

City University of New York (CUNY)

CUNY Academic Works

Publications and Research

CUNY Graduate Center

2022

Theorizing, Bounded Rationality, and Expertise: Cognitive Sociology and the Quasi-Realism of Problem-Solving as a Course of Activity

Michael W. Raphael
CUNY Graduate Center

[How does access to this work benefit you? Let us know!](#)

More information about this work at: https://academicworks.cuny.edu/gc_pubs/735

Discover additional works at: <https://academicworks.cuny.edu>

This work is made publicly available by the City University of New York (CUNY).
Contact: AcademicWorks@cuny.edu

THEORIZING, BOUNDED RATIONALITY, AND EXPERTISE: COGNITIVE SOCIOLOGY AND THE QUASI-REALISM OF PROBLEM-SOLVING AS A COURSE OF ACTIVITY*

Michael W. Raphael

ABSTRACT

The question facing sociology is whether it is a field or a discipline. If it is a field, then there is no need for theorizing. However, if sociology is a discipline, then problem-solving cannot be disentangled from theorizing without a loss of intelligibility – the inability to explain the social as the concept of the discipline. Through the quasi-realism of problem-solving as a course of activity, this chapter presents cognitive sociology as a paradigm appropriate to the concept of the social understood as an ongoing course of activity. In doing so, it is shown how bounded rationality and expertise play a crucial role in how communication interacts with the division of cognitive labor, especially through the idea of representational representationality. Representational

*Much of this chapter owe a great debt to Michael E. Brown's *The Concept of the Social in Uniting the Humanities and Social Sciences* (2014). I have had many discussions with the author about developing these concepts beyond what is captured in his marvelous text. These discussions began as an undergraduate at Northeastern in 2009 and have continued an ongoing course of activity since then. I am truly grateful for Brown's commitment to theorizing, the many stories he told me about his own work, and its relationship to Simon. In this regard, I have reserved attribution for particularly pointed comments by him, and I take responsibility for the rest.

The Centrality of Sociality

Current Perspectives in Social Theory, Volume 39, 193–223

Copyright © 2023 by Emerald Publishing Limited

All rights of reproduction in any form reserved

ISSN: 0278-1204/doi:10.1108/S0278-12042022000039011

representationality is an idea that reveals how the degree of clarity among language, meaning, and thought is relative to the issues of audience and ignorance. Representational representationality is significant because it demonstrates how the relationship among meaning, language, and thought is subject to communicative errors – errors arising from a predicament of intelligibility and not merely arising from issues of computational skill, as described by Herbert Simon’s model of bounded rationality and expertise in human problem-solving. The argument that follows from this shows how the means for adapting to ambiguity amounts to the difference between Simon’s model and a quasi-real model in terms of its principle of rationality, principle of efficiency, and its cognitive style of problem-solving for deliberate practice. These dimensions are shown to effect what “examples” are good for in the problem-solving process, thereby revealing the politics of expertise. The politics of expertise demonstrates how the conflicts in sociological explanations of strategy are not merely conflicts that can be set aside as a pluralism of values. Rather, the conflicting explanations of theory and theorizing can only be resolved when the situational rationality of sociology as a discipline realizes the quasi-realism of problem-solving as a course of activity.

Keywords: Strategy in human problem-solving; situational rationality; representational representationality; language in culture & cognition; models in quasi-realism; cognitive sociology

That strategies can be learned is hardly a surprising fact, nor that learned strategies can vastly alter performance and enhance its effectiveness. All educational institutions are erected on these premises. Their full implication has not always been drawn by psychologists who conduct experiments in cognition. Insofar as behavior is a function of learned technique rather than ‘innate’ characteristics of the human information-processing system, our knowledge of behavior must be regarded as sociological in nature rather than psychological that is, as revealing what human beings in fact learn when they grow up in a particular social environment. When and how they learn particular things may be a difficult question, but we must not confuse learned strategies with built-in properties of the underlying biological system. (Simon, 1968/1996, p. 62)

There is considerable research in psychology, social psychology, history, and sociology that presupposes the transcendental aspect of situations. But it is not often acknowledged that this has to do with the essential sociality of humans or that it implies that the social is an irreducible fact. This diminishes the significance of concrete analyses to the overall projects to which they ultimately must appeal (e.g., the analysis of “action” such that it bears on our understanding of the conduct of ordinary affairs no less than on scientific practice). Rather, this transcendental aspect appears rhetorically, as a matter of emphasis, where the description of an ostensibly particular and definite situation is paired with a conception of the individual person (“in” that situation) as a creature that “cognitively maps” environments and responds or reacts fundamentally according to a principle of least effort—as far as that is possible under conditions of what Herbert Simon (1983) famously, and ambiguously, called “bounded rationality.” In that case, it appears that the individual is variously disposed but only in ways that can be typified, and that he or she thinks and acts such that those typical dispositions are realized in types of action that are logically compatible with what is mapped objectively about the situation. The failure to address what is implicit in the idea of a transcendental situation is evident in how the various disciplines address the question of what is distinctively human about human affairs. Descriptions of action under specific circumstances, no matter how rich, typically fail to provide for the immanence of sociality.

This leaves theory with a host of problems caused by the default position that says that social facts are external to what people do, and that therefore actions (and intentionality itself) are ultimately to be understood in psychological terms. Thus, we cannot be certain that a particular behavior is exemplarily social and therefore not a proper object of psychological explanation. It is nevertheless necessary to say that whatever is involved in something being social must, at the same time, be reflexive to sociality. So when we refer to social behavior or social action, we are invoking a more general notion, though it is one about which we remain confused. (Brown, 2014, p. 176)

INTRODUCTION

The study of situational rationality is crucial to the endeavor of discerning “what is distinctively human about human affairs,” especially if we are to accredit that endeavor as worthy of articulating its own authority, be it scientific or otherwise. In that respect, situational rationality denotes an apparent paradox: that beliefs are somehow simultaneously ambiguous (situational) and knowable (rationalizing). Yet, when placed in the context of Michael E. Brown’s book, this paradox disappears. From this point of view, situational rationality is the reconciliation of theorizing with the fact that problem-solving cannot avoid “bounded rationality.” This chapter aims to highlight this need for reconciliation in two respects: the task of acquiring expertise and the task of communicating expertise. For the task of acquiring expertise, “bounded rationality” is self-evident in the most literal sense of a scholarly undertaking: serious reading requires privilege. It requires the privilege of being situated in such a way that the task of confronting and expanding one’s own “bounded rationality” is possible. For the task of communicating expertise, the fact of “bounded rationality” has to account for its own possibility within discourse by analyzing what I call “representational representationality.” In drawing out these two tasks, I present a quasi-real model of bounded rationality that is situated within problem-solving (“intelligent adaptation”) as a course of activity. This presentation involves five steps. First, Herbert Simon’s model of bounded rationality is introduced as an image of “procedural rationality” in which heuristic search is undertaken to navigate a multiplicity of possibilities, thought of as a “maze.” From this model, I outline the communicative aspects of selectivity in heuristic search, Simon’s own conception of “sociality,” and its relations to the idea of “representational representationality.” Second, the idea of “representational representationality” is clarified by showing how examples pose their own problems for intelligent adaptation. Following Brown’s rejection of the argument “that the social is pervasive, its meaning is obvious, and it would be trivial to raise doubts about that meaning” (2014, p. 192), I elaborate how the relationship among meaning, language and thought is subject to communicative errors that follow from the tension situated between a discourse of examples (and models) and a discourse that accounts for the use of such examples (and models). Parenthetically, this draws heavily on the idea of a “predicament of intelligibility,” an idea that both Brown and I draw from the work of Erving Goffman. Third, the problem of examples is placed in two forms of stark relief. The first relief is the idea of the

politics of expertise, a point about how communicative errors appear as obstacles to the unity of a truly “common sense.” The second stark relief points to how Brown’s overall argument presents a way of confronting communicative errors. Fourth, I challenge Brown’s apparently interchangeable use of “sociality” and “society” in the course of theorizing (2014, p. 5). In doing so, I draw out the quasi-realism of the distinction between group formation and group membership, and I show its significance for cognitive sociology in understanding the concept of strategy as it relates to the situational rationality of problem-solving examples. Finally, I return to the juxtaposition of Simon’s argument with Brown’s argument about the need for theorizing. In this respect, it can be said that Simon (in his studies of accredited experts) only describes skill, whereas the theorizing Brown describes is an orientation to expertise. Ultimately, I argue that the character of situational rationality is the balancing of these two orientations in problem-solving as a course of activity.¹

BOUNDED RATIONALITY AND REPRESENTATIONAL REPRESENTATIONALITY

The model of bounded rationality in cognitive science, initially advanced by Simon, can be briefly summarized as follows: as an image of procedural rationality, it tries to capture the actual *process* of decision-making as well as the substance of the final decision itself. It is an image that relies on “several sets of invariants” aided by “heuristics.” These invariants are *information* (the possible shapes of the task environment), *computational time*, and *computational capacity*, that is, the serial character of information processing and the rate at which the elementary information processes can be performed (the parameters that characterize and limit the size and speed of operation of human memory). In other words, Simon’s derivation of internal cognitive limitations and external social constraints is based on the premise that “attention” is a scarce resource. In his study of administrative behavior, Simon (1947/1997, p. 102) defined attention as the “set of elements that enter into consciousness at any given time.” From this point of view, procedural rationality designs how to allocate these resources through placing internal and external stimuli into a framework in which “the mind responds to the specific choice-situation.” Simon describes this framework as “artificial” in which artifacts serve as an “interface” between “an ‘inner’ environment, the substance and organization of the artifact itself, and an ‘outer’ environment, the surroundings in which it operates.” For Simon (1968/1996, p. 110), “the inner environment, the hardware, is simple. Complexity emerges from the richness of the outer environment, both the world apprehended through the senses and the information about the world stored in long-term memory.” It is the modeling of this artificiality that differentiates the interdisciplinary language and models of cognitive science from cognitive sociology’s “quasi-realism,” a term I use to indicate the momentousness of the reality constituted by reciprocally sustained involvement (e.g., Goffman, 1961, 1963, 1967, 1974; Raphael, 2017, 2019).

From Simon's point of view, explaining problem-solving does not require tacit knowledge, the idea that we can discover or recognize the answer to a problem since we already know what the answer would have to look like. Instead, he suggests that we merely need to devise a procedure for describing, altering, and testing whether a final, adequate, solution has been found. It is in this sense that Simon's argument so clearly exemplifies procedural rationality (e.g., Simon, 1981, 1992). The artificiality of the "environment" (and its design) lies in the fact that it is either already organized as a "well-structured" problem, or as an "ill-structured" problem. The first fits the image of a "maze" so common to psychological experimentation, and the second merely describes virtual problem situations that have yet to be constructed as "mazes." In either case, problem-solving occurs according to a principle of selectivity that guides heuristic search.

For readers unfamiliar with the idea of heuristic search, I will specify its dimensions in the abstract. This is to describe the selectivity of heuristic search in terms of: (1) its sources, (2) its inferential functions, (3) its focus, and (4) its calculative orientation. The *sources* of selectivity in heuristic search derive from assumptions regarding the movement (the uncertainty or ambiguity) of information. This is the representational aspect of how communication "interfaces" (to use Simon's term) within and between information processing systems. The *inferential functions* of selectivity in heuristic search describe assumptions regarding the conditions of satisfaction, priority, and error. That is, they describe and organize "stop-rules" for halting search, thereby communicating an expectation regarding success and failure (as Goffman (1967, p. 51) says, "an act that is subject to a rule of conduct, then, is a communication"). The *focus* of selectivity in heuristic search describes assumptions regarding the adaptability of what Simon calls the "area of rationality." That is, this dimension poses a question about how attention is understood to operate in the problem-solving situation, and thus it poses questions about the selectability of information. The *calculative orientation* of selectivity in heuristic search describes assumptions regarding whether or not computational demands are imposed by a particular audience.

Stated this way, by drawing out the communicative aspects of selectivity in heuristic search, it is clear that the "mazes" Simon describes are not located in a sociological vacuum that is as large as Brown seems to suggest. Rather, perhaps as a function of the immanence of sociality that Brown describes, Simon was unable to articulate the relationship between communication and the selectivity of heuristic search beyond his own conception of sociality. "Sociality" in Simon's thinking refers to the capacity of an actor to accumulate and transmit knowledge and strategies, that is, to find "pattern and meaning from his participation in social systems that possess a certain amount of structure, and that can offer him ideas and values," (1973, p. 350). When theoretically applied, as in the term "social environment," sociality refers to "the context in which knowledge is acquired and used," since "human social behavior is peculiarly intertwined with the capacity of humans for thinking and learning" (Simon, 1983). In this respect, Brown's description of Simon certainly matches the design of the environment, but it does not match viewing "bounded rationality" as merely governed by a "principle of least effort." Certainly, there is an emphasis on the instrumentality

of reason; however, that instrumentality faces substantial challenges in realizing such a principle, at least when viewed in relation to “representational representationality” as the basis for a quasi-real model of bounded rationality.

Representational representationality describes *how there are representations that qualify the relationships among other representations*, bounding them together and often specifying the degree of additional information that is required for achieving intelligibility and resolving ambiguity. If an idea is “simple,” then, an idea is simple. If an idea is “complex,” then it is obvious that it is not simple and that it is difficult to break the idea into component parts. If an idea is “simply complex,” then it is obvious that the reduction of the idea to its component parts is a plausible possibility. If an idea is “complexly simple” then it is not obvious that the idea only appears simple and is in fact complex, leaving the resultant representation to likely manifest a different representational representationality. When representational representationality is understood from the point of view of problem-solving as a course of activity, then, we see that a problem representation is ultimately qualified by the sense of clarity the representation articulates. Consequently, the halting of heuristic search occurs, not because a satisfactory solution is found (e.g., Simon, 1956), but because the arrived-at solution only appears satisfactory due to how the area of rationality is bounded by the communicative aspects of selectivity and its grasp of the relationship between discourse and the contingencies that connect merely situated examples (i.e., models, textbook solutions) to situationally appropriate conclusions.

Representational representationality thus poses a stark contrast with the naturalistic explanation that the causes of our failures are natural, the byproduct of “cognitive errors,” that people make mistakes in using examples because of a “bug” in the cognitive architecture of the brain (Kahneman, 2002, 2011; cf., Kahneman & Tversky, 1979; Turner, 2018; Tversky & Kahneman, 1974). The idea of representational representationality allows us to begin to see why “a creature that ‘cognitively maps’ environments” runs into so much communicative trouble in acquiring and communicating expertise. The causes and sources of inference are not merely natural connections between stimulus and response, causing glitches in what Simon calls our “information processing systems.” Rather, there is something about the character of discourse itself, as Brown demonstrates in the sense of the activity of theorizing, that makes it difficult for problem-solvers to grasp whatever is going on, at least when the scope of communicative concern extends beyond the immediate situation, that is, when references are scaled beyond locally organized principles of intelligibility, say, for example, at the level of a modern society. That is, where examples – as possibilities beyond what are offered in the immediate field of perception – become the world in which boundaries are inevitably modified or revised. Accordingly, “examples” in-themselves and of-themselves are communicative minefields that pose their own problems for intelligent adaptation, begging the question: what are “examples” good for in the immediate problem-solving situation?

REPRESENTATIONAL REPRESENTATIONALITY AND THE PROBLEM OF EXAMPLES

As a reader, I always see authors offering them; as a professor, students are always asking for them; as a researcher, I am always collecting and citing them. Whether it is the articulation of first principles, lessons, rules of thumb, policies, advice, instructions, orders, clichés, quotations, references, justifications, evidence, invocations, spells, slurs, verses, dialogue, proverbs, rhymes, Latin phrases, family sayings, maxims, jokes, punch lines, tag lines, song lyrics, laws, tradition, models, imitations, allusions, and other similar expressions, we, as problem-solvers, offer them to make a “point,” although we do not generally succeed in making these points in a “pithy,” unambiguous manner. This inadvertent failure raises a question about (1) the language involved, (2) the audience involved, and (3) the ignorance of that audience. People often ask those posing a solution to a problem to “speak plainly,” to “stop using jargon,” and to “say what you mean.” Generally speaking, this invites a consideration of four kinds of responses, in regard to the representational representationality of relating to “deliberate practice” (Ericsson, 2006), four ideal-typical ways of going *beyond* one’s level of comfortable competence:

- (1) The discussion of the example is terminated by a claim of simplicity that it should “make sense” because its simplicity is “obvious,” “self-evident,” “necessarily assumed,” or “given,” and this denies the *need* for “deliberate practice.” This has the effect of scaling up ignorance since the whole is nothing more than the component part.
- (2) The discussion of the example is terminated by a claim of complexity that it would not “make sense” because, although its complexity is “obvious,” “self-evident,” “assumed,” or “given,” its meaning is *not* “obvious,” and the problem-solver does not feel or believe that elaborating would either reveal its meaning or enable proper involvement, thereby inadvertently denying the *efficacy* of “deliberate practice.” This also has the effect of scaling up ignorance since it is difficult to break the whole into its component parts, and scaling up begs the question.
- (3) A claim of apparent complexity in the discussion of the example is acknowledged. Accordingly, to scale down the audience’s ignorance – and the corresponding level of abstraction of the example – is to simplify the example by dividing it into its component parts, bringing the object closer to its subject, and this merely provides a modest amount of “deliberate practice.”
- (4) A claim of apparent simplicity in the discussion of the example is either terminated because it is confused for one of the other possible claims, or the claim of apparent simplicity is acknowledged. When it is acknowledged, to scale down the audience’s ignorance and the corresponding level of abstraction of the example, the problem-solver complicates the example, ostensibly bringing the subject closer to its object, revealing how these realities are intertwined. Since the whole is greater than the “sum of parts” and

cannot plausibly be reduced to its parts, the claim of apparent simplicity provides for an optimal amount of “deliberate practice.”

In other words, examples – and the discussion of them – can be “simple,” meaning that nothing else needs to be said; they can be “complex” in which it is clear that “more words” will *not* have an effect; they can be “simply complex” in which the effect of “more words” tends to increase clarity at the cost of reducing complexity; or, they can be “complexly simple” in which fewer words returns simplicity to complexity. If examples – and their discussion – are “complexly simple,” then it is not clear what effect “more words” will actually have – since the simplicity of the example can be deceptive in resembling “the simple,” “the complex,” and the “simply complex;” or it can be found out to reflexively *refer to itself* as it *refers to something else*. As Abbott and Costello put it in a famous comedy routine: “I throw the ball to first base, ‘who’ ever it is grabs the ball, so the guy runs to second. ‘Who’ picks up the ball and throws it to ‘what’. ‘What’ throws it to ‘I don’t know’. ‘I don’t know’ throws it back to ‘tomorrow’ – a triple play.”²

Given these qualifying qualities (simplicity, complexity, etc.) of examples, and our discussion of them, it can now be suggested that, although this all is abstract, its abstractness allows us to *avoid* the problems posed by examples in themselves and the limitations *of* and the limitations *to* the generality that they introduce. Surely, it is difficult to describe, analyze, and write about phenomena in such a way that the result has the capacity to potentially contain all the meaning in the world; yet at the same time, respecting the fact that it appears to contain very little meaning, which is to say that it is always incomplete, and, in that respect, its open to a continuation of the articulation of “the point.” This is the recognition of how the language involved in clarifying and justifying an existential claim, including examples, exposes the difference between “meaning” and “reference” – and its connection to how cognitive labor (the capacity to process what is “going on”) is affected by the issues of audience and ignorance.

If language is stable and has an external reference, then the relationship between language and thought is stable and this correspondence is either “simple” (implying that audience and ignorance are irrelevant since our “settled” sense is given) or “complex” (implying that the audience faces competing demands as objects of involvement, and ignorance is generated by the tension between these corresponding competing demands, making it difficult for our given “settled” sense to ascertain what is “missing”). However, if language is unstable and lacks a sense of an external reference, and this correspondence appears as “simply complex,” culture and society have preconfigured two solutions: the problem of audience is solved by imposing conventions upon this relationship enforced through normative regulation, and the problem of ignorance is solved by somehow encouraging or imposing a “settled” sense of objective certainty associated with the normativity of that conventionalized discourse. After all, it is these solutions that enable the simplification of an example (intended to demonstrate the objective validity of the solution) into its

component parts. Yet, when such solutions fail, or the qualifying quality is “complexly simple,” *difficulties of reference* seem to connect meaning, language, and thought, at least partially. Since the correspondence of meaning, language, and thought is a problematic hypothesis, these difficulties of reference highlight a tension between the constraints of *conventionalized discourse* and what might then ironically be “referred to” as “the conditions of *unconventionalized discourse*.” This tension arises for its audience because the situation in which a problem solution is presented for discussion demands unsettling our “settled” sense of whatever is going on such that the awareness of our own ignorance is “the beginning of wisdom,” rather than the assertion of certainty.

In more “other words,” if language is “simple,” then issues of ambiguity are zero-sum challenges to clarity where the correspondence between reference and meaning shifts “literal meaning” into a literary device for persuasion beyond actual agreement. Accordingly, if language is “complex,” then issues of ambiguity are zero-sum challenges to clarity where the correspondence between reference and meaning becomes merely a semantic question or a purely pragmatic question. As a semantic question, “figurative” meaning is “repressed” or “activated” relative to “literal meaning,” depending upon how reference operates descriptively. As a pragmatic question, “figurative” meaning is sought if “literal meaning” is uninterpretable relative to the apparent similarity and presumed context of references made by a “sentence meaning” and a “speaker’s meaning.” If language is “simply complex,” then issues of ambiguity are *circular* challenges to clarity where the appearance of correspondence between reference and meaning in one conventionalized discourse (e.g., a disciplinary discourse) is reinforced by reference to another conventionalized discourse (e.g., etymology, dictionary definitions), thereby decoding its reference in which its meaning is checked against the reference and its corresponding meaning, and so on.

If language is “complexly simple,” then issues of ambiguity are acknowledged through the *rejection* of the principle of *res ipsa loquitur* that “the thing speaks for itself” *cannot speak for itself*. In that case, the apparent partial correspondence of meaning, language, and thought results in a distinction between “language” and “speech” where “speech” cannot be merely the realization of what is thought due to the “figurative” aspects of language, a distinction that is incompatible with the idea that meaning, language, and thought “correspond” each with the others since speech is social in its form while thought appears to be private. Outside of the dream that “perfect literalness” might be achieved by treating language as “simple,” “complex,” or “simply complex,” if language is “complexly simple,” then, meaning cannot be what is thought: in regard to speaking, because of its social aspect, it is more than fair to say that we rarely say what we mean or mean what we say, and when we try to speak a private thought, speaking takes on a life of its own in which reference to thought images gives way to increasingly general categories of the object that must resist thought in order to be speaking. This is to understand the “figurative” aspects of language as the undertaking of the transmutation of ideas into images – and images into ideas – as necessary, for first-order literal references tend to fail to express the image or the idea, leading to its suspension in favor of a second, third, or fourth-order literal reference, and so

on. Of course, while such *possibilities* of increasingly abstract references are virtually endless, it remains an open question whether such a continuance of reference as increasingly abstract “objects” (of speaking and speaking about speaking) sustains the *plausibility* thought, by itself, requires. As one chapter of *Epea Pteroenta* (Tooke, 1840), an eighteenth-century 809-page treatise reporting a dialogue on the purpose of language begins, “H.—‘The purpose of Language is to communicate our thoughts.’ B.—‘You do not mention this, I hope, as something new, or wherein you differ from others?’” That is, the “figurative” aspects of language (e.g., to “communicate our thoughts”) require acknowledging that *whatever appears as plausible in the course of speaking* has to do with how *speaking* (in the conversational sense) is “bounded” by the *conditions of unconventionalized discourse* in a way that is looser than the *constraints of conventionalized discourse* (e.g., oratory). In short, the “figurative” elements in speaking that invoke an object (or objects) do not contaminate what are otherwise “clear meanings” (something presupposed by language without the distinction of “speech” as “true” meaning). Rather, these “figurative aspects” are a necessary feature of communicating, even though some boundaries or limits obscure the plausibility of this fact – as when a speaker says, “in other words,” or paraphrases or iterates a prior utterance.

This again begs the question: “what are examples good for?” It’s one argument to accept the obvious answer: examples provide clarity – when clarity is taken as a “settled” sense that is given or imposed whereby the only challenges to clarity are zero-sum or circular, as when the sense implies *this* or *that*. However attractive this obvious answer appears, it turns out to be unreasonable when we acknowledge that examples, in speech, unavoidably rely on figurative (and therefore rhetorical) language, “tropes.” Given that the result of using examples for resolving ambiguities is, to some extent, figurative, as it turns out, we are only confronted with further ambiguities, implying that unsettling our “settled” sense of *whatever is going on* may not be finally clarified, though examples may nevertheless re-structure our intelligibility in a spiraling manner, ways that enable us to progress by creating and finding sources of further instability. In other words, examples – and the language we use to refer to them – matter, not because they clarify, but because they enable progress. If I dare give an example, I argue we should not *hurl* them at our audiences like the bullets of an “M60 machine gun” fired with the “carefree attitude” of someone playing their favorite video game. Some readers may understand this example while others may not – and that’s the dangerous problem of examples. Given the distinction between language and speech, whether examples are articulated dyadically (as in an argument between significant others, in a therapy session, a conversation, or in private correspondence, etc.), articulated in larger-scale institutionalized settings (as in classrooms, courtrooms, newsrooms, offices, etc.), or articulated in old-fashioned public places (parks, squares, etc.), there is always a *predicament of intelligibility*. The visibility of this predicament is predicated upon what inferences can be plausibly generated at a given moment and what conclusions can be plausibly drawn from such inferences at a given moment – relative to a series of such moments.

Historically, we have investigated this relationship between inferences and conclusions in a wide variety of fields at the intersection of the natural sciences, the cognitive sciences, and the human sciences, typically in regard to the languages of these fields, rarely in regard to discourse. Underlying this multitude of conceptual frameworks is the general idea of an *inferential function*. Whether it is the theory of the sign in the study of semiotics, the neural theory of metaphor in cognitive linguistics, the debate in psychology between behaviorism (the emphasis on stimulus and response), psychoanalysis (the interaction of drives and forces), and humanism (the emphasis on values and self-actualization), the various ways of conceptualizing “structure” and “agency” in the search for mechanisms in sociology to connect “macro,” “meso,” and “micro” phenomena, or whether the meaning of what an author writes is either intentionally literally or figuratively communicating a symbolic, expressive, or interpretive message, or its meaning, is not a matter of intentionality alone but a question of discourse (a question rarely raised outside of literary studies): there is a communication of some kind in which its *function* (the logic of its inference) is *altered*, and possibly destabilized, by prevailing conditions and constraints.

This alteration depends upon how these prevailing conditions and constraints operate *relative* to how they are understood, beyond what the idea of language allows. In other words, an inferential function is only “functional” to the degree it communicates the sort of inference it is presumably intended to communicate. It’s one thing to be *merely* descriptive, it’s quite another thing to be descriptive and analytical or descriptive and pedagogical, yet another thing to be descriptively poetic or analytically poetic, and it is still something else to be constructive, destructive, or deconstructive, among other plausible critical possibilities. Ultimately, the visibility of these inferential functions, with their qualifying qualities, in examples – and the figurative aspects of language associated with them – communicate *what examples are good for* insofar as their intelligibility associates the cognitive labor necessary to achieve *understanding* rather than mere *appreciation*, that is, the sort of “deliberate practice” *demand*ed by the prevailing conditions and constraints of the example.

Of course, people make demands of each other all the time by virtue of the interactive aspect of communication, just as often as we fail to learn from history, whether it is a lesson passed on over the generations or a lesson we learned last week. Assuming that the prevailing conditions and constraints are accepted and operating in good faith, a potentially suspect proposition depending on the prevailing conditions and constraints (and the fact that people cannot read each other’s minds), people tend to merely appreciate examples rather than understand them because of the *predicament of intelligibility* generated by the issue of audience and the issue of ignorance, which makes a sense of certainty difficult, if not impossible to sustain. Sociologists explain the predicament as an artifact of the “principle of multiple audiences” and the “principle of ignorance.” The “principle of multiple audiences” is the idea that there is always more than one audience to deliberate communicative behavior. The “principle of ignorance” is the idea that in the midst of communication one does not know what one does not know, and therefore one has the difficulty of imagining or figuring out what one needs to

know. While these two principles of communicative intelligibility are principles, in the sense that they structure communicative intelligibility, their operation is far from zero-sum. After all, the degree to which we recognize that there is always more than one audience, we can easily *exaggerate* or *understate* the relationship between (1) the figurative aspects of language and (2) the associated inferential functions; all the while recognizing that, as observers of communication, our own ignorance concerns (1) the difficulty of figuring out that one does not know something, (2) the variability of that uncertainty in what one does not know, and (3) whether that uncertainty is something to accept or deny. Thus, there is a predicament of intelligibility on the part of the observer no less than on the part of those in the midst of communicating together, as alternatively speakers and listeners.

If all of these difficulties were not enough of a challenge, this given instance still leaves open the likelihood that this communication is vulnerable to error. This is especially important in understanding problem-solving: what the inferential function communicates in the reality of discovery (reading/listening) is implausibly represented in the reality of explanation (observing). That is, in everyday life, the prevailing conditions and constraints of problem-solving – that enable, hinder, or compromise our capacity to “catch” each other’s reference, and usually their meaning, but relatively rarely their “points” – are not equal; they are stratified. They are stratified by the capacity to engage in problem-solving (as problem-solver and audience), and the degree to which one’s orientation toward problem-solving involves *not merely skill* but also *expertise*. If we are to understand how this stratification derives from the relations among *social* and *societal* facts, we must understand the truly situational character of problem-solving, decision-making, and expertise, the degree to which the function of communication is acknowledged as playing a significant role in its acquisition, and how this contributes not only to our success and failure, but also to our understanding of why we tend to succeed and why we tend to fail; In short, the accreditation of the role and function of examples and the politics of expertise.

EXAMPLES AND THE POLITICS OF EXPERTISE

To retrace our steps: what are “examples” good for? The simple answer is “getting our point across.” On this view, it is so “simple” that people rarely think about it, and instead ask for another example. The more complicated answer is that examples are intended to resolve ambiguity or relative uncertainty by confirming the inferential functions that presumably make *language* and the relationship of words and propositions to external reference “stable.” The “simply complex” answer is that examples simplify the “point.” That is, we achieve our sense of “clarity” about the “point” by providing certainty through treating the instability between language and external reference as something like a “model,” that then becomes an object of discourse. The “complexly simple” answer is that examples *relentlessly* help us account for the fact of our own communicative behavior. The complexity behind the apparent simplicity of “accounting for the

fact of our own communicative behavior” is that examples are thus the method for reconciling ostensible conceptual generality and the possible expression of ideas, the language we tend to associate with ideas (thoughts), and the images of them that we conjure – mediated by multiple audiences and ignorance, since the relations among social and societal facts stratify people (as communicative problem-solvers) in a way that challenges the notion of a “meeting of minds,” the ideal of a problem-solution.

Common to the philosophies of law, language, and mind, the idea of a “meeting of minds” is intended to describe “agreement” about certain aspects of meaning that have to do with “particular intentions.” In other words, the only barrier to “knowing the minds” of others is merely *linguistic understanding*. That is, the aim of a conversation or discussion is taken to be the linguistic understanding that comes about through exchanges of information – usually by the use of examples – and acts that represent an intention to make a substantive difference by taking account of information. This is quite Hobbesian: the idea of the social contract begins with a first meeting of minds which permits people to leave the State of Nature in order to form a “civil society.” This alternative to linguistic indeterminacy effectively assumes its own simplicity, that when communication is described as reciprocal acts of interpretation conceived of as a series of discrete exchanges toward mutual understanding, it provides for metaphysical notions of a “shared object” in which “the skin” is taken to be a “natural boundary” of agency in rational thought. This is the idea that the independent subjectivity of individual minds, whether following a materialist, idealist, empiricist, or rationalist view of mind, precedes the attainment of inter-subjectivity.

This notion of mind, then, seems to accept two basic propositions that bear on our understanding of bounded rationality. First, an “action” is self-sufficient in the sense of being complete or exclusively attributable to an intention on the part of an individual person or a social structure of individual intentionalities. Second, such individuals are “social” insofar as they (1) are subject to influence, structural mediation, or natural causes, or (2) find their “self” in the accidental or elective presence of “others.” The problem with these propositions is that they ignore how the truly situational character of individuality and how problem-solving, decision-making, and expertise are linked to the relations among *social* and *societal* facts and the sort of communication that follows from those facts – once we exclude the possibility that there is or could be a “meeting of minds.” This is the “complexly simple” idea that we, theorizing, cannot remain indifferent to the conditions of our own possibility in our theory of mind, the corresponding theory of communication involved in such a theory, and its relationship to problem-solving, decision-making, and expertise on our understanding of artificial intelligence – if we understand the dream of artificial intelligence as becoming “something more” than a machine. Such explanations are not only important for the end and sake of values (e.g., truth), but also due to the politics of expertise.

The idea of the politics of expertise is that scientific explanations for decision-making tend to inform the intelligibility of our own accounts of our human behavior in everyday life, and that those same accounts tend to inform the development of policy and the assessment of justice, putting the notion of a

rational problem-solver at issue from the point of view of the situation in which the consequences of a solution count. Analytically, the capacity of an account to “inform” is relative to the example meant to be representative of the larger account, as something more inclusive, something that is beyond what can be immediately informed by the example. This is why the narratives – and their examples – present in histories, self-help books, dictionaries, textbooks, and encyclopedias are just as important, if not more important, than the narratives present in philosophy and other disciplinary discourses. At the same time, we must also acknowledge that disciplinarity is not an innocent matter of “vocabulary,” “word choice,” “style,” or “domain.” This view either severely underestimates the role of communication by merely accepting the premise of a “meeting of minds” or by assuming that the object of study is relatively “simple,” “complex,” or “simply complex,” with the primary implication being that it ignores how the exercise of expertise is intended to put itself in question such that the offering of a solution is, in part, an invitation to a discourse that envisions other possibilities than those that appear in the problem situation as defined by prior naming and describing the problem. However, if we understand that disciplinarity is “complexly simple,” then it is a specification of the kind of inferences that connect the world to its purported reality and the kind of knowledge that is possible for that reality – to the degree that this specification can govern itself by its means of self-reference and self-regulation – where theorizing is necessary to ensure that disciplinary objects are in fact externally distinct or interchangeable, or in fact intertwined through some internal-external relation. After all, it’s one thing to make observations about “planets” and “stars,” it’s quite something else to make observations about “stars and stripes.”

This is how examples serve the important function of communicating “communication.” The first kind of observation is an example where the relationship between an external reference and its meaning is relatively stable (“agency-independent objectivity”); the second kind of observation is an example where the relationship between an external reference and its meaning is relatively variable where its articulation can claim “agency-dependent subjectivity,” “agency-dependent objectivity,” “agency-dependent intersubjectivity” derived from *social* facts, and/or “agency-dependent inter-subjectivity” derived from *societal* facts. It follows that there is a difference between communication in regard to a solution offered at the point of departure for a discourse on how the problem had been solved and might be resolved, and communication in regard to the execution or application of the given solution to the more encompassing solution in which the given solution must be lived and therefore find itself modified. This describes the political reality of the enactment of expertise, in particular, by admissions of ambiguity such that communication is possible and by revisiting examples in order to acknowledge their limits relative to the inclusive situation in which new examples are likely to come up as the solution is lived under circumstances beyond the original problem situation. We see that expertise sees solutions as subject to further discussion and that some of what is bound to come to light will be the object of a communication yet to be accomplished. For theorizing mind, then, the point is this: the disciplinarity of cognitive sociology

shows itself at the intersection between the natural sciences, the cognitive sciences, and the human sciences – and its view of the world is “complexly simple,” implying that its object of study, the conditions under which meaning is constituted through processes of reification, is by no means straightforward. It traces its origins to writings in the sociology of knowledge, sociology of culture, and cognitive and cultural anthropology while examining the intelligibility and meaning of research done in cognitive science. It cannot take a “simply complex” view of the world in which abstraction is understood to merely be an imagined operation of the individual mind. In other words, the danger of examples, like the danger faced by medical patients, find themselves in between a body of general principles (social facts: the situational conditions of group formation) and the particulars of a specific situation (societal facts: the merely situated conditions and constraints of group membership). In short, the danger of examples is not the “rock” nor the “hard place,” nor the thing stuck in between – but the moment of being stuck and the difficulties of capturing and expressing that moment.

Sociologically, this means that to analyze the politics of expertise requires accounting for the politics of expertise, namely the obscurity of sociology’s own object. This is to realize how visible the limitations of both “sociological theory” and “social theory” are trying to explain themselves. *The Cambridge Dictionary of Sociology* offers two great examples (Turner, 2006). It defines “sociological theory” as “Any form of sustained reasoning or logic that endeavors to make sense of observable realities of social life via the use of concepts, metaphors, models, or other forms of abstract ideas may be legitimately classified as sociological theory.” It goes on to suggest that theory develops “by incorporating highly abstract sociological insights in the abstract analysis of empirical examples.” Similarly, its entry on “social theory” offers the definition: “the systematic reflection on the nature of society and social relationships.” In both cases, in a *specialized* dictionary on sociology, the meaning of the “social” itself is taken-for-granted. It offers more than 20 entries where “social” is used as an adjective, “social this,” and “social that,” but nowhere does it “account for the fact of our own communication.” Perhaps this is because, as Auguste Comte hinted almost two centuries ago, sociology’s object is intertwined with almost everything, leaving sociologists with the predicament of either resting on their laurels (examples) or we can follow the advice Erving Goffman received from someone else: trade these examples for “a few really good conceptual distinctions and a cold beer.” Instead of taking the easy way out by merely accepting the suspect and deceptively simple proposition of a “meeting of minds,” a more sobering approach is to take this persistent ambiguity seriously.

We can take this ambiguity seriously by realizing how the politics of expertise contributes to the structuring of intelligibility. So far, we already have shown the outlines of the corresponding theory of communication involved in a theory of mind that follows from the relations among social and societal facts in terms of a “complexly simple” view of language and how the predicament of intelligibility relates to the idea of inferential functions and our vulnerabilities to error. Still, three sets of distinctions are required: (1) a course of action versus a course of

activity, (2) theory versus theorizing, and (3) a pretheoretical object or notion versus a sub-theoretical object or notion.

The concept of action is understood in regard to a particular *state* of affairs. Like an event, it begins, and it ends. It is the *specificity* of a piece of behavior interpreted as one in a sequence, in other words, a “course of action.” Analytically, it reaches for a high degree of purity. This means that intentions are “knowable” and the choices of the actor are attributable to the actor, and therefore, choosing alternative courses of action is possible. In a sense, as one philosopher put it, this is watching “behavior with a reason.” This calculation typically involves attributing to the individual actor the search for a guarantee of success. If failure occurs, mistakes can be analyzed through the lens of, as Weber put it, the “rationality of logic.” Nevertheless, within a course of action, conditions of uncertainty are predictable given three widely recognized limitations. By attending to particulars, it is understood that actors are limited in the assessment of particulars by what information is deemed “available”; a limited cognitive processing capacity; and a limited number of ‘frames’ between the state that is the observation and the state that is the execution of the intention, the application of reason, or decision. This is to speak of time in the sense of a resource – something that can be allocated, saved, redistributed, etc.

Activity is understood in regard to a *state* and a *status* of affairs. Unlike an event, it is unclear where it begins and ends – it is ongoing, in other words, as a course of activity. The focus is not on the specificity of an individual’s behavior but a strip of activity. This means that what is ostensibly interpreted “in sequence” as “data” is knowingly cut out from the stream of ongoing activity. Analytically, whatever degree of purity that is sought by doing so recognizes substantive limitations in what is “knowable.” This means that intentions are open to contingencies – focus shifts from the actor to the situation, and at times, back to the actor, and then, back to the situation, and so forth. Thus, it is recognized that the intentions the actor *begins with* are not necessarily the intentions guiding the actor when the actor is *actually doing it* – in regard to the conduct of others. It is in this sense that being in a situation is to be caught up in a course of activity irreducible to individuals taken one by one. This is the meaning of Heidegger’s (1971) proposition that “Language speaks,” “Man speaks only as he responds to language,” and that, “Its speaking speaks for us in what has been spoken.” In other words, activity tends (1) from an external point of view, to resist articulation, since *to articulate* is ostensibly *to express a particular possible realization*, which fixes reference and meaning together, and, (2) to reproduce its own principle, though never by repetition, since the logic of repetition involves imposing a repeatable order resembling the sense of a course of action.

This distinction between a course of action and a course of activity permits a true appreciation and understanding of what it really means to study and live in the moment, namely the differences between social and societal facts and the sort of communication that follows from those facts. While a larger discussion of this is forthcoming, we can now elaborate the distinction between “theory” and “theorizing.” “Theory” is typically thought of as “a tendentially consistent set of propositions.” This is consistent with the definitions provided in *The*

Cambridge Dictionary of Sociology and epistemological concepts like “meta-theory,” “models,” “-isms,” “structure,” “agency,” “practices,” and “levels.” Many textbooks seek to organize the discipline in terms of theories, from systematic treatments and excerpted readers (classified by author, time period, paradigm, etc.) to introductory texts that merely present and rely on a sequence of “simple” examples. In other words, “theory” curates a collection of examples that are meant to be “easily shared” and “known” in the epistemological sense of being empirically tested and in the pedagogical sense of being learned. (This is also how chess players refer to chess openings, but that’s a different story.)

“Theorizing” is a course of activity that is “logically prior to the constitution of a justifiable theory.” This is consistent with the idea of problem-solving in the sense of playing chess, performing jazz, painting, doing fine art photography, and other courses of activity involving revelation (e.g., reading) where living occurs in the sense of going on such that its end is not capable of being known in advance. The difficulty of theorizing is that, as a course of activity, it cannot be reduced to courses of *action* (which are relatively “simple,” “complex,” or “simply complex”) and still maintain the integrity of its world relative to its object. As Goffman (1961, p. 72) described the meaning of “fun in games,” “To be awkward or unkempt, to talk or move wrongly, is to be a dangerous giant, a destroyer of worlds. As every psychotic and comic ought to know, any accurately improper move can poke through the thin sleeve of immediate reality.” This is why “theorizing” is the work involved in discovering a “lost world” by undermining “received concepts.” It must operate in a “complexly simple” fashion, thereby sustaining ambiguity instead of resolving ambiguity, since that is what theory and its collection of examples do. To increase the intelligibility of this requires a third set of distinctions: a “pre-theoretical” object or notion and a “sub-theoretical” object or notion.

A “pre-theoretical” object or notion is dependent on a “given” theory or theories for its justification. In this sense, disciplinarity provides a theoretical language that allows for an accumulation of inferential functions associated with reasonably established concepts. As nonformal constructs, they are subject to theoretical, experiential, or analytical interventions, such as modeling and extending the diversity of the collection of examples to test its “pre-theoretical” limits. In other words, new “knowledge” concerning a “pre-theoretical” object or notion is merely “novel” relative to the principle of ignorance. For example, a study of some kind is done, and recommendations are made for “next steps.” In such circumstances, the formulation of those recommendations concerning a “pre-theoretical” object or notion typically did not require the study (which they are in the process of completing) in order to make such recommendations.

A “sub-theoretical” object or notion, in contrast, is “latent in principle.” It is “latent in principle” in the sense that an inference leads to a conclusion whose tentativeness *continually seeks* to both (1) “return to an intuition about the world” since it remains evasive since it “cannot be specified without being lost” and (2) invites any truly open response, that is, responses that assert neither a positive conclusion nor the negative conclusion of “never having to explain.” This open-ended character expresses how the “sub-theoretical” aspects of examples

found in the realm of discovery are so *resistant* to their expression in the realm of explanation – in a way that the reference can be said to communicate the same corresponding meaning and the same corresponding thought. In other words, it is not that “sub-theoretical” objects or notions are “black boxes” in which there is no explanation of an explanatory principle since such “boxes” are something other than “complexly simple.” Rather, it’s that new “knowledge” concerning such objects or notions is *novel relative to its revelations*. To discuss the theoretical language of theory, then, is to *pretheoretically conflate its example with its object* while theorizing involves using a theoretical language that is sub-theoretical to *the relationship between an example and the object conceptualized*.

This is why the ambiguities disclosed in “theorizing” are so important in opposition to the idea captured by its theory-product. It is difficult, but necessary, to maintain as much as possible what Heidegger referred to as “the life of the concept” – and to make sure it is not merely a good life but that it is “living well” – in opposition to its object. After all, once there is an intention to form a theory, focus ostensibly terminates the open-ended character of theorizing as a course of activity, and courses of action become apparent. As Brown (2014) explains,

Models are, by their nature as ideals, formal and in that sense ‘pure.’ They begin by simplifying their object in a way that cannot be understood as a representation, an analogy, or even a simulation of a reality—that is then apprehended as such within an altogether different language, or “imaginary,” with its own tropes, associations, and discursive conventions. A model is designed to breathe life into the simplification by setting it in motion according to what is allowed by the ideal it constitutes. (Brown, 2014, pp. 114–115)

In other words, as this focus turns toward what is in fact a model of life – rather than the living it represents – we tend to adopt a point of view that typically leads problem-solving and decision-making to focus on developing choices between models themselves and the complexity of their “pre-theoretical” object(s). Whether such courses of action are understood in terms of “system,” “exchange,” “structure,” “rule-governed practices,” “networks,” or “rational agency,” these paradigmatic concepts specify a world that determines what is and what is not reasonable to claim about communication (and its meaning) derived from the relations among social and societal facts. That is, they provide a collection, with an ever-increasing diversity, of examples that persistently reinforce the questionable idea that what is distinctly “human,” that is distinctly “social,” about problem-solving and decision-making is reducible to a view of mind in which individuals can be taken one by one – all the while ignoring the politics of expertise and its effects on the production of models.

THEORIZING, THE QUESTION OF SOCIETY, AND QUASI-REALISM

Examples, as hinted at previously, have been used to address what have become “classic sociological questions.” Consider, for example, how the question, “What lessons does history teach us about social change?” has undergone several

revisions: from Parsons' "How is social order possible?" concerning the "Hobbesian problem of order," to its Marxist response of "How is society possible since the assumption of 'order' ignores 'conflict'?" to "How is modern society possible?" and, of course, the countless variations on the theme of "If society is not 'modern,' then (a) what is it (critically real? interpreted and constructed? constituted? or an artifact?), and (b) how to explain or take account of the factor of identity (e.g., intersectionality)?" From the point of view of cognitive sociology, since its object is the conditions under which meaning is constituted through processes of reification, its concern is the unavoidable predicament of intelligibility generated as a *problem* by *social* facts that is *solved*, in a variety of albeit suspect ways, by *societal* facts. This means that the *question of society* appears as a matter of *quasi-realism* that must face the multitude of realities that organize the intelligibility of experience.

To state the claim of quasi-realism in a "complexly simple" way: the constitutiveness of "intelligibility" and "values" involves theorizing "mind" as a sub-theoretical object. The referential quality of this object is predicated on the dynamics between (1) processes of reification and (2) the tension between [i] the situational conditions of group formation and [ii] the *merely* situated conditions and constraints of group membership. The posited reality of this sub-theoretical object, therefore, takes the "transcendental aspect of situations" seriously by grasping that the referent of *social facts* is thoroughly distinct from the referent of *societal facts*. Processes of reification generate the referent of social facts through *the situational conditions of group formation*. These conditions describe how (1) group formation is a manifestation of our 'social nature' to partake in courses of activity, or what Brown calls "what is distinctively human about human life," such that (2) meaning draws from the *conditions of unconventionalized discourse* for its referent, explaining (3) how the accreditations of identity, trust, and authenticity cannot be free of ambiguity and uncertainty, where sub-theoretical questions constitute an unavoidable predicament. Processes of reification draw the referent of societal facts from *the merely situated conditions and constraints of group membership*. These conditions and constraints treat (1) group membership as involving the pretheoretical accreditation of identity, trust, and authenticity and other societal processes, such that (2) reference and meaning are drawn from *constraints of conventionalized discourse* on pretheoretical ideas, explaining how (3) the idea of a "meeting of minds" is generated and reinforced by the fact of group membership and the fact of conventionalized discourse, where pretheoretical solutions to the predicament of intelligibility seek to resolve ambiguity and uncertainty in advance. Stated this way, theorizing "mind" cannot be separated from theorizing sociology, for the "transcendental aspect of situations" reveals that the answer to the question of society is not *merely* a theory of solutions in need of critique (and just revision); perhaps, more fundamentally, the question of society is a question of quasi-realism. As a question of quasi-realism, the study of society must be concerned with degrees of reality, especially since two of the underlying principles of the politics of expertise (audience and ignorance) demonstrate how all realities cannot be created equally, or at the very least, that this equality cannot be taken as a "given."

Surely, all of this pushes the meaning of what's really "real" to its limits, but as we already know, even that connection (in its representational representationality) is only as tenuous as our capacity for cognitive labor and "deliberate practice." This is why quasi-realism is not categorically limited to a strict rationalist, idealist, empiricist, materialist, existentialist, interpretivist, pragmatic, or phenomenological view of mind. Rather, it is interested in all of them, since each of these *pretheoretically operates* as a value judgment that sub-theoretically constitutes its intelligibility at a level beneath explication. Stated this way, the combined weight of the predicament of intelligibility and the politics of expertise is brought more clearly into view, especially in regard to the reader's pretheoretical *appreciation* of the text and its potential for sub-theoretical *understanding*. While what is "really real" about reality is of great importance, it is false to suggest that "that is all there is," since the funny thing about reality is the overwhelming problem posed by the word "reality," especially in regard to the concepts of truth and rational action where all the reflexivities involved in how its object makes us, and how we "make it" such that they "shape our own access" to the world in which subjectivity and objectivity are internally related. It's not that we extend our mind from our head "out into the world," but that such arguments provide *yet* another set of examples that offer *yet* another configuration of how "nature" and "nurture" are intelligible as a whole such that its moments (on the side of subjects and on the side of objects) are comprehensible as intelligible beyond what words can delimit.

Accordingly, quasi-realism is not ambivalent to how "nature" and "nurture" are involved; quasi-realism accepts that both "nature" and "nurture," object and subject, are involved in the intelligibility of activity (internal relation of subjectivity and objectivity) insofar as such an acceptance recognizes the effects of the sub-theoretical on the politics of expertise. After all, in regard to causality, the politics could not be starker. The intelligibility of causation in nature tends to realize, bring to notice, the point of view of a course of action in a relatively "simple," "complex," or "simply complex" manner. As Wittgenstein concluded in his youth, "what one cannot speak about one must pass over in silence." Contrastingly, the intelligibility of causation in nurture tends to adopt the point of view of a course of action in a relatively "simple," "complex," or "simply complex" manner that becomes mixed in with the "complexly simple" point of view of a course of activity (where reality is comprehended as what Hegel calls the "sense" of the object," a sense beyond mere sensation). That is, what one cannot speak about one must *not* pass over in silence, but instead, recognize the conditions and causes of such silence, namely that problem-solving or some other course of activity is afoot.

Admittedly, the "complexly simple" quasi-real answer to the question of society is a lot to absorb and demands a lot more than a purely objectivist position can allow. However, this points to a crucial difference between the "simply complex" and the "complexly simple." When we are solving a "simply complex" problem, it is common practice to present the problem and conceal its solution, since the solution, whether presented in a standardized fashion or otherwise, *is the end*, an explanation that seeks to resolve the ambiguities posed

by the question and its possible answers. But, if we are to take ambiguities seriously, and if we are to provide a basis for a reader or audience to undertake deliberate practice regarding their own understanding of the argument, and here we are dealing with something “complexly simple,” *it is best to present the problem and its solution first* – since it is not necessarily intelligible anyway from the point of view of a course of action. That is, the presentation of the solution at the beginning is a means which provides an opportunity for a sub-theoretical sense of the solution to accompany the revelation of its course, which helps discovery as a course of activity – to distinguish between and not conflate a circular sense of clarity at the outset and the spiraling sense of clarity arising in the course of problem-solving.

So, when and how does the revelation of this “spiraling sense of clarity” resume its course of activity? Three relevant answers come to mind: the social contract, consequentialism, and the “game” model of human behavior. From the traditional philosophical point of view, the social contract is ultimately an idea about cooperation in which individual subjectivities shift from living in a “State of Nature” to living together, in an association ultimately conceived of as a society. According to this traditional view, as in Hobbes or Locke, for example, people subject themselves to the social contract by forming an agreement based on the principle of a “having in common,” or a “sharing” that is reducible to a negation of self-interest in exchange for a greater “good,” usually the security that “civil society” provides in its justification as the legitimacy of political authority consented to in the social contract. It is from the point of view of this political authority that answers to ethical questions, such as “what is just?” can be derived and judged. This political philosophy has led to the moral philosophy of consequentialism, with its historical basis in utilitarianism.

The idea of consequentialism says that a moral evaluation of a course of action (as well as rules, motives, or political institutions) is made on the basis of its outcomes. This involves adopting a utility function as the ultimate criterion of what is “morally right” or what morally “ought to be done.” While there are as many moral philosophies as theories of mind, the “simple” contrast is with “deontology” (in which “rightness” is not determined solely by its consequences) and “virtue ethics” (in which the evaluation of “rightness” is made in terms of a normative account of what is “virtuous”). The main problem with utilitarianism, and subsequently consequentialism, is how this utility function is established, since people have different preferences for what is in their own self-interest, and these preferences typically contradict each other empirically.

A contemporary solution to this problem is the theory of justice presented by John Rawls. Rawls (1971/1999) argues that we can adopt a “veil of ignorance” to suspend our knowledge in which we do not know whether or not the position we adopt would be in our own interest. From this “original position,” reason can prevail in which we imagine ourselves as merely one of many, and we can agree to two principles of “justice as fairness” that recognizes that the “State of Nature” is merely a metaphor and that social and economic equalities can be presupposed. The first is a “principle of liberty,” and the second concerns (1) maximizing the welfare of the least well-off and (2) that offices and positions are open to all in

terms of the fair equality of opportunity. This Kantian position, in which reason is the metaethical foundation of moral duties, assumes that everyone, in the original position, is rational, to the degree to that we are able to free ourselves of history. This sort of reasonable “agreement” as the basis of “fair rules” easily leads to the model of the “game,” as an exemplification of the original position.

The classic “game” model generates theories that determine how “rational” players will act “strategically” on the basis of “common knowledge” in a specified group: that is, if every member of the group knows something, knows that every member knows it, knows that every member knows that every member knows it, and so on, *ad infinitum*. In this respect, the “players” are people who are thought of as presocial individuals who acquire social knowledge and social traits (appropriate dispositions) once they become “members,” like the kind of person someone becomes when joining “Greek life” in college or the army. Given this conception of group membership, then, whether in the social contract or the “game” model, the sense of a collectivity is effectively one of citizenship in which one is only subject to those laws unless someone renounces their citizenship and goes off to live on a deserted island. As Rousseau proclaimed, “Man is born free and everywhere he is in chains.” Aside from raising questions about international law, and other qualms about an individual’s subjectivity, still other limitations remain.

From the point of view of cognitive sociology, the primary limitation of the classic “game” model assumes that what is “social” about people are the values they accept as members. That is, as a function of this group membership – behind a veil of ignorance – all of “the relevant choosers are all basically the same,” especially in terms of decision-making rules, values, and choices, meaning that every decision one might make is one that any member might make. This is affirmed by the response of “evolutionary game theory,” in which contingencies are explained by the correlation of many types of equilibria with many possible “alternative” social contracts or games. As Ken Binmore (1994) explains, “Social institutions and networks evolve to enable and maintain correlation.” While such “societies nearly always have only two citizens,” since a game is, technically speaking, a model of an interaction with two or more players involved, even if it’s a mathematical model, whatever is being calculated must have its assumptions correct. Contingencies generally exceed what is explainable by “mutation, invention, experimentation, and external environmental shocks.” After all, many researchers in the natural sciences “are quick to apply a Darwinian frame,” and as Goffman (1971) acknowledged, when this frame is brought to modeling human behavior, “some very unsophisticated statements result.” What is precisely “unsophisticated” about this is its model of what is precisely “strategic” about “strategic interaction,” which is to say how members attempt to sustain their membership, something that, in principle, might always be called into question. It assumes that *social facts* and *societal facts* are the same set of facts in which the predicament of intelligibility either does not exist or is already resolved, enabling the “game” to focus on some other “domain.” In other words, it is precisely this ignorance (operating as an assumption of a uniform social context) that limits the assimilation of game theory into social science: it merely assumes the “social order” it was invoked to explain. Of course, this depends on the sort of

examples that these theories aim to provide: does game theory offer “good” “simply complex” strategies, or do the “excellent” “complexly simple” strategies provide a basis for theorizing?

Consider Goffman’s introduction to his own work on strategic interaction:

By examining strategic interaction in its own terms, we can become clear about what it is; *being clear*, we will be better equipped to set it in its special place when looking at face-to-face interaction. By seeing that communication is of limited analytical significance in strategic interaction, we can prepare ourselves to find its limited place in the naturalistic study of face-to-face conduct. [...] In pursuit of their interests, parties of all kinds must deal with and through individuals, both individuals who appear to help and individuals who appear to hinder. In these dealings, parties—or rather persons who manage them—must orient to the capacities which these individuals are seen to have and to the conditions which bear upon their exercise, such as innate human propensities, culture-bound beliefs, social norms, the market value of labor, and so forth. To orient to these capacities is to come to conclusions, well founded or not, concerning them; and to come to these conclusions is to have assumptions about the fundamental nature of the sorts of persons dealt with. These assumptions about human nature, however, are not easy to uncover because they can be as deeply taken for granted by the student as by those he studies. And so an appeal is made to extraordinary situations wherein the student can stumble into awareness. (Goffman, 1969, p. x-3; emphasis added)

This is where the difference between strategy as a pretheoretical idea and strategy as a sub-theoretical notion remains significant.

As a *pretheoretical* idea, the focus is on a course of *action*. In a course of action, the choice of a strategy is tactical and involves a calculation made with limited resources. In this sense, ‘strategy’ and ‘calculation’ (reasoning to a tactic) are synonymous. Accordingly, since a course of action is thought to be undertaken by individual actors, conditions of uncertainty are thought of as a challenge individuals face in making predictions with limited resources. In a course of action, thought of a particular event, what counts as “data” are factual particulars, meaning that the assumption is that states of intentions are the intentions of the particular actor attending to particular facts.

As a *sub-theoretical* notion, the focus is on a course of *activity*, which cannot be reduced to individual actions. Within a course of activity, strategy and calculation are not synonymous. Strategy is broader, perhaps, something like a “commitment to a course with an adaptable point of focus.” The amount of calculation varies with the amount of activity going on, thereby varying the amount of complexity and the focus of the associated conditions of uncertainty. Accordingly, under the idea of a course of activity, since actors are thought of as interactants, conditions of uncertainty are understood in terms of what the activity offers interactants as shifting alternative points of focus and varying degrees of focus. In a course of activity, since what counts as “data” are the organization of statuses, the assumption cannot be that states of intentions operating at each moment are the intentions of the individual actor. The point is since actors are interactants, and therefore constituted in the course of activity, there is no overall stable singular intention that can be definitively attributed to any one person. Intentions are always contingent. They are not “knowable” as states of mind, as they are said to be under a course of action. This is why the difference between strategy and calculation is so significant. Under a course of activity, then, generally speaking, *strategies* may be attributable to individual

actors, but not *specific intentions*. This might be called ‘strategic, yet not calculative conditions.’ The attribution of calculation appropriate to specific intentions, what might be called ‘strategic and calculative conditions,’ faces the general burden of account for the situation. That is, there are courses when certain strategies may predictably lead to certain types of calculation, and more often, there are courses in which strategies face having to overcome the problem of predicting what cannot be predicted. Within a course of activity, the situation is even more likely to oscillate between these three possibilities: strategic, yet not calculative conditions; predictable strategic and calculative conditions; and unpredictable strategic and calculative conditions. The second is merely an ideal that crops up in the course of activity, an ideal without the hope of realization.

Thus, the question that is sub-theoretical to whether strategy is a pretheoretical idea or a sub-theoretical notion is *thoroughly concerned with what examples are good for*. All the theory in the world is useless if it does not provide a basis for further theorizing (see Fig. 1). Surely, this is not a normative judgment

<i>Representational Representationality in the Selectivity of Heuristic Search</i>							
<i>Claim</i>	<i>Degree of Clarity</i>		<i>∴</i>	<i>Audience</i>	<i>Ignorance</i>		
<i>Simplicity</i>	Meaning =	Language =	Thought	Whole = Part	Given	Given	
<i>Complexity</i>	Reference / Meaning ≈	Language ≈	Thought	Whole ≠ Part	Given	Given	
<i>Simply Complex</i>	Reference / Meaning Δ	Language Δ	Thought	Object → Subject	Conventions Simplify	Settled Certainty	
<i>Complexly Simple</i>	Reference / Meaning ≠	Language vs. Speech ≠	Thought	Object ↔ Subject	Balancing Multiple Audiences	Unsettled Certainty	

<i>Heuristic Search, Examples, and the Intelligibility of Theorizing</i>			
Procedural Rationality		Situational Rationality	
<i>Principle of Least Effort</i>		<i>Principle of Most Effort</i>	
Skill-Oriented Problem-Solving	Deliberate Practice is Simple, Complex, or Simply Complex	Expertise-Oriented Problem-Solving	Deliberate Practice is Complexly Simple
Course of Action	State of Affairs	Course of Activity	State and Status of Affairs
Theory	Tendentiously Consistent Set of Propositions	Theorizing	Logically Prior to the Constitution of a Justifiable Theory
Pre-Theoretical Object	Theoretical Language of Disciplinarity	Sub-Theoretical Object	Theoretical Language Latent in Relationship Between an Example and the Object Conceptualized
Strategy as a Pre-Theoretical Idea	Strategy ≈ Calculation Depth = Given in Advance Individual = Intention Predictions Bounded by Resources ∴ Examples Demonstrate Solutions	Strategy as Sub-Theoretical Idea	Commitment to a Course with an Adaptable Point of Focus Depth ≠ Given in Advance Individual ≠ Intention Oscillation of Conditions ∴ Examples Demand Theorizing

Fig. 1. Problem-Solving and Theorizing: The Bounded Rationality of Heuristic Search.

condemning the achievement of particular, personal, ends, for that is consequentialism; rather, it is about understanding why all the knowledge we have in the world of “optimal” strategies is so difficult to make good use of as “recipes for success.”

THEORIZING, BOUNDED RATIONALITY, AND EXPERTISE REVISITED

It can now be clearly said that situational rationality demands that we account for far more than Simon suggests we can. At the same time, we must concede to Simon that ignoring representational representationality in favor of merely “decomposable complexity” makes the transmission of knowledge and strategies more likely to succeed. The trouble is that such a transmission only communicates skill and its procedural rationality. Brown, in contrast, demonstrates one way to avoid the loss of such fidelity. As he describes his style, “I have tried to build into the text something on the order of a memory so that the inter-dependence and overall significance of its various claims are evident throughout” (Brown, 2014, p. 19). His book is challenging in the sense that reading it successfully is only possible if the reader understands how to participate in problem-solving as a course of activity. That is, the memory the book provides is an invitation – and not a command – to seriously consider the authority of the argument, a master class in communicating expertise. Nevertheless, such quasi-realism will remain only as a flicker of hope in the darkness before the dawn that can only be transformed into an inspirational blaze once we acknowledge that theorizing and bounded rationality must be reconciled.

This is challenging because such a reconciliation often requires entertaining the ridiculous. After all, it is usually ridiculous to suggest that authors write things and that readers only have to contend with what an author writes. However, perhaps, highlighting such possible ridiculousness is necessary if we are to draw attention to points at which “language” and “self-reflection” are issues. Unfortunately, “self-reflection” is constantly getting a “bad name” (a reputation worthy of suspicion) because “proper” “self-reflection” is really difficult to define and identify as an activity (By “proper,” I mean “self-reflection” that engages in “deliberate practice” – instead of a normative claim, for example, like a judgment regarding the evaluation of the irony that arises from doctoral students following self-help guides on “doing” phenomenology, a doing that clearly prioritizes procedural rationality over situational rationality?!?). Its difficulty as a problem has preoccupied philosophers for millennia in which its solutions are apparently wide-ranging. Such “theory-products” have received wide-acclaim and durability, such as certain *Dialogues* of Plato and Kant’s *Critique of Pure Reason*. At the same time, for a variety of reasons ranging from disciplinarity and organizational incentives and constraints to a lack of acknowledgment of the politics of expertise, many other works have been received in such a superficial way that they

might as well not have been done at all. I have heard such “theory-products” being harshly criticized as fitting the vulgar criteria of “navel-gazing,” “intellectual distractions,” or “yet another project” (as in “I do not think we need yet another project on capitalism and inequality”). For sure, such satire often hits the mark when logic fails, yet we cannot rely on such an evaluation.

The truth of the matter is that an individual’s opportunity for “proper” “self-reflection” (a.k.a. “critical thinking” for the realization of its own end) ultimately comes down to the division of cognitive labor and a relationship between what may appear as capital (cognitive labor time, theory-products, and surplus value) and how we understand what examples are good for. In other words, sub-theoretically, the idea of “each dependent on all” suggests that survival depends on our not spending all of our time thinking about the same tasks; that is, to continually address the predicament of intelligibility at *every* point it reveals itself would seem to make cooperation impossible; instead, society ostensibly solves this problem for us in advance, providing conditions and constraints on what we spend time doing and thinking about, thereby limiting our intelligibility. The division of cognitive labor limits our sense of intelligibility, at the very least, by affecting how we (i) identify the problem (whenever “language” and “self-reflection” are issues), (ii) undertake problem-solving (what it means to engage “language” and “self-reflection”), (iii) determine the intelligibility of plausible solutions (evaluate the stability of “language” in the course of “self-reflection”), (iv) evaluate plausible solutions (evaluate the effects of inferential functions on “language” and “self-reflection”), (v) choose a plausible solution (select the inferential functions with the most situationally plausible effects on “language” and “self-reflection”), (vi) determine how conclusionary the solution is (determine whether the inferential functions with the most situationally plausible effects on “language” and “self-reflection” are timely or timeless), and, (vii) present the “theory-product” (communicate whether the issues of “language” and “self-reflection” are resolved as a theory [utilizing “simple,” “complex,” or “simply complex” examples] presented as a “command,” or whether the progress of problem-solving is communicated (to be made into a solution) as a basis for discussion in which “language” and “self-reflection” remain ambiguous, thereby enabling further theorizing [utilizing “complexly simple” examples]). Surely, we all need not be Plato or Kant, and many do not hold such desires. After all, if it were just about “philosophizing” in which the argument was merely about rejecting the entirety of the division of cognitive labor in favor of generalizing a specialized task – in which everyone had the capital to understand how what examples are good for operates as a form of societal control through the politics of expertise – then the entire argument could be potentially dropped.

However, since such a distribution of capital appears unlikely, and, admittedly it is implausible and undesirable to return the division of cognitive labor to something resembling “mechanical solidarity,” we must concede at the same time that the specialization implicit in the division of cognitive labor has gone too far. It has gone too far in stratifying education, increasing alienation, and reifying

expertise. For example, consider the difference between police, the military, and civilians. The tuition for the police academy, which costs less than \$10,000, and the training cadets receive is para-militaristic and designed to reduce organizational liability. This is drastically inconsistent with the sort of cognitive labor actually involved in police work, which is service-oriented communication. Actual military training, by comparison, in which a soldier's objective is to achieve a mission and avoid bullets, costs thousands upon thousands of dollars to train. Due to the high risk, society views this as a worthy investment of capital. Yet, for civilians whose labor does not involve "avoiding bullets," for some reason, we have decided to turn that investment into a loan, *as if* ensuring whatever individual subjectivity people experience is somehow "unrelated" to their capacity for "language" and "self-reflection," and therefore whatever contribution to the division of cognitive labor is made as specific courses of action is indistinguishable from a machine.

For, as life expectancies have gone up, so too have the number of years of education required to compete in the labor market. Yet, as people take more courses and acquire more credentials, they do not necessarily appear more "substantively educated." Such coursework provides students with more examples but not with the "deliberate practice" associated with them, because "self-reflection" is difficult enough as a problem, even more difficult to undertake by oneself (since "language" and "self-reflection" are irreducible issues), and even more difficult to do so in a classroom setting when educational institutions (in their organizational design) fail to acknowledge the need to account for the politics of expertise and its relationship to theorizing as a course of activity and an instance of sociality.

This is why it is so important to understand that "self-reflection" is not plausible, or even possible, if individuals are taken one by one in which such individuals are considered "social" either when they are (1) subject to influence, mediation, or natural causes, or (2) find their "self" in the accidental or elective presence of "others." It is only after we positively substitute "self-reflection" in favor of "reflexivity" relative to a course of activity that is "intrinsically and irreducibly social" that we can understand our own individuality as an artifact of "the immediacy of any reason." This immediacy of reason is important for understanding the kind of knowledge – and knower – that corresponds to the irreducibility of sociality. As Brown (2014, p. 331) explains, "reference to reflexivity entails understanding human life as constantly changing the terms of its existence insofar as it can be known in its distinctively human aspect. That life, that sociality, is endlessly self-differentiating and, therefore, always in the course of being composed."

And so, if we are to discuss seriously the sort of knowledge appropriate to the human sciences and its intersection with the natural sciences and cognitive sciences, namely in terms of a cognitive sociology, it is important to begin, as we have, with "a fuller recognition of the incompatibility of many of the most important concepts and models in the social sciences with the intuitively compelling character of the sub-theoretical notion of sociality on which the validity of those concepts and models ultimately depend." In other words, we

clearly need a balance in the relations among *social* facts and *societal* facts in which the division of cognitive labor rewards reflexivity (therefore, rewarding the courses of activity in which we realize our “distinctively human aspect”) and specialized labor (the ostensible courses of action that we may or may not be alienated by). Historically, games, such as chess, have served as a mechanism for achieving that balance. However, when an “excellent example” becomes so diffuse that it is articulated as a theory, it becomes conflated with its object so that its rationalization stops invigorating theorizing and its course of activity. Consequentially, the world its reference purports to recognize becomes lost and a bit of heroism is required in that we must balance skill and expertise “to save the world.”

NOTES

1. The distinction between skill-oriented and expertise-oriented problem-solving is developed in my doctoral dissertation (Raphael, 2022a). As a bit of useful intellectual history, this distinction was initially inspired by communicative difficulties I faced in my own experiences as a chess player in which it became clear that procedural rationality was insufficient to understanding what games – like chess – seek to communicate as a form of instruction (Raphael, 2011, 2022b). In this respect, the lessons often rely heavily on tacit knowledge in the application of heuristic search. This is why I subsequently examined “self-help” literature where the lessons were more explicit, but nevertheless heavily reliant on tacit elements that contribute to a sense of success if, and only if, they are noticed (Raphael, 2013). These are seven structural elements: (1) the author’s generation of rapport with the reader, (2) the programmatic language (i.e., “the language that generates the reality the author intends to be offering advice for”), (3) the rules themselves (i.e. the advice), (4) the language qualifying rules as “rules” (i.e., “the specification of the conditions under which the advice is to be followed and how they are to be applied”), (5) the language qualifying rules as “not rules” (“the specification that attempts to eschew the rule of its algorithmic character and instead presents it as a situational heuristic”), (6) the language qualifying some rules as meta-rules (i.e. “rules about how to form a rule and how to apply it”), and (7) the extracurricular language (i.e., “the text that is seen as ‘filler’ or ‘distracting’”). Through these structural elements, the reader is presented with a reality where they can imagine themselves problem-solving, which tends to lead to failure because the solutions generated in the course of that practice are not situated in the same way as “deliberate practice” engages the possibility of optimization by the use of such strategies. In other words, they only succeed if problem-solving is a course of activity, and not merely an application of procedural rationality.

2. This is the punch line. The short version of the full routine is as follows: “*Abbott*: Well *Costello*, I’m going to New York with you. You know Bucky Harris, the Yankee’s manager, gave me a job as coach for as long as you’re on the team. *Costello*: Look *Abbott*, if you’re the coach, you must know all the players. *Abbott*: I certainly do. *Costello*: Well you know I’ve never met the guys. So you’ll have to tell me their names, and then I’ll know who’s playing on the team. *Abbott*: Oh, I’ll tell you their names, but you know it seems to me they give these ball players now-a-days very peculiar names. *Costello*: You mean funny names? *Abbott*: Strange names, pet names. . .like Dizzy Dean. . . *Costello*: His brother Daffy. *Abbott*: Daffy Dean. . . *Costello*: And their French cousin. *Abbott*: French? *Costello*: Goofé. *Abbott*: Goofé Dean. Well, let’s see, we have on the bags, Who’s on first, What’s on second, I Don’t Know is on third. . . *Costello*: That’s what I want to find out. *Abbott*: I say Who’s on first, What’s on second, I Don’t Know’s on third. *Costello*: Are you the manager? *Abbott*: Yes. *Costello*: You gonna be the coach too? *Abbott*: Yes. *Costello*: And you don’t know the fellows’ names? *Abbott*: Well I should. *Costello*: Well then who’s

on first? *Abbott*: Yes. *Costello*: I mean the fellow's name. *Abbott*: Who. *Costello*: The guy on first. *Abbott*: Who. *Costello*: The first baseman. *Abbott*: Who. *Costello*: The guy playing. . . *Abbott*: Who is on first! *Costello*: I'm asking YOU who's on first. *Abbott*: That's the man's name. *Costello*: That's who's name? *Abbott*: Yes. *Costello*: Well go ahead and tell me. *Abbott*: That's it. *Costello*: That's who? *Abbott*: Yes. [PAUSE] *Costello*: Look, you gotta first baseman? *Abbott*: Certainly. *Costello*: Who's playing first? *Abbott*: That's right. *Costello*: When you pay off the first baseman every month, who gets the money? *Abbott*: Every dollar of it. *Costello*: All I'm trying to find out is the fellow's name on first base. *Abbott*: Who. *Costello*: The guy that gets. . . *Abbott*: That's it. *Costello*: Who gets the money. . . *Abbott*: He does, every dollar. Sometimes his wife comes down and collects it. *Costello*: Who's wife? *Abbott*: Yes. [PAUSE] *Abbott*: What's wrong with that? *Costello*: Look, all I wanna know is when you sign up the first baseman, how does he sign his name? *Abbott*: Who. *Costello*: The guy. *Abbott*: Who. *Costello*: How does he sign. . . *Abbott*: That's how he signs it. *Costello*: Who? *Abbott*: Yes. [PAUSE] *Costello*: All I'm trying to find out is what's the guy's name on first base. *Abbott*: No. What is on second base. *Costello*: I'm not asking you who's on second. *Abbott*: Who's on first. *Costello*: One base at a time! *Abbott*: Well, don't change the players around. *Costello*: I'm not changing nobody! *Abbott*: Take it easy, buddy. *Costello*: I'm only asking you, who's the guy on first base? *Abbott*: That's right. *Costello*: Ok. *Abbott*: All right. [PAUSE] *Costello*: What's the guy's name on first base? *Abbott*: No. What is on second. *Costello*: I'm not asking you who's on second. *Abbott*: Who's on first. *Costello*: I don't know. *Abbott*: He's on third, we're not talking about him. *Costello*: Now how did I get on third base? *Abbott*: Why you mentioned his name. *Costello*: If I mentioned the third baseman's name, who did I say is playing third? *Abbott*: No. Who's playing first. *Costello*: What's on first? *Abbott*: What's on second. *Costello*: I don't know. *Abbott*: He's on third. *Costello*: There I go, back on third again! [PAUSE] *Costello*: Would you just stay on third base and don't go off it. *Abbott*: All right, what do you want to know? *Costello*: Now who's playing third base? *Abbott*: Why do you insist on putting Who on third base? *Costello*: What am I putting on third. *Abbott*: No. What is on second. *Costello*: You don't want who on second? *Abbott*: Who is on first. *Costello*: I don't know. *Abbott* & *Costello* Together: Third base! [PAUSE] *Costello*: Look, you gotta outfield? *Abbott*: Sure. *Costello*: The left fielder's name? *Abbott*: Why. *Costello*: I just thought I'd ask you. *Abbott*: Well, I just thought I'd tell ya. *Costello*: Then tell me who's playing left field. *Abbott*: Who's playing first. *Costello*: I'm not. . . stay out of the infield! I want to know what's the guy's name in left field? *Abbott*: No, What is on second. *Costello*: I'm not asking you who's on second. *Abbott*: Who's on first! *Costello*: I don't know. *Abbott* & *Costello* Together: Third base! [PAUSE] *Costello*: The left fielder's name? *Abbott*: Why. *Costello*: Because! *Abbott*: Oh, he's centerfield. [PAUSE] *Costello*: Look, You gotta pitcher on this team? *Abbott*: Sure. *Costello*: The pitcher's name? *Abbott*: Tomorrow. *Costello*: You don't want to tell me today? *Abbott*: I'm telling you now. *Costello*: Then go ahead. *Abbott*: Tomorrow! *Costello*: What time? *Abbott*: What time what? *Costello*: What time tomorrow are you gonna tell me who's pitching? *Abbott*: Now listen. Who is not pitching. *Costello*: I'll break your arm, you say who's on first! I want to know what's the pitcher's name? *Abbott*: What's on second. *Costello*: I don't know. *Abbott* & *Costello* Together: Third base! [PAUSE] *Costello*: Gotta a catcher? *Abbott*: Certainly. *Costello*: The catcher's name? *Abbott*: Today. *Costello*: Today, and tomorrow's pitching. *Abbott*: Now you've got it. *Costello*: All we got is a couple of days on the team. [PAUSE] *Costello*: You know I'm a catcher too. *Abbott*: So they tell me. *Costello*: I get behind the plate to do some fancy catching, Tomorrow's pitching on my team and a heavy hitter gets up. Now the heavy hitter bunts the ball. When he bunts the ball, me, being a good catcher, I'm gonna throw the guy out at first base. So I pick up the ball and throw it to who? *Abbott*: Now that's the first thing you've said right. *Costello*: I don't even know what I'm talking about! [PAUSE] *Abbott*: That's all you have to do. *Costello*: Is to throw the ball to first base. *Abbott*: Yes! *Costello*: Now who's got it? *Abbott*: Naturally. [PAUSE] *Costello*: Look, if I throw the ball to first base, somebody's gotta get it. Now who has it? *Abbott*: Naturally. *Costello*: Who? *Abbott*: Naturally. *Costello*: Naturally? *Abbott*: Naturally.

Costello: So I pick up the ball and I throw it to Naturally. *Abbott*: No you don't, you throw the ball to Who. *Costello*: Naturally. *Abbott*: That's different. *Costello*: That's what I said. *Abbott*: You're not saying it. . . *Costello*: I throw the ball to Naturally. *Abbott*: You throw it to Who. *Costello*: Naturally. *Abbott*: That's it. *Costello*: That's what I said! *Abbott*: You ask me. *Costello*: I throw the ball to who? *Abbott*: Naturally. *Costello*: Now you ask me. *Abbott*: You throw the ball to Who? *Costello*: Naturally. *Abbott*: That's it. *Costello*: Same as you! Same as YOU! I throw the ball to who. Whoever it is drops the ball and the guy runs to second. Who picks up the ball and throws it to What. What throws it to I Don't Know. I Don't Know throws it back to Tomorrow, Triple play. Another guy gets up and hits a long fly ball to Because. Why? I don't know! He's on third and I don't give a darn! *Abbott*: What? *Costello*: I said I don't give a darn! *Abbott*: Oh, that's our shortstop." Internet Archive (1937/2006) It should be noted that routine has a remarkable similarity to Homer's *Odyssey* where Odysseus refers to himself as "nobody" in his fight against the Cyclops Polyphemus, causing difficulty for Polyphemus's explanation of Odysseus' escape. *Odysseus*: "Cyclops, you asked my noble name, and I will tell it; but do you give the stranger's gift, just as you promised. My name is Nobody. Nobody I am called by mother, father, and by all my comrades." *Polyphemus*: Nobody I eat up last, after his comrades; all the rest first; and that shall be the stranger's gift for you." *Narrator*: "Then in his turn from out the cave big Polyphemus answered: 'Friends, Nobody is murdering me by craft. Force there is none.'" But answering him in winged words they said: "If nobody harms you when you are left alone, illness which comes from mighty Zeus you cannot fly. But make your prayer to your father, lord Poseidon.'" (Homer & Lattimore, 1990).

REFERENCES

- Binmore, K. G. (1994). *Game theory and the social contract*. Cambridge, MA: MIT Press.
- Brown, M. E. (2014). *The concept of the social in uniting the humanities and social sciences*. Philadelphia, PA: Temple University Press.
- Ericsson, K. A. (2006). *The Cambridge handbook of expertise and expert performance*. Cambridge and New York, NY: Cambridge University Press.
- Goffman, E. M. (1961). *Encounters: Two studies in the sociology of interaction*. Indianapolis, IN: Bobbs-Merrill.
- Goffman, E. M. (1963). *Behavior in public places: Notes on the social organization of gatherings*. New York, NY: Free Press of Glencoe.
- Goffman, E. (1967). *Interaction ritual: Essays on face-to-face behavior*. Garden City, NY: Doubleday.
- Goffman, E. (1969). *Strategic interaction*. Philadelphia, PA: University of Pennsylvania Press.
- Goffman, E. (1971). *Relations in public: Microstudies of the public order*. New York, NY: Basic Books.
- Goffman, E. M. (1974). *Frame analysis: An essay on the organization of experience*. New York, NY: Harper & Row.
- Heidegger, M. (1971). *Poetry, language, thought*. New York, NY: Harper & Row.
- Homer, & Lattimore, R. (1990). *The Iliad; and, the Odyssey of Homer* (2nd ed.). Chicago, IL: Encyclopædia Britannica, Inc.
- Internet Archive. (1937/2006). Abbott & Costello – Who's on first original 30 min live. *Radio Show and Programs Archive*. Retrieved from https://archive.org/details/otr_abbottandcostello/
- Kahneman, D. (2002). Maps of bounded rationality: A perspective on intuitive judgment and choice. In F. N. Foundation (Ed.), *Les Prix Nobel: The Nobel Prizes 2002* (pp. 449–489). Stockholm, SE: The Nobel Foundation.
- Kahneman, D. (2011). *Thinking, fast and slow*. New York, NY: Farrar, Straus and Giroux.
- Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica*, 47(2). doi:10.2307/1914185
- Raphael, M. W. (2011). *Chess: A preface to a technical resource for sociology*. (Bachelor of Science Undergraduate). Northeastern University, Boston, MA.
- Raphael, M. W. (2013). Learning informal interaction: The problem of self-help literature for expression games. Retrieved from <http://hdl.handle.net/2047/d20003073>

- Raphael, M. W. (2017). *Cognitive sociology*. Oxford Bibliographies Online in Sociology. New York: Oxford University Press.
- Raphael, M. W. (2019). The politics of twilights: Notes on the semiotics of horizon photography. *Visual Studies*, 33(4), 295–312. doi:10.1080/1472586x.2019.1590157
- Raphael, M. W. (2022a). *The Politics of expertise and the articulation of authority in democracy: Cognitive style and intelligibility in the education of problem-solving and professional decision-making in the domain of law*. (Ph.D.). New York, NY: City University of New York Graduate Center.
- Raphael, M. W. (2022b). Chess imagination and problem-solving techniques. In *Effective chess*. Beverly, MA: Fanatic, LLC. 5-hour Instructional Chess Psychology DVD Lecture.
- Rawls, J. (1971/1999). *A Theory of justice* (revised ed.). Cambridge: Belknap Press of Harvard University Press.
- Simon, H. A. (1947/1997). *Administrative behavior* (4th ed.). New York, NY: The Free Press.
- Simon, H. A. (1956). Rational choice and the structure of the environment. *Psychological Review*, 63, 129–138.
- Simon, H. A. (1968/1996). *The sciences of the artificial* (3rd ed. 2019 ed.). Cambridge, MA: The MIT Press.
- Simon, H. A. (1973). Organizational man: Rational or self-actualizing. *Public Administration Review*, 33, 346–353.
- Simon, H. A. (1981). Studying human intelligence by creating artificial intelligence. *American Scientist*, 69, 300–309.
- Simon, H. A. (1983). *Reason in human affairs*. Stanford, CA: Stanford University Press.
- Simon, H. A. (1992). What is an “explanation” of behavior? *Psychological Science*, 3(3), 150–161. doi: 10.1111/j.1467-9280.1992.tb00017.x
- Tooke, J. H. (1840). *Epea Pteroenta, or, the diversions of purley* (A new ed.). London: Printed for Thomas Tegg.
- Turner, B. S. (2006). *The Cambridge dictionary of sociology*. New York, NY: Cambridge University Press.
- Turner, S. P. (2018). *Cognitive science and the social: A primer*. New York, NY: Routledge.
- Tversky, A., & Kahneman, D. (1974). Judgment under uncertainty: Heuristics and biases. *Science*, 185(4157), 1124–1131. doi:10.1126/science.185.4157.1124

