The Hysteresis Effect: Theorizing Mismatch in Action[1]

MICHAEL STRAND AND OMAR LIZARDO

ABSTRACT

Widespread reliance on representationalist understandings commit social scientists to either partially or totally decouple belief from reality, limiting the domain of phenomena that can be treated by belief as an analytic concept. Developing the contrastive notion of practical belief, we introduce the hysteresis effect as a situational phenomenon involving the systematic production of agent-environment mismatches and argue for its placement as a central problem for the theory of action. Revealing the dynamic, embodied conservation of belief in the temporality of practice, hysteresis appears when environmental contexts change in a way that leaves actors without an ontologically complicit relationship to institutions as scaffolds of action. Under these circumstances, a past-inflected reflexiveness replaces a forward-inflecting practical belief in the actor's temporal relation to the world. Drawing from a variety of historical case studies, we locate hysteresis in routine disjunctures between the temporality of practice and the temporality of environments. Our analysis reveals four distinct types of reflexiveness produced the hysteresis effect, each with a unique dispositional impact on actors and extensions to group-level phenomena. We conclude the article by emphasizing the non-eliminativist relationship between belief as disposition and belief as representation.

Keywords: belief, theory of action, Bourdieu, reflexiveness, temporality, field theory

INTRODUCTION

The Contemporary Theory of Belief

"Good old fashioned action theory" (GOFAT) (Martin, 2015, p. 217), as the default mode of theorizing action in several social science disciplines, defines belief

as explicit, conscious representations expressible in linguistic format and supporting propositional content regarding the entities, processes and states of affairs that are taken by actors to exist or obtain in the worlds in which they act.[2] For the purpose of theorizing the sources of action, sociologists treat beliefs as inference-supporting *internal representations* of the environment and the consequences that follow certain lines of conduct given the existence and efficacy of the "believed in" entities and processes. Beliefs are, in this sense, the primary components of reasoning chains that are constitutive of "rational" (inclusive of "value-rational") action in the Weberian sense (Campbell, 2009). In the culturalist extension of this theory, beliefs are the "world images" that, according to Weber (1946, p. 280), canalize or "refract" material and ideal interests (e.g. wants, desires, needs) in the production of action (Warner, 1970). This formulation fixes the default explanatory format of the theory of action as accounting for how variation in the social agent's conduct in a given setting can be traced to beliefs about the makeup of that reality, even in the presence of analytically indistinguishable interests, motivations, and objective (e.g. institutional or material) constraints (Parsons, 1938).

In relying on GOFAT and its theory of belief, sociologists continue to abide by Weber's account—most clearly laid out in his sociology of religion (Weber, 1993) —of the role of divergent ideas and conceptions of the world in determining different lines of action (Swidler, 1993, p. xii; Warner, 1970, p. 82). From this perspective, in order for a person to hold a belief related to social, psychological, natural, or supernatural worlds that person must have already formed an explicit, consciously accessible cognitive representation, using it as a "model of" reality that facilitates action as a "model for" reality (Geertz, 1973, p. 93). Reasoning is therefore understood as "moving along" the implicational chain from one belief to another belief within an internally represented system of beliefs. This leads to either action or non-action in the world depending on the derivations drawn from a representational content (Rydgren, 2009).

The organization of beliefs into systems follows naturally from a representational/propositional conception of belief, as *a fortiori* all propositional beliefs have to be connected to other beliefs (and ultimately to action) by chains of implication (Borhek & Curtis, 1975). In the sociology of religion, sociologists can analyze and decompose systems of belief by following the web of implications that go from fundamental beliefs about the existence of particular sorts of supernatural entities or powers to certain patterns of action designed to obtain worldly and otherworldly benefits (Weber, 1993). The same goes for modern "rationalized" versions of transcendental entities, as "ethical gods" are replaced by abstract, impersonal principles, and priests by professional classes of scientists, politicians, bureaucrats, and activists (Meyer, Boli and Thomas, 1994). Modern institutions are thus cognitively legitimized through idealized beliefs that are represented internally by actors and produced and arranged by symbol-production professionals (Meyer & Rowan, 1977).

A consequence of rigorously following this representationalist logic, however, is that the relation between beliefs and reality becomes a thorny issue (see Dreyfus & Taylor, 2015). One approach is to follow the "utilitarian" path and propose that there is a one-to-one mapping between beliefs and reality. This approach runs against the fact that action is justified by beliefs that cannot be verified by objective (e.g. "scientific") criteria (Rydgren, 2009). In addition, positing a one-to-one mapping between beliefs and reality would make recourse to belief in the GOFAT scheme essentially superfluous, since the postulate that beliefs are somehow "caused" by external reality eliminates them as an "autonomous" explanatory factor (Parsons, 1938, p. 91-92; Alexander, 1978, p. 179).

Another approach follows the postulates of the sociological appropriation of phenomenology (e.g. Berger & Luckmann, 1966). This requires holding fast to a policy of "indifference" as to the causal provenance of beliefs, proposing instead that by taking abstract representations as "real," actors transform the world in conformity with those representations.[3] Ironically, in order for beliefs to function as an explanatory concept in the social sciences, they must be thought of as having no *necessary* link to reality in this respect; instead, beliefs are (and must be) decoupled from the world in order to give meaningful (internal) form to the otherwise "arbitrary" (external) content of the world (see Martin, 2011, p. 143-44).[4]

A classic (if pre-phenomenological) version of this argument is Robert Merton's "self-fulfilling prophesy" (1948)---still treated in "analytical" discussions of action theory as the canonical example of a belief-based mechanism (see Rydgren, 2009; Hedstrom, 2005). Importantly, Merton does not dismiss the relevance of the truth-content of beliefs, only claiming that they are separable from the "objective features of a situation." In this conception, beliefs are "beliefs" precisely because they have *no direct connection* to reality; this is what makes them capable of performing their "self-validation" function, changing reality to fit with beliefs rather than vice versa (Douglas, 1986, p. 48). Historically, this has been the primary way in which analysts accommodate the obdurate anthropological observation of cultural diversity in such postulated systems (see Sahlins, 1976; Winch, 1964). The historical and cross-cultural diversity in belief systems stands as *prima facie* evidence that there cannot obtain any one-to-one coupling between belief and any type of underlying (physical, psychological, or sociological) reality.[5]

Accordingly, the key phenomenon to be accounted for has been (and remains) a variation on the "Thomas' theorem"—"if men define situations as real they are real in their consequences" (Thomas & Thomas, 1928, p. 572). As Parsons (1938, p. 660) noted, to "define the situation" was in effect to overlay objective reality with a layer of "normative order" produced through belief, which meant that actors did not always pursue what otherwise seemed to be in their utilitarian best interest (as observable through "factual order"). Here the analytic focus remains concentrated on the first part of the formulation: how actors define their situations independently of the reality of those situations. In Merton's (1948) rendering, beliefs are confirmed because actors proceed "as if" their beliefs were true, ignoring

physical and social constraints. This mirrors what Meyer and Rowan (1977, p. 357) famously referred to as "the logic of confidence" that sustains collective commitment to myths lying at the basis of institutions, which are only "loosely coupled" to "efficiency criteria." More broadly, a nearly identical framework underlies recent discussions of "performativity" in cultural sociology, economic sociology and science studies (Alexander, 2004; Callon, 2008), the latter of which traces its intellectual legacy to a neo-Mertonian formulation---the notion of "bootstrapped induction" (Barnes, 1983). Even otherwise point-by-point opposed perspectives on GOFAT, such as interpretivist and analytic conceptions, introduce much the same understanding of the logic linking belief with action (Reed, 2011; Hedstrom, 2005). In each of these different cases, the assumption that belief is representational and mediatory commits sociologists to either a partial (e.g. Parsons, 1938; Rydgren, 2009) or radical (e.g. Meyer & Rowan, 1977; Winch, 1964) decoupling of belief from the world.

Beyond the Sociological Theory of Belief: A Dispositionalist Perspective

In this paper, we challenge this (admittedly appealing) general approach to belief in action by building on an alternative conception rooted broadly in dispositionalism. Our starting point is the following quote from Bourdieu:

> Practical belief is not a 'state of the mind,' still less a kind of arbitrary adherence to a set of instituted dogmas and doctrines ('beliefs'), but rather a state of the body. *Doxa* is the relationship of immediate adherence that is established in practice between a habitus and the field which it is attuned, the pre-verbal taking-for-granted of the world that flows from practical sense (1990, p. 68).

This formulation challenges belief-representationalism in a number of ways. First, in its emphasis on *embodiment*, practical belief bypasses the requirement of a content-bearing representation or "world-modelling" that happens internally (in the mind). The proposal here is that "instituted dogmas and doctrines" cannot take an embodied form and still remain in propositional form. To account for actors' "practical sense," therefore, belief-based explanations cannot rely on representationalism. Second, the notion of *doxa*---or what translates from ancient Greek as "common belief"---is positioned here against representationalist conceptions of belief and consciousness: "the social world does not work in terms of consciousness; it works in terms of practices, mechanisms and so forth. By using doxa we accept many things without knowing them" (Bourdieu & Eagleton, 1992, p. 113). This last phrase is central to the reformulation of belief from a dispositionalist perspective, as it posits a relationship of "acceptance" without a propositional content that is internally represented (see Hutto, 2013). This avoids the antinomies of doxastic voluntarism, or the paradox of "deciding to believe" (Williams, 1973; Smilde, 2007, p. 143). As a product of embodied acquisition

and conservation, practical belief functions instead through a kind of "genesis amnesia" (Bourdieu, 1990, p. 49-50).

As suggested, the priority given to practical belief in Bourdieu's theory of practice mirrors in many ways the arguments associated with philosophical dispositionalism (see Mumford, 2003). Rooted in Ryle's (2002/1949) criticism of the "ghostly" concept of mind inherited from Cartesian thought, dispositionalism treats a representational content as incidental to belief: representations matter only as supports for belief-based *predispositions* to certain kinds of action. For example, to understand that someone believes in Christ propositional or that the stock market will crash tomorrow, we do not need to go in search of a content that deductively generates their (internal) state of belief. Instead, belief presupposes only an observance of dispositional tendencies for certain kinds of action (e.g. going to church; withdrawing money from investments). As Ryle puts it, "belief is of the same family as motive words…to believe that the ice is dangerously thin…is to [be] prone to skate warily, to shudder, to dwell in imagination on possible disasters, and to warn other skaters" (2002/1949, p. 134-135).

Bourdieu's practical belief and Rylean dispositionalism depart from a common reaction against the kind of "mentalism" that depends on internal representations to *mediate* an actor's relation to the world.[6] Important in this respect is that dispositions and belief are both distinguishable from *knowledge*. To know "that the ice is dangerously thin" is different from believing that it is, because the former involves a propositional truth-content. In the same way, one can have the non-propositional practical belief ("alief") that the ice is dangerous (experienced as a visceral fear of stepping into it) even if one "knows" that it is perfectly safe (see Albahari, 2014). For Bourdieu, reflexive sociology attempts to reveal the source of "doxic acceptance" in order to transform practical belief into knowledge, the propositional/representational form of which gives actors the power to reason critically about *doxa* by creating an "epistemological break" (see Bourdieu, 1993, p. 25; Bourdieu & Wacquant, 1993, p. 250-251; Wacquant, 2004). Meanwhile, in contrast to Dennett's (1987) "intentional stance," belief is not *interpretively* (or instrumentally) attributed to actors in order to recover the presence of an "intentional system" responsible for action. Rather, and like dispositionalism in this respect, the operating logic of practical belief can be *objectively* revealed by accurately describing its conditions of acquisition or "genesis" (Bourdieu, 1990, p. 50).

Thus, while belief-representationalism is intuitive (especially for people raised in societies defined by the "presence of the word"; see Ong, 2013), it is not the only way to conceptualize belief. Contemporary research in the neuroscience of perception and action lends support to a dispositional/practical account of belief instead, showing that agents embedded in real world environments do not need to form discrete, sentential representations or models about the objective "states" or objective facts pertaining to those environments in order to act effectively and adaptively in relation to them (Clark, 1997). The most compelling accounts in

the growing area of "embodied and embedded" approaches to cognition suggest that neural patterns of activation are distributed and that there is no executive center in which everything comes together for binding or integration (Damasio, 1989; Edelman, 2001). Instead, action in the world results in coordinated (but decentralized) activation patterns in the brain; these are synchronized in time and keyed to environmental regularities (Thelen & Smith, 2002). The sentential, structured representations that form the foundation of the theory of belief are nowhere to be found (Clark, 1997). Instead, what we find are time-locked, distributed neural signatures and the off-loading of the job of cognitive processing, explicit representation, and memory to environmental scaffolds (Clark, 1997; Lizardo & Strand, 2010).

Under this formulation, the objectivist question of whether single sentential beliefs (or worse entire "systems" of such beliefs) "correspond" to reality is relegated to the background. Instead, attention moves toward accounting for how distributed patterns of neural activation—becoming strongly linked and coordinated through repetitive experiences—generate time-sensitive patterns of motor-activity, and how this activity links *directly* (e.g. without a representational mediation) to the affordances of action environments (Thelen & Smith, 2002). The key question to be answered is how action comes to be synchronized with a dynamically changing environment which itself becomes an active co-participant in the production of certainties and "taken-for-granted" presuppositions (e.g. beliefs) about the world.

To help answer this question, we propose the following: each aspect of our revised "action frame of reference"---practical belief, action, and environment---is endowed with its own *temporality*. They each have different generational histories and change at different rates. The temporality of "action" results from the relationship between practical belief and the environment. The temporality of both of those must be kept analytically distinguishable from the other, as they advance at different rates and fall out phase with regularity. Practical belief "shapes and canalizes" action with its own temporality, anticipating possibilities that may or may not match institutional patterns of the environment generated via a different temporality (see Bourdieu, 2000; Tavory & Eliasoph, 2013; Emirbayer & Mische, 1998). Belief-based action is thus dependent on the *dynamic coordination* between "subpersonal, personal, and extra-personal" processes supportive of cognition in the "extended" sense (Clark & Chalmers, 1998). These multi-level, multi-temporal dynamics combine to generate the phenomena that have usually been treated by the representationalist theory of belief as inclusive of such phenomena as "reflexivity". The coordination (or lack thereof) generates the regular "misfirings" that the standard account cannot help but shelve under a residual category of pathological deviations from a "rational" norm (Elster, 1983). However, these misfirings are not to be taken as a form of "error." Instead, they emerge as a *regularity* of linking the practical past with the contingent present *in action*.

Another Look at the Problem of Belief

We argue that this characterization of practical belief in the "action frame of reference" is an improvement over the GOFAT account, but it remains exceedingly abstract. What are its concrete implications? Stated broadly, by abandoning the understanding of belief as a discrete, sentential and representational entity that interacts with other such entities at the prompting of "logical logic" or "evidence," we introduce a fundamental reorientation of the basic empirical parameters of the theory of belief that has important (indeed, transformative) implications for cultural analysis and the theory of action. Rather than being confined to the question of the degree of "fit" or objectivist "correspondence" between belief systems and reality (Rydgren, 2009; see also Dreyfus & Taylor, 2015, chap. 3), we propose that the phenomenon that should be at the center of the sociological analysis of belief is the systematic production of *matches* and *mismatches* within the context of dynamically changing, asynchronous, agent-environment couplings that characterize action. In this formulation, belief moves from being a representational content possessed by actors internally to being a *relation* between actors and environmental features made reliably sensitive as affordances through habitual action patterns (Brownstein & Madva, 2012, p. 420).

Drawing on practice and field theories (Bourdieu, 1990, 2000; Martin, 2003) we argue that actors form pre-theoretical and pre-conceptual practical belief about the world that generates an open directedness and intentionality without a representational/propositional content (Strand & Lizardo, 2015). Via the enactment of practical belief, actors produce attempted diachronic matchings between their embodied experiential histories and currently experienced situations embedded in established institutional patterns (Bourdieu, 1988). This pre-reflexive process is pervasive and automatic, and is the *normal* manner in which actors embedded in concrete dynamic environments form an intentional awareness of it (Clark, 1997). In contrast to GOFAT accounts, there is no need to postulate the existence of an extensive ideological and pedagogical process resulting in the "internalization" of belief systems or world models that mediate the actor's experience of the world. While these systems do exist and do perform this function, a corollary of our view of practical belief is that action guided by explicit "reasons" and subject to an exacting process of discursive rationalization is the more *unusual* (and cognitively unsustainable) way of engaging with the world. Agents resort to *representational* belief only when they are forced to do so after repeated failure at matching practical belief to institutional patterns (see Lizardo & Strand, 2010; Strand & Lizardo, 2015).

Indeed, as expectations about what the world *is* like automatically seep into expectations about what the world *should* be like, the origins of normative and moral but *non-propositional* understandings of what is just or unjust, ideal or good about the world, can be derived from direct experiential interaction with it (Lizardo, 2014). The matching and mismatching effected through practical belief reveal

the normativity embedded *in* the agent-environment relation instead of imposed on it externally from a representational belief system of values (Brownstein & Madva, 2012). As we argue below, this reformulation of belief allows for a more adequate account not only of the mysterious "regularity of action" (see Martin, 2003) but also of phenomena presumed to be necessarily "representationalist" in nature (like moral belief or political ideology) without, however, relying on a learning process geared toward the acquisition of explicit belief systems (see Bourdieu, 2000, p. 215) or the problematic imputation of "collective objects" (Turner, 1994).

Outline of the Argument

We have outlined the principal features of this reformulation of the concept of belief in detail elsewhere (Strand & Lizardo, 2015). In this article, we elaborate and expand these arguments to recover a pivotal concept that most clearly reflects the main implications of practical belief and dynamic temporality: *hysteresis*. Hysteresis occurs within contextual environments that (as a rule) dynamically change at a faster rate than the practical belief embodied (e.g. "generated") in the actor through interactions with past versions of the environments can anticipate (Thelen & Smith, 2002). Thus, hysteresis refers to the retention of traits in actors across time that are acquired from actors' exposure to an environmental state at only *one* time. It concentrates on discontinuity or *mismatch* between practical belief and environments based on asynchronous dynamics made evident in a present situation of action. In this sense, hysteresis reveals the close connection between action and temporality (or "rhythm") that is observable in the co-constructive relationship between practical belief and institutional patterns ("scaffoldings") with different temporalities (see Bourdieu, 1988, p. 155-56, 180; Lizardo & Strand, 2010) .

To demonstrate the centrality of hysteresis as a manifestation of practical belief, we use the concept to highlight four distinct types of *reflexive* orientation to action found among actors during periods of institutional change. Each different form of "reflexiveness" corresponds to hysteresis present in the belief-based relationship between actors and an environment of either rapidly or slowly changing institutional patterns. We label these belief-sensitive types of reflexiveness as *radical*, *anomic*, *traditional*, and *ironic*. Concentrating our efforts on drawing connections between hysteresis and reflexiveness, we claim more generally that practical belief helps to reveal the hitherto unrecognized limits of the GOFAT account of action, particularly for explaining certain puzzles (like reflexiveness) that remain elusive should they be conceived strictly according to a representationalist framework. In concluding the article, we argue for the merits of a *dualistic* (e.g. non-eliminativist) approach to belief, featuring *both* representational and practical manifestations under specific conditions.

THE CONCEPT OF HYSTERESIS

The term "hysteresis" literally means "that which comes after, or is behind" (Cross & Allan, 1988, p. 26). The Scottish engineer and physicist Alfred Ewing (1885) is credited with resurrecting the term from Ancient Greek in order to explain the persistent effects in ferric metals stemming from their temporary exposure to magnetic fields. When removed from those fields, the metals "[lagged] in the change of quality." Ewing hypothesized that this was because the metals *retained* the characteristics of the field *ex ante*, which meant that their present "state structure" could not be explained by a restrictive focus on the present, but must instead be due to a "hysteresis effect" that revealed the history of a particular metal by producing an *asynchronic* relation to its environment.

Despite these somewhat obscure origins, the concept of hysteresis has enjoyed a broad application across a variety of disciplines (engineering, materials science, biology, ecology, economics) where it is used to explain, in similar fashion, the *inelasticity* of change based on a trajectory of past exposures (Franz, 1990). While Bourdieu is seemingly alone among sociologists in drawing substantively on the idea, we argue that the concept has a natural place in sociological analysis, though one that has been obscured by GOFAT: the mismatched relation between actors and environments.[7]

Hysteresis in Developmental Psychology

To help specify how *mismatch* is the appropriate analytic location for hysteresis, it is useful first to discuss arguably its clearest analogue in the human sciences, what has been referred to as the "most famous experiment" in all of developmental psychology: Piaget's "A-not-B" experiment (see Piaget, 1954). The experiment involves an infant, a toy, two cups and an experimenter. To start, the experimenter puts the toy under one of the cups in full sight of the infant and allows the infant to "grab" the cup to get the toy. The experimenter does this several times in a row. Then the experimenter removes the toy from under the first cup and places it under the second cup, all in full view of the infant. When the infant is then allowed to grab the toy, she grabs at the first cup and "misses" the toy because it isn't there. The infant's belief that the toy is under the first cup persists despite the fact that she saw the experimenter hide the toy under the second cup.

For Piaget, this was proof for his (representationalist) theory about the infant's lack of a concept of "object permanence." For Thelen and Smith (2002), by contrast, it is evidence of the process of "dynamic cognition" in which the body acquires *belief* via activity in an environment. When that environment changes (e.g. when the toy is placed under the second cup instead of the first), the belief remains in place, meaning that the infant now *mismatches* with the environment. This mismatch is a direct analogue to hysteresis in electromagnetism first

identified by Ewing. In our terms, the A-not-B experiment reveals the most intuitive phenomenological description of hysteresis produced through practical belief (transposed from infants to adults or entire social groups): a temporally forward-feeding "grabbing" action that "misses" because of environmental change creating asynchronous mismatch.

Thus, we suggest that rather than being a residual nuisance gumming up GOFAT (cf. Elster, 1976), hysteresis can serve as a platform to highlight and develop an alternative model of *practical* belief-in-action. Not only that, hysteresis can also serve as a pivotal mechanism for the analysis of a dispositional reflexiveness present in actors, that takes a variety of important manifestations (related to morality, emotions, and moods). Fundamentally, the missing link that hysteresis provides is a "substantive" connection between the theory of action and temporality (see Bourdieu, 2000, p. 206-07).

Hysteresis in Classic Institutionalism

Temporality and action have been connected before in a similar way with the phenomena of "cultural lag," or what is observed when different "parts of culture [are] not changing at the same rate" (Ogburn, 1922, p. 200; see also Swidler, 1986, p. 281). In this rendering, one part of a culture (e.g. industrial technology) undergoes a period of rapid transformation, while other parts (e.g. legal system) experience a "lack of correlation" with the transformative part, giving rise to a host of "maladjustments." While agreeable in many respects to hysteresis, cultural lag theorists never quite explained what the "correlation" between different parts of a culture means, apart from the observation of "harmony" when all parts are synchronized (Ogburn, 1922, p. 266).

In one sense, the concept of hysteresis differs from the notion of cultural lag precisely because it does not rely on this kind of (Boasian) understanding of culture as the entire "social heritage." In fact, as an extension of practical belief, hysteresis does not need to reference any concept of analytically distinguishable "culture" in the first place.[8] Yet, in agreement with cultural lag theorists, hysteresis allows us to conceive of the relationship between practical belief and the environment as based on asynchronous dynamics and multiple temporalities. The key is to replace the concept of "correlation/harmony" and the overly normative idea of "maladjustment" with the allied notions of practical belief and temporally-structured institutional patterns whose harmony (in practice) is conducive to a kind of "phase alignment" between actors and institutions. Precisely stated, the coordination between practice and institution is due to an actor's ability to "activate" the historically-formed requirements of a social institution found in an action-situation at a given point in time (see Bourdieu, 1981, p. 305-06; Bourdieu, 2000, p. 210).

To the extent that practical belief matches the environment by successfully activating the history deposited in those institutions, the actor appears "ontologically

complicit" with her environment and her action might indeed fit the criteria defined by observers as "rational." However, when beliefs and environments mismatch, specifically because the environmental rate of change falls out of phase with the temporality of practice, hysteresis is set into relief. This results in sudden and often chronic forms of reflexiveness, leading to a diverse set of consequeces (Bourdieu, 2000, p. 160). In this respect, our focus aligns with Ogburn's (1922, p. 312-331) emphasis on the dispositional effects of cultural lag. However, conceiving of hysteresis as a mismatch caused by asynchronicity we are able to render these effects as a phenomenologically valid response to "grabbing and missing" in practice rather than a pathological instance of "lag" (with its normative subtext).

The Neglected Centrality of Hysteresis in Bourdieu

The centrality of hysteresis in Bourdieu's work is remarkable when considering that over nearly 50 years he continued to apply the same, basic conceptual structure to new areas as his research focus became increasingly diversified, and that his applications during this time remained strikingly consistent (Hardy, 2008). While sociologists have focused on the triad of habitus, capital, and field to summarize Bourdieu's contribution to the theory of action, the notion of hysteresis has received little to no sustained critical engagement.

Yet it is here, in the perseverance of the past in the present, that one can find the most natural application of Bourdieu's practice theory. By joining a theory of habituation, as the mechanism through which actors acquire objective properties of the environment in the form of practical belief, to a conceptualization of environmental dynamics (conceived from the point of view of a field theory), Bourdieu separates the *ontogenetic* temporality of the agent from the *phylogenetic* temporality of the field, creating a multidimensional framework to capture the time-structure of action (Bourdieu, 1996, p. 288, 313-314; see also Emirbayer & Mische, 1998; Martin, 2003; Lizardo, 2004). Habituation histories account for perseverative attempts to deploy practical belief that is the product of past conditionings even in the face of dynamic environmental change that alters the institutional patterns with which the action attempts to *match*.

Bourdieu's interest in the phenomenon of hysteresis dates to his early anthropological work and was first formulated in the context of his ethnology of colonial Algeria in the 1950s (Go, 2013). The overriding theme of that early research are the litany of dispositional consequences that follow when a "society … is compelled to define itself by reference to another" (Bourdieu, 1961, p. xiv; see also Bourdieu, 1972/1963; Bourdieu & Sayad, 2004). More precisely, when objective social circumstances change dramatically, as they do in a colonial situation, the practice of the colonized does not immediately come into phase with the accelerated temporality of the changing environmental parameters. Because of this mismatch, actors "grab and miss" as they struggle to act in rhythm with changing (forcibly imposed) institutional patterns. The temporality of practice remains

"double-sided" in this regard as it points to two chronological horizons (the precolonial past and the colonized present), both of which "coexist within" the hybrid temporality of the colonial subject as a *cultural sabir* (Bourdieu & Sayad, 2004, p. 464).

These two temporalities reveal the mark of hysteresis. Bourdieu offers the following analytic description of the fundamental *mismatch* evident in this situation, which he labels "the hysteresis effect":

> The presence of the past in this kind of false anticipation of the future performed by the habitus is, paradoxically, most clearly seen when the sense of the probable future is belied and when dispositions ill-adjusted to the objective changes because of a *hysteresis effect* ... are negatively sanctioned because the environment they encounter is too different from the one to which they are objectively adjusted (Bourdieu, 1990, p. 62; emphasis ours).

In this formulation, hysteresis manifests itself as a practical (not representational) relationship to changing institutional patterns in which the past makes itself present in the form of practical belief about the future. In this sense, belief cannot be separated from temporality. Much like the sensorimotor schemes preserved by infants in their repetitive grasp for the toy in the "A location," (Piaget, 1954) habituation attunes the actor to specific environmental parameters, constituting practical belief as a "state of the body" and preserved in flesh (Bourdieu, 1990, p. 68). However, the sequence can be hysteretical when that belief, well-adjusted to a prior situation, *misfires* in the present, as the complicity with environmental conditions necessary for effective practice is broken. Much as Don Quixote wrongly imagined "that knight errantry was compatible with all economic forms of society" (Marx, 1867/1976, p. 54), agents often follow novel or unexpected lines of action in his circumstance, violating regularities that (to observers) appear as normal conduct.

Hysteresis in *Homo Academicus*

Bourdieu often draws on the relationship between past, present and future to identify hysteresis as involving action that misfires because of what he refers to as a "break," "crisis," or "suspension" in the "order of succession" (Bourdieu, 1988, p. 182). The latter concept is particularly significant for understanding the relationship between action and temporality implied by the notion of hysteresis. Bourdieu draws from Leibniz's relational understanding of time in which time has no independent ("eternally flowing") structure outside of events, but is rather an order of succession between events; in other words, the temporal structure (e.g. that constitutes "time") refers to the relation between *successive positions* (Leibniz, 1973/1715-16, p. 211, 220). This notion of time is distinct from the "substantival" notion of time found in Newtonian physics, in which the temporal structure is not relational but "eternally flowing" (see Sklar, 1976, chap. 3)

In Bourdieu's application of Leibniz, hysteresis is often observable inside a *socially-instituted* "order of succession" between successive positions or roles (e.g. graduate student → assistant professor → associate professor → full professor). The rhythm of time found in action structured by an order of succession makes immanent "in biological bodies" the "social law" that defines the relationship between these positions, and this leads actors' "aspirations…to adjust themselves to [a] modal *trajectory*" (Bourdieu, 1988, p. 143). However, the laws of succession vanish during periods that leave the temporal relationships within the order unrealizable. This produces hysteresis when actors' "[perceptions] organized to make sense of [this] pre-structured causal world" no longer have "ontological complicity" with it, as the world and its temporal order quickly disappear in relation to the actor's alignment with them (see also Martin, 2003, p. 24). In this instance, practical belief adapted to a prior order of succession are what lead individuals habituated to its rhythm to "grab" for positions that are no longer there. A clear demonstration of the social consequences of this kind of dashed practical belief on a large scale is found in Bourdieu's (1988) account of the changing university system in France in the 1960s and how this provided the context for the eruptive events of May 1968 in Paris.

Here, the effect of rising demand for faculty positions following the "morphological transformation" (an asynchronous environmental dynamic) of rapid expansion in the population of students—approximately 60,000 before WWII, 175,000 in 1958, 500,000 in 1968 (Boudon, 1971, p. 140)—precipitated a "crisis of succession" among both students and professors. For professors and aspirants to the professoriate, the old conditions had restricted the display of intellectual precociousness, which meant that they were encouraged to delay completion of the thesis that would have made them a *docteur d'etat* and thus qualified to hold a faculty position. In other words, the "institutional necessities of [professorial] reproduction" became a requirement for completion of the thesis, and aspirants *prolonged* research and writing from their own sense of "legitimate ambition." This was facilitated by the relationship of apprenticeship that aspirants maintained with their *doktorvater* (doctoral advisor), which was replete with a sense of academic consecration *ex ante* and guarantees "to eventually have it all" as insurance against the dangers of lengthy training. These academics-in-training thus acted to maintain the rhythms of the "university life-cycle" as their practical belief matched the temporal position they occupied in that cycle (Bourdieu, 1988, p. 152-156).

However, as demand for faculty grew alongside a rapid increase in the number of students in the 1960s, the order of succession was disrupted as the slow production of professors could no longer satisfy the urgent need for them. The immediate effect was the "autonomization of the production of the thesis in relation to the temporal structures of the career" (Bourdieu, 1988, p. 156). New entrants to the field who had not been habituated to the established order of succession did not "adjust themselves to [its] modal *trajectory*" (Bourdieu, 1988, p. 143; emphasis original). Instead of acting according to "legitimate ambition," they *expeditiously*

completed the thesis from an instrumental sense of qualification, or simply in order to secure a faculty position. This behavior contrasted with those actors whose practical belief was attuned to older academic generations and habituated to its order of succession, who continued to *delay* the completion of the thesis, even though this did not match the new conditions structuring the academic labor market.

Much to their surprise, the thesis itself—once regarded as little more than a formality in the largely informal process of academic consecration—was wielded against them. Those who completed it quickly entered the labor market and took advantage of the temporary high demand for positions. For those who waited, the thesis, which they had never *believed* to be important for gaining an academic position, effectively disqualified them from succeeding to the only position their long preparation had made it conceivable for them to hold. Meanwhile, the newly admitted aspirants to the professoriate lacked the "qualifications and the dispositions previously supposed necessary for entrance to the professorial body" (Bourdieu, 1988, p. 156). Their high expectations thus clashed with the new reality, as the supply of faculty candidates (those simply seeking a "job") eventually outpaced the ability of the new university "life-cycle" to fulfill them. Not only that, the development of a comparatively open ("mass") higher education system meant that the prestige once enjoyed by those holding a faculty position had declined relative to the practical expectations of this newer generation. Both camps of the professoriate, old and new, thus experienced a "crisis of succession" as a product of the hysteresis effect.

As Bourdieu recognized, the '68 situation was unique not only because of hysteresis among the professoriate (and aspiring professoriate), but because French university students also experienced hysteretical mismatches with the new university environment. In any situation the "relative autonomy" of the educational system from the economy acts as a constant "source of effects of hysteresis" for students as they move between the two institutions that operate according to two different temporalities (Bourdieu & Boltanski, 1981, p. 144). In the years preceding May '68 in particular, diploma inflation, resulting again from the postwar expansion of French higher education, created a mass "disparity between the aspirations that the educational system [produced] and the opportunities it really [offered]" (Bourdieu, 1984, p. 143; see also Boudon, 1971, p. 141-142; Crozier, 1968).

While students still possessed a practical belief in the promises of upward mobility through education, they were effectively "fobbed off" with degrees whose distinct value (as a form of capital) had declined rapidly with the expansion of the university system. Their expectations corresponded to the pre-expansion university system before they entered it, and they didn't have time to adjust. The resulting mismatch ultimately lead to a *radical* form of reflexiveness (as detailed below) among university students, which was concentrated within a single academic *generation*. As Bourdieu puts it, the predominant attitude of French students during

this period was one of "total refusal … an anti-institutional cast of mind … [denunciating] the tacit assumptions of the social order, a practical suspension of doxic adherence to the prizes it offers and the values it professes, and a with-holding of the investments which are a necessary condition for its functioning" (1984, p. 144).[9]

Thus, "the hysteresis effect" characterized the French university system in the period leading up to the May '68 revolts in two ways: First, among professors who either entered the faculty with aspirations shaped by a pre-expansion professoriate, only to find themselves a "faculty proletariat," or who were lingering products of an older generation and could not adjust their practical belief (i.e. "embodied investment") quickly enough. Second, among students, particularly those from working and lower middle class backgrounds who (comparatively speaking) flooded into the universities and disproportionately pop-ulated the less distinguished (because newer) disciplines of sociology and psychol-ogy. For both extraneous faculty and disappointed students alike, reflexiveness in this situation meant suddenly "finding out they had been taken for a ride" by a seemingly impersonal and fair-minded system. It does not seem shocking, then, that both groups supplied the May '68 revolt with many of its most active and vocal members (Boudon, 1971; Bourdieu, 1988, p. 160-161; Crozier, 1968).[10] In our view, this analysis represents Bourdieu's best and most thorough application of the hysteresis effect.

MODALITIES OF HYSTERESIS: A TYPOLOGY OF REFLEXIVES

As the above discussion suggests, in Bourdieu's work, the notion of hysteresis is intimately connected to his treatment of reflexivity. Our proposal in this section is that hysteresis allows for a conception of the non-representationalist notion of reflexivity as *reflexiveness* that is rooted in dispositions and responsive to practical belief. From this perspective, reflexiveness may be thought of as thoroughly coterminous with (and in fact dependent on) the actor's effort to establish ontolog-ical complicity ("phase alignment") with the institutions that structure her envi-ronment of action (e.g. her situational field of practice).[11] Modalities of reflexiveness emerge from an expected asynchronicity between the (slower) temporality of practice and the (faster) temporality of environments. Like any phe-nomenology of "grabbing and missing," hysteresis will be accompanied by some form of reflexiveness. Yet the situated conditions under which grabbing and miss-ing occurs generates distinct reflexive stances with a range of dispositional effects.

In what follows, we develop a typology of reflexives based on three systematic dimensions of what we call *belief-environment coupling*: (1) the relative presence of strongly structured institutional patterns providing a relational structure to the passage of time (e.g. orders of succession); (2) the relative perseverance of old prac-tical belief within the temporality of practice after the recognition of mismatch; (3)

the inability to form new coherent belief in novel action patterns. To more clearly articulate the range of phenomena we discuss, Figure 1 maps the different forms of the hysteresis effect in a three-dimensional space. This yields four different types of reflexiveness that, we claim, are attributable to belief-environment mismatches: Radical, Traditional, Anomic, and Ironic.

Each of the coordinates in the figure refers to a continuum that indexes relative strength or weakness. The types of reflexiveness reflect combinations of the three dimensions of belief-environment coupling. *Traditional* reflexiveness combines strong presence of old belief, the absence of new belief, and an absent order of succession (e.g. an institutional structuring of time). *Radical* reflexiveness combines a weak perseverance of old belief with the presence of a previously strong order of succession. *Anomic* reflexiveness consists of a weak perseverance of old belief, weak order of succession, but a strong effect of the absence of belief. Finally, *Ironic* reflexiveness demonstrates a kind of "degree zero" effect of all three coordinates: old belief is not absent, but neither is it strong; the absence of belief has a partial effect; the order of succession is strong enough to be recognized, but only has a weak fulfillment.
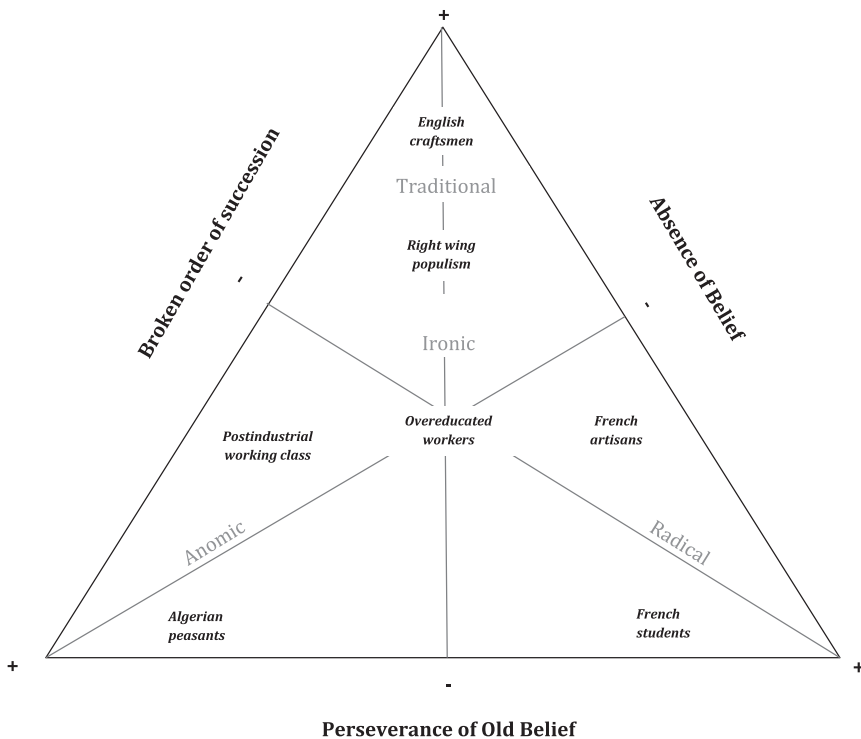

Figure 1. Dynamic configuration of types of reflexiveness in the hysteresis effect.

Radical Reflexives

While Bourdieu observed radical reflexiveness as characteristic of the "anti-institutional attitude" found among students and the professoriate during the May '68 protests, this form can also be drawn from similar instances of hysteresis. In this case, our archetypical example is the process of "proletarianization" among artisans in mid-19th century Toulouse, France, as documented by Julia Adams (1993). Here, the "truncation of the traditional trajectory from apprentice to journeyman to master" made certain groups of tradesmen more "*disposed* toward political radicalism" than others (p. 207). Increased use of manufacturing practices from the 1830s onward marked the capitalist reorganization of the relations of production. But the radical response to this transformation varied according to "truncated occupational trajectories," which was most pronounced among those working in artisan trades (like foundry workers, housepainters, and hatmakers). Workers in these trades tended to be the most radical, "the *temporal contours* of [their] militancy" revealing distinct "positional grievances" that explains their heightened disposition to seek fundamental political and social change (p. 218).

Adams's French artisans evince a structural variant of the type of reflexiveness also displayed by Bourdieu's French students and professors. In both instances, we see a relatively strong presence of a broken order of succession, though slightly weaker than in May '68 because occupational trajectories were more "truncated" than rapidly broken. The French artisans did not become traditional in an attempt to persevere old practical belief. Instead they attempted to embrace new conceptions ("socialism") for the organization of work. This in turn meant they were not subject to anomie, but instead tried to synchronize the new institutional patterns with newly embraced beliefs. Hence, these groups responded to their newfound reflexiveness with radicalism. The "rules" and "social laws" that had encouraged belief-based adoption of the occupational "modal trajectory" were made to appear *arbitrary* as a result of institutional change. This in turn revealed the order of succession and its distribution of winners and losers to be the result of *power*, a perception particularly strong among apprentices in the artisan trades (Adams, 1993, p. 218).

This is the identical sense in which "declassed" faculty and students suspended their belief in the "prizes and values" that the university system offered as a prelude to May '68 (Bourdieu, 1988, p. 144). Indeed, Bourdieu describes how the union of *demode* faculty members forced "the older order" to give "the consistency of a plan to what was only the more or less coherent effect of … spontaneous orchestration." However, in doing so, the established professors simply "reinforced the break [with] categories which is the source of the protest against which they intended to struggle" and thus unintentionally "contributed to destroying one of main pillars of the old order … *faith*" (Bourdieu, 1988, p. 151). Radicalism emerged in this instance when the reflexive

absence of "faith" was quickly filled by new beliefs that were *resonant* in relation to an embodied (e.g. non-propositional) sense of having been wronged. Radical reflexives became open to ideas signified as "revolutionary" to the extent that they called into question old institutional patterns that were built into the expectations of practical belief that did not materialize. For French artisans and the students and faculty in the lead-up to May '68, the everyday sphere of practice assumed a political significance that had remained latent to the extent that practical belief maintained a decidedly *institutional* "cast of mind" (e.g. "this is the way things are") by matching these actors with established institutional patterns, rendering them ontologically complicit.

Anomic Reflexives

Reflexiveness takes a different form in what we label *anomic* cases. The experience of the postindustrial working class in advanced Western economies provides one example where the hysteresis effect follows in the wake of the social transformations associated with deindustrialization. The reflexive implications of this have been masterfully documented in vivid phenomenological detail by Simon Charlesworth (2000). As we claim, this generates a type of anomic reflexiveness and a resultant inability to "believe" among members of the postindustrial working class that closely parallels a type observed by Bourdieu five decades earlier among Algerian peasants displaced by colonization.

   In this case of deindustrialization, the rapid disappearance of the industrial labor base removed the organizational source of "human association" and "social consecration," and the "sources of value to which [they] give rise." For the generation that first experienced this, their relationship to the world revealed a kind of "sociological absurdity" manifest in rising levels of "mental and physical ill-health." In this condition, everyday life is experienced as "fractured, no longer supported by a steady stream of habitual associations…[an] affective world [that] is pre-constituted as chaotic: absurd" (Charlesworth, 2000, p. 5-6). This results in a circumscribed relation to the world and the body registered by an elective affinity for the "sensual kinaesthetic pleasures…of eating, drinking, dancing, sex, going out, the search for pleasures in the rudiments of those given in the body" and the latent significances found in "broken syntax, the signs and truisms that are the impact marks of the world that they know…[the] growing inertia to experience itself" (Charlesworth, 2000, p. 28). Such an account echoes William Julius Wilson's (1996) portrayal of the social effects of industrial dispossession on inner-city neighborhoods in the US in the 1970s and 1980s. In each instance, deindustrialization produces a severely dissonant relation to the world, made evident through hysteresis, in which actors are drawn away from belief-based action altogether. Their practical "investments in the world" are therefore capable of possessing only an "indeterminate, ambiguous significance" (Charlesworth, 2000, p. 28).

As Bourdieu describes it (see above discussion), the condition among the Algerian peasantry resulting from colonization produced similar effects. In all these cases, the reflexiveness observed is of a different nature than that found among French students in 1968. There is neither an order of succession that is suddenly broken nor does old belief persevere following rapid institutional change. Instead, absent a coherent institutional pattern to match, practical belief first misfires and then decays, seemingly without adequate replacement. Subject to a chronic form of reflexiveness as a result, Bourdieu's Algerian peasants, Charlesworth's postindustrial working class, and Wilson's inner-city "underclass" are unable to maintain a "minimum hold on the present which is the precondition for a deliberate effort to take hold of the future" (Bourdieu, 1972, p. 69).

What we find here is a type of anomic reflexiveness in which the qualitative sense of *imperative* is absent, with nothing to structure either desire or dejection as the dispositional anticipation of future realities.[12] These consequences are the product of a post-hysteretical condition in which even pre-colonial or industrial-capitalist existence no longer serves as the basis of mismatch, as anomic reflexives lack *any* basis to match or mismatch with institutional patterns at all. As shown in Figure 1 anomic reflexives evince strong belief dissolution, while every other group retains belief (whether old or new) in some form in the condition of hysteresis. For both Algerian peasants and the postindustrial working class, the ultimate result is anomie, which in our terms may be defined as the *absence* of belief-ordering effects on action.

The suggestion here is that institutions, and their coupling with practical belief, are what make actions seem *non-arbitrary* (Martin, 2003, p. 41). Practical belief, enacted via the strong pull of institutions practically, grasps at something that extends beyond the immediate situation---in the sense that some action (not just any action) should happen next; other people (not just anyone) are implicated in what is presently happening. As such, belief enacted in a context devoid of institutional scaffolding cannot draw from the same non-arbitrariness (Lizardo & Strand 2010). The Algerian peasant does not, in this sense, *believe* himself to be "unemployed" because he cannot presume the structured conditions that make that condition a social relationship and therefore non-arbitrary (Bourdieu, 1972, p. 56-57). Instead, his anomic condition expresses the full immediacy of the present, as simply an effect without a cause. Nothing is outside the present or implicated in the next step in this scenario: what is happening is merely something that happens; anything else could happen next. This fully contingent state is created when belief finds no institutional support or "scaffold," which leaves action absent of all *sens de l'avenir* (Bourdieu, 1972, p. 63). Actors thus veer toward wild fantasizing (without planned execution) and engagement in the kind of "kinesthetic pleasures" that require no relationship to the future (see Charlesworth, 2000, p. 34-35).

Traditional Reflexives

Pre-reflexive "tradition" is often contrasted with reflexive modernity (see Giddens, 1991), but in our rendering, a traditional type of reflexiveness, rather than being oxymoronic, emerges as an expected regularity: it is the form of reflexiveness in which the preservation of previously developed practical belief becomes a *project*. In fact, in our account, the traditional reflexiveness observed in certain actors is one in which the perseverance of "old belief" is strongest. Take, for example, the technological displacement of 19th century English craftsmen, a case documented by Craig Calhoun (1982, 2012). As Calhoun notes, "craftsman and others with direct ties to traditional occupations and communities" (1982, p. 236) were the backbone of anti-capitalist resistance in early 19th century England. The nascent proletarian factory worker was (and remained) reformist by comparison, because their grievances reflected their adaptation to the institutional patterns of industrial capitalism, an adaptation made possible by the lack of previously established practical belief (see Biernacki, 1995).

Alternatively, "the very existence of the older, more traditional communities of artisans and other workers was threatened by capitalism," which prompted craftsmen like handloom weavers and wheelwrights to organize to maintain control over traditional craft industries, work patterns, and moral standards (e.g. the "moral economy") in the face of capitalistic institutional change (Calhoun, 1982, p. 231). The craftsmen were simultaneously reactionary and *radical* as they affirmed a "tradition" in the face of "progress," in doing so challenging a course of social change that enriched elites. Their efforts were successful to the extent that traditional practical belief could be matched to traditional institutional patterns within cohesive communities. This proved difficult to maintain past a single generation, however, and as the hysteretical condition faded with each passing year, so too faded the reflexiveness that was the source of the artisans' radicalism (see Calhoun, 2012, chap. 2).

There are striking parallels in this respect between these English craftsman and what has been more recently labelled as "right wing" or conservative social movements whose support tends to come from members of social groups threatened by "power devaluation" (see McVeigh, 1999). Our contention is that these parallels make substantive sense only because these groups are all subject to a form of hysteresis that generates traditional reflexiveness among actors. In all cases, a traditionalist type of radicalism originates in periods of precipitous social change and consists of "people [suddenly finding] themselves in deep and important senses *out of place*, unable to produce small, adaptive improvisations, and therefore pushed to more radical measures" (Calhoun, 2012, p. 304). Traditionalist radicalism does not need to elaborate an "ideology." It is not prompted by a representational belief system but rather by the affirmation of practical belief in "common cultural" practices and social relations; namely, a

"commitment to ways of life fundamentally threatened by social change" (Calhoun, 2012, p. 9).

Traditional reflexiveness thus involves the preservation of practical belief that organized existence *pre-reflexively* before the onslaught of fundamental institutional change that altered the "ontologically complicit" relation between actors and their environment. In contrast to radical reflexiveness, there is no broken order of succession. While there are superficial parallels between radical reflexives and the "radical" action of traditional reflexives, the sense of injustice and orientation towards the world differs. In contrast to radicals, traditionalists focus on how changing institutional patterns violate standards produced by previous applications of practical belief. Unlike anomic reflexives, belief is not absent in this condition; in fact, belief becomes *strongest* due to the joining of surviving practical belief to representational beliefs as "invented traditions" (see Hobsbawm & Ranger, 1983). Thus, traditionalist reflexives seek to maintain, under increasingly "unrealistic" conditions, forms of practice that, despite their lack of synchronicity with external institutional patterns, can be made to match with an increasingly threatened band of embodied beliefs.

Ironic Reflexives

The final type of reflexiveness we label as ironic. In this case, the situation of "overeducated" workers under conditions of credential inflation in Western democracies provide an ideal-typical example (Vaisey, 2007; see also Bourdieu, 1984, p. 139). The hysteretical mismatch evident here is between the high expectations workers draw from the educational system with the reality they confront on the labor market. These workers retain practical belief to the extent that, rather than becoming radical or anomic, their reflexiveness makes them dispositionally *ironic* about the "rules of the game," though they continue to go through the motions. In this respect, they are subject to a kind of protracted "cognitive dissonance" (or practical disassociation) related to their inability to "achieve consonance between their [expected and actual] social statuses" (Vaisey, 2007, p. 837). However, having "grabbed for" a position, they did attain something. Thus, irony and cynicism characterizes ironic reflexives for whom the hysteresis effect leaves in a situation noticeably (though not drastically) different from what practical belief led them to anticipate.

Ironic reflexiveness can thus be considered as a kind of attenuated, ludic version of the other three forms of reflexiveness; a "degree zero" (see Figure 1) that consists of the middling composition of different parts of the others. Ironic reflexiveness does involve a break in the order of succession, but it is not as severe as its radical counterpart. Ironic reflexives do successfully "grab" forthcoming positions, although they are not the ones promised. While old (i.e. outdated because of institutional change) belief perseveres in this case, the key characteristic of ironic reflexives is a kind of self-aware *distancing* from that belief. This makes ironic

reflexives diametrically opposed to traditional reflexives in their response to hysteresis. If ironic reflexives disinvest in increasingly dislocated belief, traditional reflexives double down on them.

There are surface similarities between overeducated workers as ironic reflexives and French students in May '68 as radical reflexives; but where the latter exhibited a revolutionary attempt to establish alternative practices, the former exhibit job dissatisfaction and ironic loyalty to the "hard work ideology." Practical belief leads them to attach a "value" to credentials that, as a result of educational expansion and "mass schooling," they can no longer objectively bear but whose relation to institutional patterns (as scaffolds) is still ontologically complicit.[13] This results in a mild anti-institutionalism, a disillusioned questioning of certitudes, and a cynical "truth-telling" made evident through a kind of fatalistic awareness of institutional patterns that are limiting and constraining.

Ironic reflexiveness is attendant upon those who *do* progress through an order of succession, like the one created by higher education in Western democracies, only to find a significant anticlimax, like "skills mismatch" (Vaisey, 2007), awaiting them at the end of the tunnel. Practical belief acquired through participation in the educational institution produces hysteresis as an incomplete, discontinuous relation to asynchronic institutional patterns created by the labor market. This is less akin to a "break" and more akin to a chronic ill-fit (see Bourdieu and Boltanski, 1981, p. 143-44). Ironic reflexiveness involves some level of recognition of the arbitrariness of the social order without necessitating the complete absence of practical belief (as with anomic reflexives), nor the strong presence of belief (like traditionalist or radical reflexives). Instead, ironic reflexiveness is characterized dispositionally by a disillusionment compelled by the recognition that practical belief must necessarily fail in relation to institutional patterns. Ultimately, ironic reflexives occupy a kind of purgatory in hysteresis: the mismatch, though present here in comparatively mild form perpetuates indefinitely.

RETHINKING BELIEF IN ACTION

In each of the above cases we have characterized the hysteresis effect that occurs during periods of institutional change and results from the mismatch that arises between practical belief and the institutional patterns constituting the environment. This provides the best setting in which to observe the hysteresis effect. However, it is important to emphasize that the phenomenon of hysteresis is often a *regular* feature of action and not limited to critical instances of mismatch like the ones highlighted above. This becomes particularly clear when emphasizing the inherently temporal dimension of action. We'll conclude the paper by highlighting these points.

The Regularity of Mismatch

Practical belief is an embodied trait that guides action forward in accordance with the temporality of established institutional patterns. Contrary to GOFAT, this means that belief is not decoupled from the world but rather the product of conditioning by it, retained in the body. Hence, the phenomenon of mismatch is not due to representations that fail to truthfully match institutional patterns (Elster, 1983). Mismatch is instead due to a critical break or chronic ill-fit between two temporal periods: a *conditioning* period in which practical belief is acquired and a *deployment* period in which practical belief becomes the engaged basis of action. In a basic sense, action becomes a form of "regulated improvisation" from this perspective, as actors use conditionings derived from the past to *activate* "the sense [presently] objectified in institutions" (Bourdieu, 1990, p. 57).

As a form of (non-representational) *intentionality* that "anchors" actors in institutionally-structured environments, practical belief supplies the "protention/retention" sets that lend action its phenomenological character (Husserl, 1893-1917/1991, pp. 40-41; Merleau-Ponty, 1945/2002, p. 483-84).[14] In any given situation, agents are aware of what has happened (retention), what is happening (primal awareness) and what *should* happen next (protention) (Emirbayer & Mische, 1998; Tavory & Eliasoph, 2013). These aspects of the time-consciousness of action are mutually interlocked, meaning that the intentional awareness/anticipation of what should happen arises naturally from what has happened. In other words, agents are always *pre-occupied* by the world (*ex ante*) before they actually occupy it. Their pre-occupation is a function of how they have *been* occupied by the world (*ex post*) up to that point (Bourdieu, 2000, p. 240).

While practical belief is acquired through habituation and direct conditioning by past environments, it *indirectly* relates actors to present environments by relating them to a *space of possibilities*. In other words, practical belief works *immanently* to pre-dispose actors toward only certain kinds of action. When aligned with possibilities that are actually available, practical belief puts actors into a relationship of *ontological complicity* with institutional patterns. In this sense, "complicit" action is tantamount to an actor spontaneously moving her body in rhythmic fashion and finding that this synchronizes exactly with the dance that has been going on around her. Action resembles "an unwilled, effortless flow" because practical belief, working immanently, is successfully scaffolded by institutions. This is what Bourdieu describes as the "meeting of two histories" (2000, p. 150-55), which suggests, importantly, that practical belief still mediates an actor's relation to the environment, but through an anticipated space of possibilities not through representations (see also Dreyfus & Taylor, 2015). Hysteresis refers to asynchronicity in that relation and a lack of institutional scaffolding, as the space of possibilities *mismatches* the actor with available possibilities. The sequence here is characterized by *friction* instead of "flow." Reflexiveness instead of complicity emerges as the dispositional trait associated with this tangled, asynchronic relationship.

Understood in this temporalized sense, then, hysteresis is not a pathological anomaly, or even a "subversion of rationality" (Elster, 1983), but a *regular occurrence*. While hysteresis sometimes registers as critical break or chronic ill-fit, the regularity of hysteresis arises simply from the temporal structure of action in which practical belief appears as traces of exposure to past situations. Institutional differentiation increases the regularity of hysteresis as it increases the need for inter-situational transfers of practical belief (see Bourdieu & Boltanski, 1981). The isomorphic effect of a field reduces hysteresis as it brings differentiated institutional patterns into alignment, increasing the repetition of situations and diminishing the need for actors to mediate inter-situational relationships using practical belief (Martin, 2003).

While the regularity of hysteresis is often observed as the individual-level effect of mismatches arising from the temporal structure of action, the claim here is that the four types of reflexiveness defined above are *not* strictly group-level phenomenon nor is the regularity of hysteresis strictly individual. Hysteresis is instead a phenomenon whose scope conditions are found on "multiple levels" (Meyer & Jepperson, 2011). The regularity of hysteresis tends to result in a gradual weakening of dispositions due to a "dislocation" or "pluralization" effect that replaces inter-situational transfers with *intra-situational* adoptions of practical belief (see Martin, 2003; Lahire, 2011). Reflexiveness, meanwhile, arises from the relative strength of dispositions and characterizes more severe forms of hysteresis, distributed here according to the traditional, anomic, radical, or ironic types.

Between Representations and Dispositions

Our intention in developing the notion of practical belief is not to completely eliminate the representationalist understanding of the notion inherited from GOFAT. Rather, our main focus is to sketch the *limits* of representationalism, identifying substantive problems that it is not equipped to handle and new areas of research that it cannot address. In this respect, the notion of practical belief supplements representationalism, it doesn't "eliminate" it (contra Churchland, 1981). While it adds important explanatory dimensions to the theory of action, it also helps bring the latter into alignment with "embodied and embedded" (or "E"-type; Clark, 1997) strands of cognitive neuroscience by breaking with the elements of the GOFAT tradition. But if we are resistant, in this sense, to eliminativism in all its forms (whether motivated representationalism or by materialism) this begs an important question: What precisely is the relationship between representational belief and practical belief or, more broadly, between representations and dispositions?

We propose the following to conclude the paper: content-bearing belief relies on explicit, inference supporting, representations of the world similar to the kind described by Weber as "world images." These representations are scaffolded and supported by a variety of external "artifacts" exclusive to written and

spoken language (Clark, 2006; Ong, 1982/2013). In this sense, there are two primary analytic locations for representational belief: first, the slow, deliberate, and cognitively costly space populated by intellectual entrepreneurs and symbol-production professionals. Here, a state of belief is a function of (usually written) language used to produce theoretical representations of the world. Second, the effects of representational belief appear in situations of "retooling" following a critical mismatch between practical belief and institutional patterns. In this state of reflexiveness, representationally induced belief can provide the basis for schematic transfers into new practical belief (see Lizardo & Strand, 2010).

Practical belief, as we have argued, is a type of embodied intentionality that pre-reflexively and pre-conceptually anchors actors in environments. By deriving an ontologically complicit relationship with the affordances of institutional patterns, it makes possible the immanently constructed lines of action that are predictable and "regular" because they are supported by institutional scaffolds (Martin, 2003). In this sense, we contend that, contrary to GOFAT assumptions, *most* action falls within the ambit of practical belief. Given its cognitive costs and deliberative temporality, effortful, representational belief is the exception that requires special explanation (Silver, 2011).

In his discussion of the "causality of the probable," Bourdieu (1974/2012) provides a good example of the difference between representational and practical belief, and the reason why the former is the exception not the rule when it comes to explaining belief-in-action. To do this Bourdieu draws from Marx's distinction between the demand for goods and the *effective* demand for goods: While the former expresses demand in the abstract, the latter expresses demand as bound to the possession of money as the "material substance of the circulation of commodities" (Marx, 1867/1976, p. 247). The latter is a reliable indicator for consumer patterns and schemes of accumulation while the former is not. By the same token, practical belief differs from representational belief as it is bound to objective probabilities that apply to institutional patterns constituting a social environment (especially its temporality). In Bourdieu's (1974/2014, p. 237) terms, the "*effective* aspirations" that arise from practical belief are therefore "capable of really orienting practice, because [they are] endowed with a reasonable probability of being followed by effect." They are different, in this sense, from "*dreamt* aspirations, 'without effect, without being real, without object'" that lack any boundedness to the objective probabilities of institutional patterns.[15]

What we suggest here is that practical belief orients action in an effective way because it is formed in relation to objective probabilities. It is therefore drawn upon for action in new environments even when the results appear self-defeating, as observed in the overwhelming tendency for any actor placed in relation to institutional patterns to adjust her "subjective aspirations to the objective chances" made available to her. Our claim is that this phenomena cannot be explained as the effect of representational beliefs that either heighten or diminish

aspirations (e.g. "ain't no makin' it"). Sociologists instead need the concept of practical belief in order to account for how the exposure to "objective conditions" makes action "pre-adapted to objective demands" despite actors' explicit aspirations or ambitions (Bourdieu, 1990, p. 63). This has been referred to poetically as *amor fati* (love of fate; Nietzsche, 1911, p. 54), although here the mechanism is not willful or existentialist "choice." Rather, the embodied conservation of practical belief acts as an accumulated (dispositional) weight on aspirations and motivations. The unwilled effect of this has the tendency to hold *despite* any representational belief brought to bear on action.

Representational beliefs do not have the same kind of "ontological complicity" with the environment, because, as emphasized above, they are (*ipso facto*) uncoupled from it. This means that the actor's degree of confidence in representational beliefs is not tempered by a relationship to objective probabilities. Hence, just as demand pales in comparison to *effective* demand, so practical belief is a better predictor of action than representational belief, as revealed by what is perhaps the tell-tale sign of the (lack of) effect of representational belief-in-action: "saying one thing and doing another" (see Swidler, 1986, p. 275).

Contrary to GOFAT, we've claimed in this article that representational beliefs rarely function as direct guides for action. While the implication here is that representations and dispositions work at cross-purposes, we wish to emphasize a constructive relationship between them. Following Lizardo (2016) this relationship is a type of *evocation model*. The symbols and explicit inference-supporting statements that constitute representational beliefs afford access to the "pre-existing potential" and accumulated "mental experience" that finds its durable form in dispositions generated by practical belief and its relationship to institutionally-structured environments. Thus, there is a *resonance* relation between representations and dispositions. The former are meaningful as they are evocative of an otherwise inarticulate *sens* acquired through direct, experiential engagement with the world.

Michael Strand
Department of Sociology
Brandeis University
201 Pearlman Hall
Waltham, MA 02453
mstrand@brandeis.edu

Omar Lizardo
Department of Sociology
University of Notre Dame
810 Flanner Hall
Notre Dame, IN 46556
olizardo@nd.edu

ENDNOTES

[1] A previous version of this paper was presented at the 2011 meetings of the American Sociological Association in Las Vegas, Nevada where we benefitted from helpful comments by George Steinmetz. We would also like to thank Doug Porpora and two anonymous JTSB readers whose comments and criticisms allowed us to sharpen the argument in the paper.

[2] The acronymic provenance of GOFAT is what Haugeland (1985, p. 112) labelled GOFAI or "Good Old-Fashioned Artificial Intelligence" which, similarly, rested on the representational mediation of an environment as a necessary prelude to action. As early researchers (like Marvin Minsky) quickly discovered, if AI depended on "internal symbol manipulation" and "reasonable derivation" to represent the environment before acting in it, action became impossible for AI (often spectacularly).

[3] For instance, the creation of the state as the embodiment of rational purpose in fact ends up creating a "rationalized" societal realm in which institutionalized forms of rational and means-ends calculation are predominant (Meyer, Boli, Thomas, & Ramirez, 1997).

[4] In this respect, sociological phenomenology reverses the "direction of fit" proper to the notion of belief analytical philosophy which as a "world to mind" direction of fit, to one in which beliefs may have a "mind to world" direction.

[5] This was, of course, a primary input into the first spate of the "rationality wars" opened up by Winch's (1964) radical reading of this constructivist implication of the theory belief implied by cultural anthropology. This was a debate that while putatively focused on rationality and the possibility (or lack thereof) of cross-cultural understanding, centered around the notion of belief (e.g. in "magic").

[6] For example, it is unnecessary in this sense to posit a representational "ideology" that creates "false consciousness" of the world when "symbolic power works…through the control of other people's bodies and belief that is given by the collectively recognized capacity to act in various ways on deep-rooted linguistic and muscular patterns of behavior" (Bourdieu, 1990, p. 69).

[7] Economists have applied the concept of hysteresis to understand anomalous patterns in labor markets and consumer behavior (Gocke, 2002). Yet their application of the concept is often skewed as they force hysteresis through the straightjacket of representationalism, meaning that beliefs are hysteretical because they refer to "consciously contrived memories" of past situations (Elster, 1976).

[8] Lizardo (2011) discusses the departure that Bourdieu's understanding of culture makes from conventional anthropological understandings of the concept, but which remain consistent with more contemporary "post-cultural" anthropology (see Bloch, 2012). In this sense, Bourdieu's conception is also *inconsistent* with predominant sociological understandings of culture, which remain modelled on a representationalist understanding of belief and an anthropological theory of culture (see Biernacki, 2000).

[9] Evidence comes from the abuses catalogued in that famous document of the period: *On the Poverty of Student Life: Considered in its Economic, Political, Psychological, Sexual, and particularly Intellectual Aspects, and a Modest Proposal for its Remedy.* Written by the situationist Mustapha Khuyati in 1966, but credited to the *Association Federative Generalre des Etudiants des Strasbourg*--the student group responsible for initiating the revolt in the university-- 300,000 copies of the pamphlet appeared by 1969 and its catchphrases echoed in radical circles throughout the country and around the world (most famously, "live without dead time … indulge in untrammeled desire" (Marcus, 1989, p. 386-87).

[10] Smelser (2010, p. 59-61) points to similar preconditions--rapid expansion of the student population and the growing presence on campus of "non-regular faculty"--for the emergence of student radicalism (the Free Speech Movement in particular) at UC-Berkeley in the 1960s.

[11] Margaret Archer (2007, 2012) has developed an extensive, influential account of reflexivity from within a "relational-realist" framework conceptualizing reflexivity as fundamental human capacity that is historically, socially and contextually variable in its manifestation. Her account dovetails with ours but departs from substantially different premises, especially with regard to the role of self-consciousness in routine activity and the underlying conceptualization of social ontology. However, we share a similar emphasis on the importance of the analytic and empirical distinction between the multiple temporalities of practice and "structure" (for us conceptualized as environments) and their propensity to "fall out of phase" at certain junctures. As such, we see our formulation as largely complementary to her effort.

[12] As Bourdieu discovered, the displaced Algerian peasant would rapidly transition between an attitude that "anything is possible" and, as a full complement to this, "nothing matters."

[13] In the case of the May '68 students Bourdieu referred to this as "allodoxia" (1984:, p. 139).

[14] As opposed to the line of discrete, deliberative acts presupposed by GOFAT.

[15] There are striking parallels between probability in the formation of practical belief and broad applications of Bayesian reasoning (see Oaksford and Chater, 2001). We thank the reviewer for drawing our attention to this.

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