived as choice super-structures. Such a super-structure operates by altering choice problem definition in either individual decision problems or non-cooperative games. Frame-related causal interpretations or frame-induced emotions can shape individual choice behavior, or re-frame choice sets giving them a different morphological structure. In a similar vein, Salant and Rubinstein suggest a theory

of choice with frames. They define a frame as observable information that appears to be irrelevant to the rational assessment of the alternatives but nonetheless may affect choice [54].

Frames as choice superstructures consist of two ingredients: an equivalence relation between choice alternatives, and a non-order-preserving application over alternatives. When agents frame a choice problem, they put in action different equivalences and transformations consistent with the kind of frame they are facing. Hence, frames are sustained by nomological conditionals, which are behaviorally binding propositions deduced from the synthesis of several intervening and conflicting ethical principles, social influences and traditions through which the frame is activated. The process of forming this conditional statement can be, to some extent, manipulated and influenced by social settings, conventions, norms and the like.

From this perspective, we distinguish between: exogenous frames, i.e. frames of choice voluntarily created by someone different from the person who has to choose, and which cannot be modified by the chooser; endogenous frames, i.e. frames of choice endogenously elaborated by the chooser whenever he/she faces a particular choice problem; internal frames, i.e. frames valued as relevant for the choice at stake, given the characteristics of the choice problem; external frames, e.g. external references of choice opportunely internalized by the chooser as a result of individual volition and/or social pressure.

By using choice-superstructures, framing effects and context effects can be easily rationalized with reference to both Nash equilibria in strategic games and maximization-oriented choice problems. From this viewpoint, frame analysis provides categories and tools for approaching the problem of "embedded agency", which relies of the understating of human agency as interconnected to macro-level structures [55]. Hence, frames as choice-superstructures allow connecting framing and framing effects to embeddedness structures. As emphasized by Mark Granovetter: "since social relations are always present, the situation that would arise in their absence can be imagined only through a thought experiment like Thomas Hobbes's "state of nature" or John Rawls's "original position". Much of the utilitarian tradition, including neoclassical economics, assumes rational, self-interested behavior affected minimally by social relations, thus invoking an idealized state not far from that of these experiments ([56], p. 481)".

Hence, modeling the idea of frame of choice, and combining it with the manner in which choice problems are solved, contributes to overcoming the social reductionism of modern economic science. As Granovetter stresses, "at the other extreme [with respect to neoclassical economics' viewpoint] lies what I can call the argument of "embeddedness": the argument

that the behavior and institutions to be analyzed are so constrained by ongoing social relations that to construe them as independent is grievously misunderstanding [...] a fruitful analysis of human action requires us to avoid the extremes of under- and over-socialized conceptions. Actors do not behave or decide as atoms outside a social context, nor do they adhere slavishly to a script written for them by the particular intersection of social categories that they happen to occupy. Their attempts at purposive action are instead embedded in concrete, ongoing social relations (ibidem, p.482/487, [,] added)".

Last observations lead exactly to what we have called, at the beginning of the essay, relational social sciences. However, before discussing why frame analysis is crucial in such a paradigm, let us sum up main interdisciplinary fertilizations produced by the literature overviewed.

3. Framing Theory: Main Cross-borders Spillovers

Frames define borders and structures. Borders are edges from which, sometimes, something leaks out. Indeed, in the history and evolution of theories and notions of frame and framing within social sciences, many cross-borders disciplinary spillovers are leaked out. In this Section, we mention just some of them.

Firstly, the sociological viewpoint of Erving Goffman has been largely used and extended by sociolinguistics, social constructionism and cognitive theories. Thus, studies of communication, news, media, politics etc... have largely applied the notion of framing. To remind but some: social movement research, conflict and negotiation research, international relations, news discourse, social research.

Secondly, Charles Fillmore's use of semantic frames in cognitive linguistics has fruitfully fertilized not only semiotics and mass media analysis, but also studies of political sociology, social psychology and artificial intelligence.

Thirdly, Marvin Minsky's conception of frames as behavioral scripts not only grounds contemporary computer science, but has also inspired many researches in organization theory, consumer research and management studies.

Finally, David Kahneman's framing effects have made possible relevant advancements in expected utility theory, behavioral economics, consumer research and rational choice theory. In economic sciences, some of these steps forward have led to a deeper comprehension of the role of embeddedness structures whose frames and framing belong to. That is to say, back to the Goffman's idea of situatedness of social interaction and behavior.

As we have pointed out in this paper, a multiverse of frames results from such an inter-disciplinary fertilization. From a micro-cognitive point of view, or from a macro-institutional one, cognitive frames, frames

of reference, framing effects, strategic and interactive framing, collective action frames, master frames, frame alignment, frame shifting and the like, have been important analytical categories in contemporary social sciences. Next Figure summarizes main depictions of the frame construct we have interconnected in the above discussion (see Figure 1). The second diagram represents cross-borders spillovers and main interdisciplinary linkages between notions of frame and framing (see Figure 2).

4. Conclusions: Frames and Relational Social Sciences

The relational perspective on social action and historical change can be characterized through the opposition with substantialism. According to the latter, substances of various kinds (objects, beings, essences, societies) constitute the fundamental units of inquiry. Contrarily, relational social sciences reject the idea that one can posit discrete, pre-given units as ultimate starting points of social analysis. Variable-based analysis is viewed as equally misleading, since it detaches elements/substances from their spatial-temporal contexts, analyzing them apart from their relation with other elements within fields of mutual determination.

Contrarily, a relational approach embeds agents, and processes, within relationships, contexts, signs and stories which shift over time and space, and such a shifting precludes the categorical stability of action and meaning. The ontological embeddedness of entities within actual situational contexts become central, and interrelations between units, seen as unfolding/ongoing processes rather than as static ties among inert substances, the bases of analysis. Relational social sciences, therefore, must be focused on embeddedness structures, situational contexts, social interaction, relational perspectives and the like. One might just as well speak here of construal, mental spaces or conversations; the underlying idea remains the same: the primacy of contexts. Properties of objects, phrases or beings therefore have different values, both ontologically and epistemologically, depending on the relations in which they are embedded.

As we have discussed in this overview, the dimensions of framing have to do with "situated" representation, cognition, interaction, communication and behavior. Frames interconnect cue, relation and structure and, therefore, are crucial in the development of relational social sciences researches. To this aim, two main applications of notions of frame and framing are possible: on one hand, the explicative use, i.e., to explain social phenomena otherwise unexplainable (like in the case of the social use of irony [57]; on the other hand, the counterfactual use, i.e., to falsify in Popper's sense existing results or theories which do not consider explicitly framing or context effects (like

in the case of Expected Utility Theory).

Finally, in relational social sciences, frame analysis can offer insights on the idea of positional objectivity. A positional perspective questions “the tradition of seeing objectivity in the form of invariance with respect to individual observers and their positions ([58], p.126)”, and states that the objectivity of observations must be position-dependent: not a “view from nowhere”, but one from “a delineated somewhere” (ibidem).

More radically, positional dependency might also imply that “the site of truth is not the way “things really are in themselves”, beyond perspectival distortion, but the very gap or passage which separates one perspective from another, the gap which makes the two perspectives radically incommensurable. The “Real as impossible” is the cause of the impossibility of our ever attaining the “neutral” non-perspectival view of the object. There is

a truth, and not everything is relative, but this truth is the truth of the perspectival distortion as such, not a truth distorted by the partial view from a one-sided perspective ([59], pp.47-8)”.

In the first case, frames can ease the description and understating of position-dependent statements, utterances and choices; in second one, frames and framing could be exactly the truth we are looking for. This kind of claim is consistent with a key trait of frames, the fact that they contain relational conceptual information that links contexts and situations to actions and outcomes [60].

In conclusion, the popularity of frames and framing notions has been a double-edged sword. As this overview has discussed, in less than half a century, frames and framing have been conceptualized in many and often diverse ways, a proliferation that,

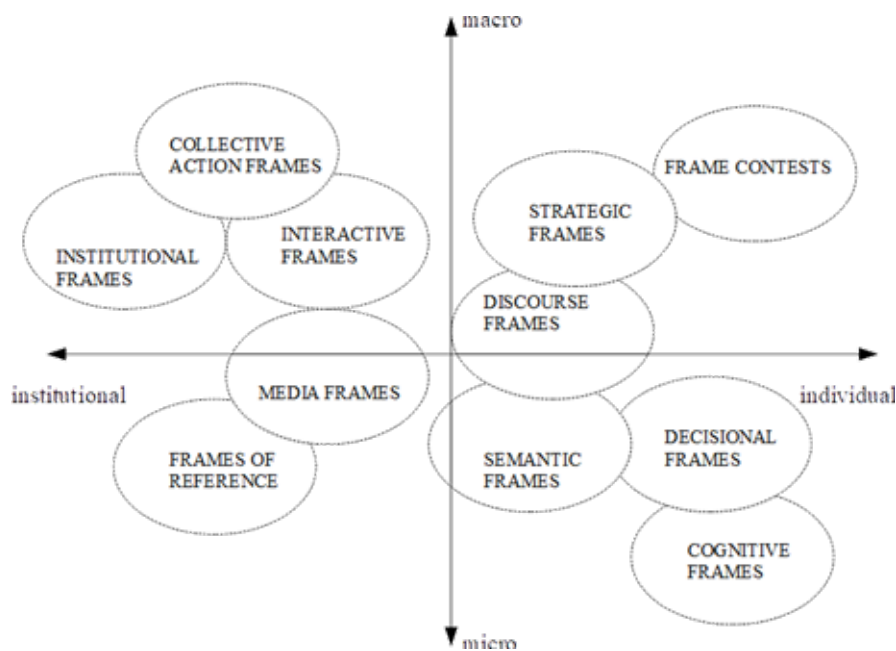


Figure 1 Frames in the social sciences

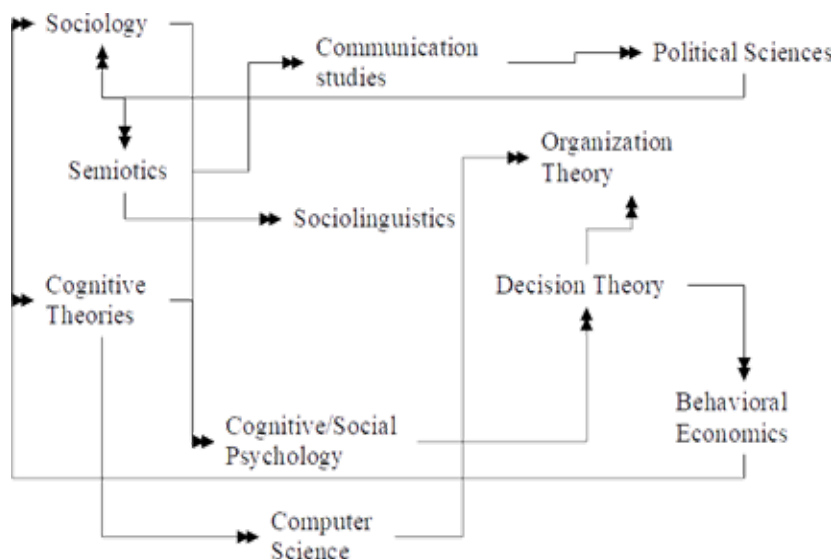


Figure 2 Main cross-borders spillovers

sometimes, has made difficult to follow and trace the fil rouge linking contributions and theories. As Entman emphasizes, the multiple views of what a frame is have led to a “fractured paradigm” for frame analysis [21].

The overextension of framing concept has been also problematic. Made to stand in for a variety of processes, framing has been differently treated and modeled within subfields of social sciences. And this, as we have clarified in this paper, even if the basic notion of framing was always the same. The reason of this has been the wrong attitude to think of a frame as the perimeter of a picture, rather than as the structure of a building. Such a grievous mistake leads to seek the truth inside, or apart of, the frame, when it lays hidden in the frame itself.

In this paper, we have argued that frames and framing have to do with how individuals and groups structure and contextualize experience and reality, a structuring exercise that obeys to invariant principles in different fields of social research. This multi-disciplinary overview should have reduced, at least a little, the mentioned fracture.

Acknowledgement

Nil

Funding

No funding was received to carry out this study.

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