**There is no *Ground* and no *Theory* in Grounded Theory!**

**Can we create both with Dialectic Ontology?**

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Glaser and Strauss’s grounded theory (GT) was a new theory of conceptual sociology. GT emerged from Glaser’s empirical sociology and Strauss’s pragmatic symbolic interactionism. The result of GT was a practical method to build theory from qualitative data. Unfortunately, the practicality of GT hid its ontology, epistemology, and philosophical foundations. Three waves, or historical periods, of scientific philosophy have attempted to reveal GT’s foundations. These waves, inductivism, positivism, and social constructivism, left GT with no ground and no theory. This paper pinpoints where GT went off track by examining the foundations of GT. We use Hegel’s philosophy to develop a foundation of dialectic ontology for a fourth wave of GT. The intent of this fourth wave of GT is to get it back on track. Fourth wave GT recognizes the multiplicity of intra-active self-organizing ontologies necessary to defining ground and theory. Fourth wave GT embraces Peirce, Heidegger, Bhaskar, and Žižek’s ontologies, resisting the grounding mistakes of logical positivism and social constructivism, contributing to the question of what theory can be, creating both ground and theory through a new foundation for GT.

Recently, while giving Academy presentations, the lead author found himself saying there is no *ground* and no *theory* in grounded theory (GT). This was a bold revelation, a revelation leading to this article. This article intends to review the history of GT, understand why there is no ground or theory in GT, and create ground and theory through a new foundation for GT. We hope that by understanding the mistakes of the past we can overcome them in the future.

When we review management articles and dissertations, article authors will often declare they are using GT. As Flick (2009: 425) writes, “Grounded theory has been one of the most influential schools in qualitative research since the 1960s and it is still guiding a considerable amount of the qualitative research that is done in different fields.” Pushkala Prasad (2005) points out that GT is one of the most common synonyms for qualitative research. This probably means that Robert Gephart (2004) is right; too many less-than-rigorous qualitative methods are being lumped together and called GT. When reviewing, we now ask authors: “What kind of GT are you using?” To use GT properly, authors and reviewers need to understand the waves, or historical periods, of GT and its foundations (c.f. Eisenhardt & Graebner, 2007; Brown and Eisenhardt, 1997; Pratt, 2009). Our purpose in this essay is to sort out the three waves of GT, explain why they have left GT without ground or theory, and to create both ground and theory for GT.

There is disagreement over the status of GT as purely inductive. Induction differs from deduction in that it does not aim to uncover necessary causes, but rather to update probability belief states (Wright, 1941; Vickers, 2006). Necessary causes are those relationships where in one thing necessarily causes another. Critiques of inductive reasoning mention its limited generalizability, perspective, and its unsuitability for revealing necessary causes (Empiricus, 1933). One form of induction makes nonlinear assumptions about temporality, thus defying the idea of necessary causation. Another form is weak-induction, which is what most raised in a social-psychological or econometric tradition learn about. Weak-induction leads to tentative causal hypothesis, hypothesis based on relationships lacking validation, casting doubt on the validity of inductive findings (Hume, 1748). We submit that the weak-induction perspective is a form of positivism which assumes that “reality is ‘out there” and that a “context free truth about reality” is accessible by “following a research protocol and getting responses relevant to it, minimizing researcher influence and other sources of bias” (Alveson, 2003:15). Suddaby (2006) argues that since its inception in 1967 (Glaser & Strauss), GT has taken a turn toward positivism. Despite inductive roots, it is clear that not all waves of GT are inductive. Glaser (2016a) claims GT is often confused with other qualitative data analysis methodologies. His historical analysis of GT argues that it stays with an inductive approach, thus contradicting the work of his co- GT-discoverer Strauss (& Corbin 1990, 1997, 1998), who moved away from GT as fully inductive. Historical periods in GT help explain this disagreement.

We assert that there are three periods of GT. Because these periods overlap and never fully end, we refer to them as waves of GT. We propose a fourth wave of GT based on dialectic ontology, a process-based understanding of ways of being in the world. Our main contribution is to develop a critique of GT’s ground and theory in the mode of Alvesson and Sköldberg (1994). We do this by taking seriously the positivist criteria Popper used for scientific theory: (1) correspondence, (2) understanding, and (3) pragmatic usefulness (Åge, 2011: 1602). Correspondence, is the “idea of objective and absolute truth,” a correspondence to the facts that “transcend empirical instances which gave rise to them” (Popper, 1963: 223-224, 355, as cited in Åge, 2011: 1602-3). Understanding, is explanation by coming up with hypotheses and a process of empirical falsification or refutation (Popper, 1972; Åge, 2010). Pragmatic usefulness is the ability to predict outcomes (Popper, 1972). Each implies GT is without ground. Popper’s positivistic critique of inductive inference is that logically induction must lead to falsifiable inferences. Positivist theory replaces inductiveism’s belief states with absolute grounds built on falsifiable correspondence to facts (Popper, 1963: 223; Åge, 2011). GT is not falsifiable and thus is without positivist ground. Dialectical ontologies offer alternative grounds.

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Insert Figure 1 About Here

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The problem of induction occurs because positivism demands falsifiability, deductive theory, and experimentally observable premises. Dialectical ontology presents the possibility of getting around Popper’s problem of induction. The dialectical ontologies represented in Figure 1 are how we can create ground and theory for GT. We develop dialectical ontology as a potential fourth-wave of GT after reviewing the problems of induction.

The structure of the essay is as follows. The essay begins with a review of three waves of GT, including some theoretical mistakes and inductive problems each relied on. After that, we discuss the meaning of ground and theory in dialectic ontology, as summarized in Figure 1 (see Christensen, 2007 for further discussion). We conclude with a regular theme in AMR: how to theorize, in particular how to theorize using dialectic ontology in order to address GT’s lack of ground and theory. Can there be what Gephart (1988) calls a next-step – A next-wave of GT?

**WAVE ZERO OF GROUNDED THEORY**

Grounded theory was created as a practical method to build substantive theory from the analysis of qualitative data. Originally GT had no explicit ontology, answer to the question of the meaning of being, epistemology, answer to the question of what we can know, or philosophical foundation, answers to a series of axiomatic questions necessary to a self-consistent worldview. Although his publishing history shows a constant devotion to methodological questions (Glaser, 2016a), “Glaser’s grounded theorist stance was not ‘visible’ until he had encountered Strauss’s symbolic interactionism” (Martin & Gynnild, 2011:217). Therefore, it is helpful to look at the origins of Barney Glaser and Anselm Strauss’s perspectives to understand where GT came from and how it evolved and diverged into different streams.

Glaser was trained by Paul Lazarsfled, a founder of empirical sociology; Strauss was a student of Herbert Blumer, a founder of pragmatic symbolic interactionism. Coming from institutional traditions in empirical sociology and thick ethnography, the non-descriptive nature of GT seems to be a striking departure. Both scholars seemed intent not on closing “the devastating gap between speculative theory and descriptive empiricism” (Strauss, 1970), but rather, to chart a new course toward thick conceptual sociological theory development. In Glaser’s early years (1964, 1965, 1969), we see a reaction against the dominant practice of speculative theory verification, a fatal flaw of social sciences at the time. Glaser’s constant comparative process of emergent theory development acknowledged Popper’s (1935/2002, p. 317) realization that scientific theories cannot be verified, that “the best we can say of a hypothesis is that up to now it has been able to show its worth, and that it has been more successful than other hypotheses.” Absolute truth of a theory gives way to informative value relative to the data in which it is grounded because, unless we carefully define the parameters of a closed system, “the probability of any (non-tautological) universal law will be zero” (Popper, 1935/2002, p. 375). In this regard, Glaser and Popper are on the same page in the critique of logical induction. Grounded theories are not discoveries of ultimate truth. Rather, they provide a substantive theoretical platform for new theories and/or theory supplementations to emerge through empiricism, leading to testable hypotheses that can be verified with quantitative or qualitative data (Strauss, 1970).

Before meeting Herbert Blumer and learning of his sociological pragmatism, Strauss was already familiar with Dewey’s philosophy (Strauss, 1970), which proposed that knowledge from the study of humans and their active interactions with their environments can only arise from a naturalistic approach (Dewey, 1999). This inclination may have been due to Strauss’ undergraduate studies in biology, but it was a good fit with Blumer’s symbolic interactionism and his critical perspective of research in the social sciences. Glaser and Strauss (1967, p. 1) made it clear that GT is the “discovery of theory from data,” not theory verification. Their position was that theory generation should only come from the data during the process of research. Qualitative methods best support the discovery of the structural conditions, consequences, deviances, norms, processes, patterns, and systems that are crucial elements to theory generation. Quantitative methods have thus become the most feasible for theory verification (Glaser & Strauss, 1967).

On the surface, analytic and sensitizing seem to be a direct application of Blumer’s sensitizing concept, which was meant to provide a focal point for discovering intersubjective meaning. However, Glaser’s belief in generalizability from substantive theory rests on a positivist assumption of objective human social reality. The analytic concrete entity represents social reality to Glaser, while to Strauss, the emergence of sensitizing concepts is merely a starting point for further research to flesh out thick substantive theory. As a method of qualitative data analysis, Glaser’s GT has a natural endpoint (Glaser, 1992, 2002, 2005, 2016a). Glaser and Strauss ultimately had different worldviews that emerge in the waves of GT that followed its discovery; however, both used a non-critical positivist philosophy of science.

**HOW GROUNDED THEORY WENT OFF TRACK**

Sutton and Staw (1995) attempt to answer the question, what constitutes a theory? They argue theory is not data, LISRL is not theory, references and lists of hypotheses are not theory, and give this notice: “If manuscripts contain no theory, their value is suspect” (p. 371). With regard to GT, in their section “data is not a theory,” Sutton & Staw (1995:374-5) declare that just as in quantitative studies, “qualitative data must develop causal arguments to explain *why* persistent findings have been observed if they wish to write papers that contain theory (Glaser and Strauss, 1967)”. It is not at all clear that GT is a theory that develops causal arguments in its first three waves. Undaunted by this standard for theorizing, Brown and Eisenhardt (1997: 2) publish a GT case study in ASQ, and get around such gate keeping by saying their work not intended to be a full-fledged “extant theory.” Wilson (2002) does a book review of Karen Locke’s (2001) GT book, concluding that GT has become synonymous with qualitative studies in management research, shoring up what seems to be a move from grounded theory as method to grounded theory as findings. Fortunately, Locke does not agree as she divides GT in modernist (positivist) and interpretivist (poststructuralist) approaches, moving GT into its third wave.

**Waves**

*First Wave GT 1965 – 1989 (Inductive)*

First Wave GT attempts to be inductive and generate theory out of practice. “If first wave grounded theory methodology is not a post-positivist pragmatic unity of theory and practice we must ask what it is” (Boje, 2014: 263). Glaser and Strauss (1967: pp. 2-3) say “the discovery of theory from data systematically obtained from social research” is an idea they picked up from Merton, for whom the meaning of ground is non-theoretical social practice, out of which theory can be generated. We call it a qualitative positivism, in that it jumps over the social scientific problem of interpretation of data but still relies on a reality that is “out there” (Alveson, 2003:15).

Lars-Johan Åge (2011) concludes Glaserian GT (Glaser, 1965, 1978, 2003) has been characterized as both positivist sociology and as hermeneutic constant comparison. Both forms require open coding that uses theoretical memos, notes made on how quotes may relate to theory, as a method to generate theory inductively. Others (Charmaz, 2006; Brown, 1995; Goulding, 1998) critique GT as an interpretive inductive methodology, because being interpretive and inductive is not positivistic enough, a criticism that ignores GTs intention and origin.

Glaser (2016a) reveals that GT began as a ‘fledgling methodology’ to analyze the dying in hospital (Glaser & Strauss, 1965a). In 1965, the method was called Awareness Theory not GT. The Awareness Theory article left unanswered the question of how to generate concepts. This led to the 1965 article published in Social Problems (Glaser & Strauss, 1965b). “It dealt with the comparing of data from different respondents to find interchangeable indicators which showed a grounded pattern. This became a grounded theory procedure to generate enough concepts for a theory” (Glaser, 2016a). In First Wave GT this was called an indicative approach, one where the researcher stays “100% open to the emergent” (Glaser, 2016a).

Requests for how to do GT led them to write their (Glaser & Strauss, 1967) book. The focus at this point was on how to verify theory through GT. “This was the beginning of codifying GT as a methodology” and “The total product was an emergent grounded theory of Awareness Contexts” (Glaser, 2016a). Glaser and Strauss (1971) wrote a formal theory of theoretical codes, leading what began as inductive Awareness into a deductive approach and a second wave.

*Second Wave GT 1990-2009 (Reciprocal theory/practice)*

In 1994, Strauss and Corbin (1994: 21) gave GT a hermeneutic facelift, where theory and praxis build in a reciprocal relationship with one another. First wave GT continues, as GT makes its turns to more and more positivism. Glaser (1992) is still opposed to reviewing the theory literature when conducting GT research. He is concerned about contamination, constraint, or inhibitions engaging theory would cast upon the analysis of codes. Theory should be, for him, emergent from the data itself. This ‘reciprocal theory/practice’ approach was short lived.

Is GT positivist or post-positivist? Suddaby (2006: 239) argues that since its inception in 1967 (Glaser & Strauss), GT in “the indeterminate, messy nature of saturation invites a fundamentalist drift toward positivism.” By contrast, Strauss and Corbin (1990) claim GT is a post-positivist pragmatism rooted variously in Dewey, Mead, and Peirce. This leaves us to wonder what their understanding of Peirce is and how aware Straus and Corbin are of Peirce’s shift from pragmatism to pragmaticism. Pragmaticism being a way to construct theory from stories told by participants (Age, 2011: 1601), in a way Locke (2001) calls post-positivism. Annells (1996) says GT results in idealized types dualized into positivist and post-positivist. Guba and Lincoln (1994) declare GT to be a constructivist, post-positivist, belief system. Post-positivism defines science as simply that which is self-consistent (Feyerabend, 1975/2002:234)

*Third Wave GT 2010- 2014*

Third Wave GT (e.g. Clarke, 2005) seeks to move GT around the turn of social constructivism while the first two waves continue to unfurl. Mills et al. (2008: 27-8) prefer a social constructivist turn in GT, and accuse Strauss and Corbin (1990, 1998) of never addressing which paradigm (i.e. positivism, interpretivism, hermeneutics, etc.) underpins their thought. Annells (1996) noticed early on how GT’s postmodern turn had begun to break with symbolic interactionism and other sociological theories. What is GTs theory of truth and meaning?

Not all grounded theories in this historical phase are committed to the postmodern turn. Charmaz (2014) is paradoxically developing an objectivist approach to GT. Charmaz (2003: 94) GT method is “doing open coding line by line,” because it "also helps you to refrain from imputing your motives, fears, or unresolved personal issues to your respondents and to your collected data" (Flick, 2009: 316). Bryant and Charmaz (2007a: 611) focus on theoretical saturation, until gathering more data about a theory category yields no new insights. First and second waves of GT, make room for third wave versions that make postmodern moves away from earlier waves of GT. Goudling (2002: 11) contends many positivists perceive qualitative research to still be exploratory, and filled with unscientific conjecture, and of questionable value.

The third wave incorporates a ritual of attending to process that does not address how in American pragmatism theory and action are inseparable (Boje, 2014). Corbin and Strauss use a deductive inquiry method that moves away from the pragmatism of practice Glaser (2016a, b) continues to advocate. Experience is to be located in a “larger conditional frame or context in which it is embedded” and “the process or the ongoing and changing forms of action/interaction/emotions that are taken in responses to events and to problems that arise to inhibit action/interaction” (Strauss & Corbin, 2008: p. 16).

As first wave GT was taking off, a wave of social constructivist method (Berger & Luckmann, 1966) was also coming on the scene. Berger and Luckmann’s social constructivism was rooted, however, in a Marxist historical materialist dialectic framework (see Berger & Luckmann, 1966: footnote 59). GT stayed clear of first wave Marxist aligned social constructivist discourse (Laclau and Mouffe, 1985). Rather it was the second wave of social constructivist method, in Weick (1995) and Gergen (1985, 1999), which became the home paradigm for second and third wave GT. Thus, social constructivist method merged with GT and together they have avoided ontology, unlike Peirce’s (1878) pragmaticism, Heidegger’s (1962) post-structuralism, Bhaskar’s Critical Realism (1993), or Žižek’s (2012) take on Hegel’s (1807/1977) dialectics.

**Questions for Grounded Theory**

Is GT just an inductive method, in search of both ground and theory? Or, is GT a way of knowing that does not touch ground, but is inferred by the researcher? Has GT become not just post-positivism, but logical positivism, and moved totally away from its inductive, qualitative, foundations, as established by Glaser and Strauss (1965a), before the label GT was invented?

*What is called ground?* We find the word *grounded* to be unduly concrete, since theory has no earthy soil, no meaning existentially. Perhaps *grounded* in GT does not refer to a factual or ontologic ground, a solid base, but rather to some transcendent thing or process that is neither an ontic factual, a physical character of an event or thing, nor to an ontology, of which there are many. GT validates theory by induction, or by a misunderstood notion of induction, observers learning from their own and others’ experiences. For Popper this is inductive verification by experience, and does not prove a theory will not be falsified in the future: “no matter how many instances of white swans we may have observed, this does not justify the conclusion that all swans are white” since finding just one black swan will disprove the all swans are white theory (Popper, 1959/2002: 4). For Popper, “the question whether inductive inferences are justified, or under what conditions, is known as *the problem of induction” (Popper, 1935/2002, pg.4)*. A collection of remarkable statements, based on experiences, cannot be validated as the universal truth but can provide some degree of probability of the truth. Popper argued that no scientific statements are universally true or false. Yet, they only attain “continuous degrees of probability whose unattainable upper and lower limits are truth and falsity” (Popper, 1935/2002, pg6). The logic of science developed by Popper is opposed to inductive logic and was described by him as the theory of “deductive method of testing” or empirical testing to advance hypotheses.

*What is called theory?* Karl Popper’s (1935/2002) seminal book (he claims) rang the death knell for inductive positivism, and its focus on verification by observations, rather than falsifiability. For Popper, only falsification can demarcate science from non-science. Popper’s critique of induction, argues induction is inappropriate to science, since pure observation, as we see in GT, does not develop scientific ideas because what it develops is not inherently falsifiable.

In sum, from Popper’s critique of the ‘problem of induction,’ there is no unique inductive methodology of coding procedures, such as in GT, that can distinguish science from non-science. No amount of inductive observation is sufficient to declare GT a theory, or to falsify what its proponents declare to be theory, of inductive practices for theory building (Meredith, 2012). Popper agues only deductive logic and deductive testing of theories can be part of scientific methods. Therefore, as Popper uses falsifiability to demarcate science from non-science and since inductively derived GT often cannot be verified or falsified: it must often not be science.

**Why are the first three waves limited?**

Gephart (2004) observes that while most authors claim to have used GT, it is less common to actually see detailed applications of it in our field. Eisenhardt & Graebner (2007: 29), for example, point out the challenges of GT to reviewers and readers: “Coping with the trade-off between rich story and well-grounded theory is easier to do in a multicase book or a single-case paper. But in journal articles, multicase researchers face a particularly difficult trade-off between theory and empirical richness. It can be especially challenging to satisfy readers who expect the extensive narratives of single-case research. They ask, where’s the rich story?”

Prasad (2005: 289, 291) helps launch our current discussion points. Reviewers of management and organization journals, in this still comparatively young field, oftentimes, do not have access to experts in multiple kinds of qualitative research traditions. For quality control, those reviewers serve as gatekeepers which is “particularly the case with the North American segment of management and organization studies, which has, until relatively recently been dominated by industrial and organizational psychology and economics.” (p. 289). In those disciplines, the preference is for positivistic methods of survey-based research and some experimental lab studies with hypothesis testing.

GT has some aspects of correspondence, for example, data fits the substantive area in which it will be used (Glaser & Strauss, 1967: 237). Glaser (1978) has aspects of Popper’s conceptions for science (correspondence, understanding, & usefulness), as Age (2011: 1603-1604) puts it “to *explain, predict,* and *interpret* what is happening in a specific area of interest” (citing Glaser, 1978). The second dimension of understanding, can be found in Glaserian GT in a dialogical process, but in a vocabulary not found in the hermeneutic tradition. For example Glaser and Strauss (1967), say GT must be “Understandable *by laymen concerned with this area”* [emphasis in original] (p.237, as cited in Åge: 2011: 1065). Superficially, GT appears to be a pragmatic meld of Strauss and Glaser’s individual origins and the influences of their mentors. However, Glaser seems to believe in an objective reality revealed in latent patterns through data, a stance that could be described as critical phenomenological positivism. This contrasts with Strauss’ roots in pragmatic intersubjective interactionism and the view that the same events or concepts have different meanings to different people. This objective/intersubjective fault line is evident in the description of substantive theory as analytic or “sufficiently generalized to designate the properties of concrete entities – not the entities themselves” and sensitizing, indicating that “they yield a meaningful picture with apt illustrations that enable [subjects] to grasp the reference in terms of their own experiences” (Glaser & Strauss, 2015).

The intent here is not to advance the pragmatic usefulness of scientific theory through positivistic Glaserian GT. We interpret pragmatic usefulness of theory to be relevant to solutions to empirical and conceptual problems (Laudan, 1977), as Age (2011: 1605) puts it there are three such problems “(1) *unsolved problems* (which are empirical problems that have not yet been solved, by any theory); (2) *solved problems* (which have been solved by an existing theory); and (3) *anomalous problems* (which are not solved by a particular theory, but which are solved by a competing theory).” Glaserian GT (1998) claims it can make useful contributions to conceptual problems, first by providing concepts appropriate to real activities, and second by synthesizing and integrating existing concepts into more general categories (Åge, 2011: 1607).

We disagree with Åge’s (2011: 1608-1609) conclusion that Glaserian GT meets all three dimensions of correspondence, understanding, and usefulness of a positivist theory. In particular as Age (2011: 1064) notes “Glaser (1978) insists that grounded theory should also be ‘modifiable’ (p. 5) during and after the data-collection process when he observes that ‘…nothing is sacred if the analyst is dedicated to giving priority attention to data’ (p. 5).” This is not consistent with Popper’s (1963, 1973) positivistic science condition of falsification. GT can move beyond the inductive/deductive schism by becoming an approach to pragmatism. Pragmatically, GT as a principle of inquiry, should be grounded in Hagel’s dialectical process philosophy and composed of the dialectical triad of sensemaking, social-irritability, and reproduction (Boje, 2014).

**HOW TO GET GROUNDED THEORY BACK ON TRACK**

Hegel’s dialectical process philosophy has served as an inspirational source for many philosophers and theoretical thinkers, including Heidegger, Brier/Peirce, Bhaskar, and Žižek. In Hegel’s phenomenology of Spirit he outlines a phenomenological approach to dialectics, summarized by Boje (2014) as composed of a dialectical triad of sensemaking, social-irritability, and reproduction. Made up by many sub dialectical processes, this triad involves the dialectical interplay between the ontology of becoming and epistemological processes of knowing. Hegel’s work on dialectics contributes by throwing more light on the problem of induction in GT as well as on what may serve as ground in theory building.

**Dialectical Ontology**

In Hegel’s work, dialectic operates ontologically, as the transformational driving force of that which exists and its existential movement towards becoming: “Wherever there is movement, wherever there is life, wherever anything is carried into effect in the actual world, there Dialectic is at work” (Hegel 2001: Note to § 81). According to Hegel (2001: § 86-87), becoming is the dialectical unity of being (that which is) and nothing (that which is not). The nothing is the negating contradiction, the dialectic of something missing and absent in that which is. This something is thus only what it is in its relation to another something (Hegel 2001: § 92-93). Both the positive-of-being and its negation take part in fixing and determining the content and form of being as part of its becoming. As such, “its beginning is itself a case of Becoming” (2001: § 88). Subsequently, Hegel speaks of becoming as ‘identity-in-difference’, as “the unity has to be conceived **in** the diversity” (Hegel 2001: § 88). Hegel maintains that everything finite is subject to change; never at rest but constantly challenged and in process. Its negation constitutes its inherent potential and its change is the manifestation of this implicit potential. From the Hegelian perspective, dialectic constitutes thus the transformational force of (natural, social, cultural, and organizational) life and movement.

From a quantum dialectical process philosophy, Earth constitutes a single yet dialectical unity; the body of Earth (Hegel 1807/1977: § 296) which is composed by the life of the inorganic and organic nature, including vegetable and animal nature and hence human beings (Hegel 1970b: § 206, 266-268). The body of Earth and its richness of life unfold in an endless manifold of variations through its dialectical processes as part of its elevation to new stages. Through the continued elevation and transformation of Life, the old world then transforms into a new world that is distinguished from the former by its physical, organic, and anthropological character (Hegel 1970b: § 263). On Earth, Spirit is conceived as mere nature and part of the sensible yet unconscious body. Developing and actualizing in the material world, Spirit creates a world as its being. In its manifestation, Spirit sets forth Nature as its world (Hegel 1970a: § 384), thereby creating a second nature, the cultural anthropological world. The organization is thus conceived as an organic unity; its content and form, identity and boundaries constantly being challenged through a quantum dialectical process of sensemaking, social-irritability, and reproduction.

**Sensemaking**

Dialectics constitutes not only the nature of ontological organic life but also composes “the soul of all knowledge which is truly scientific” (Hegel 2001: Note to § 81). As such, Hegel defines the purpose of dialectic to be concerned with the study of things in their own being and movement. The dialectics of the epistemological process unfolds within the triadic relationships between sensemaking, social-irritability, and reproduction (Boje 2016) or what Hegel refers to as the dialectical movement between sensibility, irritability, and reproduction (Hegel 1970: § 276).

Sensemaking involves the sensuous and perceiving body ontologically positioned within its surroundings in a fluid dialectic of the here and now, past and future (Hegel 1807/1977: §31, Boje 2016). In this first moment of the triad, the body is fluidly related to its externality in a concrete moment of living. The exterior and the interior of the body are united in a dialectical unity. As such, our body is an ontological part of the world before conceptual consciousness. Within this unity, we dwell in the familiar conceived of as the not cognitively understood and as a taken for granted knowing (Hegel 1807/1977: §31) of our positioning within the externality. In this dialectical moment, being is a self-contained being-in-itself without awareness of being-for-other or being-for-self.

Epistemologically, sensing and perceiving, forms the basis of consciousness and knowing (Hegel 1807/1977: § 132) and constitutes the primordial step of the epistemological process of knowing (Boje 2016). According to Hegel, this primordial embodied engagement occurs through 1) sensing (hearing, seeing, smelling, feeling, and tasting) and 2) observing and measuring (the ontic dialectic of quality-quantity-measure) as well as 3) perceiving and experiencing (Hegel 2001: § 85). All together, they constitute what Hegel calls the sense-certainty of the sensuous consciousness. Furthermore, the primary basis of sensemaking gives rise to instincts and to intuition as immediate responses to things occurring in the surroundings. Defined as immediate knowledge by Hegel and furthermore as a knowing that is not yet in the notion (Hegel 1807/1977: § 6), intuition is felt instead of comprehended and therefore not yet conceptualized or articulated.

**Irritability**

The familiar state of sensibility is challenged and negated when something new emerges as an ontological occurring phenomenon. The emerging something new is indicated through the negation, made sense of by the sensuous and intuiting body, and immediately responded to by way of instincts and irritability. As the second moment of the epistemological process, irritability arises from within the dialectical exterior and interior of the body (Hegel 1970b: § 273-280). Irritability awakens our consciousness as we become aware of the negated, broken unity and begins the process of self-relating, self-separation, self-differentiation and self-movement (Hegel 2001: § 169, Hegel 1807/1977). As part of this self-relating process the self-contained being-in-itself becomes aware of the social encounter with otherness and of being-for-others and of being-for-self. A sense of self and self-consciousness thus emerges. The epistemological process of knowing develops into the social dialectical process of social irritability. Social irritability refers to the dialectical elastic bouncing back and forth between different consciousness and conceptions mutually recognizing each other. Thereby social irritability provides the basis of epistemological intersubjective conception of the indicated something new, creating a potential for reproduction.

**Reproduction**

The third moment – reproduction – is concerned with the return to the unity of itself at a higher level (Hegel 1970: § 276). Due to the dialectical transformation the return implies a transformational movement of transgressing beyond itself. Reproduction should not be conceived of as the synthesis, as the thesis-antithesis-synthesis model was mistakenly attributed to Hegel by Fichte through Shelling reducing it to the narrative of an action-reaction-synthesis model (Schacht, 1975: p. 33-34). Such a reductionist-synthesis narrative obliterates important aspects of the Hegelian dialectical process that are relevant to management and organization studies (Saylors, Boje, & Mueller, 2014). For Hegel the world is full of contradictions, as is the world of organizations. “The impasse is here irreducible, there is no mediation between the opposites, no higher synthesis” (Žižek, 2012: 267). For Žižek, Hegel tells a very different story than Fichte, via dialectical development processes without synthesis. In Hegel’s dialectic, there are two opposing forces. The negating force constitutes the middle-ground in transforming from being to becoming. In transforming the organic unity into its higher elevation, the negating middle-ground vanishes, absorbed and integrated in the becoming of the organic unity. At the same time as the negation mediates the transforming of the unity, the unity is preserving the useful parts of its being.

The epistemological process of knowing and developing conceptual consciousness is thus efficacious to the ontological becoming of the world and vice versa. From an organizational perspective, the ontological and epistemological dialectic of becoming is thus Hegel’s story of how the organic unity “never existed in the first place, of how its status is by definition that of a retroactive fantasy—the Fall itself generates the mirage of what it is the Fall from” (Žižek, 2012: p. 952). As part of transgressing, spirit gains “the reflexive shift of perspective which recognizes the success in failure itself” (Žižek, 2012: p. 520). The reflexive shift that Žižek brings to the fore is the main objective in Hegel’s reflexive phenomenology of inquiry grounded in real life (Hegel 1807/1977: § 25, 12). According to Hegel, Spirit as Reason remains in what he calls a restless search of finding (Hegel 1807/1977: § 239) and knowing.

**The Problem of Induction in the Three Wave of GT**

Grounding understanding in real life turns our attention towards the application of Hegel to the inductive problem running through the three waves of GT. Positivistic inductive methods are rooted in a static entity – an ontic-ontology in search of the law of things and of finite as a whole, thereby deadening the unfolding living life into regularities and patterns. That is why many of the positivistic theoretical frameworks developed many years ago no longer apply in today’s business world. Conceiving things as ontic ‘being’ (without their inherent becoming) and hence studying them in quality-quantity-measure implies a focus on their immediate and primarily external characteristics and as such the knowing of being only constitutes its relative identity (Hegel 2001: § 110). In a process theory, these immediate characteristics will soon show themselves to be “not fixed but transient...” (Hegel 2001: § 111). As Hegel states “The sensuous consciousness is in ordinary estimation the most concrete and thus also the richest; but that is true only as regards materials, whereas, in reference to the thought it contains, it is really the poorest and most abstract” (Hegel 2001: § 85). Turning to knowing ‘being in its becoming’, we therefore need the dialectical grounding in sensemaking (including intuitive reason), social irritability (including intersubjective processes), and reproduction (including the transgression of conceptual understanding and the actualization of becoming). The rigorous coding procedure of GT falls short in this respect by turning the interpretation of data into the technicality of coding.

There are multiple types of induction inference (von Wright, 1941/1965) giving rise to the question if some of these types can resolve GT’s problem of induction. In figure 2, we list 6 types of inductive inferences which may prove helpful to the extent they are open for the processual ontology and futural becoming of the world as put forward by Hegel. The answer we provide to the question is therefore that some of them are the root of GT’s induction problem, and others could be quite helpful in making GT a better and more grounded form of theory.

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Insert Figure 2 About Here

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Despite speaking in favor of grounding understanding in real life, Hegel is not entirely inductive either. This shines through in his dialectic of the Notion and of appearance and adds to a Hegelian critic of the GT positivistic inductive inference and coding process. In Hegel’s use, the notion is not only a matter of universal abstracts but also of the concreteness of life, being “the principle of all life” (Hegel 2001: § 160).

Even though the Notion contains all earlier categories of thoughts merged in it and hence constitutes a form, it is an infinite and creative form (Hegel 2001: § 160). The world is thus to be conceived of as a universal fluid medium (Hegel 1977: § 168, 171). Through this living fluid medium, the immediate object appears as Life, a living thing (Hegel 1807/1977: § 168) instead of a being that is fit into the lifeless ready-made conception. Appearance and revelation occurs through the process of bringing “fixed thoughts into a fluid state” (Hegel 1807/1977: § 33) questioning whether anything is true regard concepts and their interconnection. As such, we notice the beginning of a dialectical interplay between ontology and epistemology that Peirce further develops in his own dialectical abductive approach. A Hegelian approach to grounding is thus found in his reflexive phenomenology questioning the dialectical relationship between the ontological ground and epistemological conceptual knowing, forming a basis for a 4th wave of GT

**A 4TH WAVE OF GROUNDED THEORY**

The ground in GT should not refer to static or fixed anchor, rather it should refer to the resemblance of the fluid reality. We shall explore in part one, the ways Peirce, Heidegger, Bhaskar, and Žižek could constitute fourth waves of GT by resisting the temptation to reduce ontology to the epistemologies of logical positivism and social constructivism. As in all his writing, Popper critiques the problem of induction, avoiding falsifiability (& testability) of the theory and thereby rejects Hegel’s dialectical approach. Søren Brier (2001, 2014) Martin Heidegger (1963), Roy Bhaskar (1993), and Slavoj Žižek (2014), by contrast, are inspired by Hegel’s dialectic yet critical and therefore choose to retheorize dialectics each in their own ontological version. Thereby they each contribute to the further development of the fourth wave processual and dialectic ontological GT.

**Brier’s Peircean GT**

Søren Brier (2014) counters positivist GT arguing that Popper lacked an understanding of living systems. He argues Popper’s problems with induction have not taken complex adaptive living systems into account, systems that are the mainstay of organization studies. To overcome this limitation Brier (2006, 2008) introduces cybersemiotics.Søren Brier’s (2001, 2014) *cybersemiotics* combines Peirce’s semiotics with Luhmann’s autopoietic triad of interpenetrating psychological, biological, and socio-communicative closed systems.

The connection between Peirce and Luhmann, for Brier, is the sign (and language games) rooted interpretatively in autopoietic, self-organizing, systems (Brier, 2001: 110). Both Peirce and Luhmann are resituating Hegelian dialectics into an even more evolutionary process, emphasizing the open organic living system. For Peirce there is a sign connection between mind and body, including biosemoitc signs that constitutes purposefulness & goal-directed process of living systems. Peircean triadic semiotics adds openness to Luhmann’s autopoietic systems. For example, Peircean Firstness of Tychism, there is an element of chance in evolutionary processes. In Secondness of Agapism there is evolutionary love. In Thirdness of synechism there is a continuity of mind with matter, in the flesh and blood conditions of socio-linguistic embodied consciousness (Rennie & Fergus, 2006). In Peirce’s abduction, the researcher deduces consequences of theoretical premises of hypotheses, and then applies sampling and tests to evaluate the inductively derived theory that began in adductive intelligent speculation, flashes of insight, or intuition. As such, Peirce’s adductive seems to carry traits from Hegelian intuitive sensemaking and reflexive reasoning of signs. For Peirce, science is a self-correcting process, and an evolving ontology, not just a way of knowing. Both Peirce and Popper therefore had notions of falsifiability, and did not rely exclusively on induction, as is the case in GT.

A Peircean GT can answer the question, how is non-positivist GT knowledge possible? We start with Peircean, because for some time GT has been attempting to incorporate Peircean abduction semiotics, as a way to move beyond logical positivism epistemology of GT (Dubois & Gadde, 2002; Haig, 1995; Reichertz, 2007; Rennie, 2000; Richardson & Kramer, 2006; Suddaby, 2006; Timmermans & Tafory, 2012). Strauss (1987) and Haig (1995) comments did mention Peircean abduction, as part of induction, deduction, and verification. Our claim is that the ways abduction has been attempted in GT does not live up to its potential for a non-positivist GT.

Charles Sanders Peirce (1898/1992) claims that inductive, deductive, and abductive compose a triadic three-logic relationship. A complete review of Peirce’s semiotics is beyond the scope of this review. Instead, we will concentrate on Søren Brier’s (2008, 2013) many contributions to bio-semiotic ontology. Cybersemiotics integrates third person knowledge from exact sciences with first person life instances knowledge, and second person intersubjective knowledge of communicative interactions on which socio-cultural aspects of reality are based (Brier, 2013: 220). And of the many Peircean triads, we will focus here only on the inductive-deductive-abductive triad. These are also known as Firstness, such as inductive first-person human experiential epistemology, Secondness, the confrontation with resistance be it physical, biological, psychological or social & Thirdness. Thirdness dialectically mediates the otherwise dualistic Firstness and Secondness. Bio-semiotics, which takes Peircean semiotics from the level of human culture to the ground of all living systems, breaks the dualism of epistemology by a arguing that there are signs everywhere, even in biological systems, resulting in eco-semiotics.

Peircean ‘pragmatic realism’ offers GT a naturalistic sign approach, where grounded becomes more than a set of GT ritualized positivistic coding and recoding procedures. Rather natural signs are observable in activities of organization and surrounding environments int heir inseparable signification and their own subjectivities. Brier (2014: 14) explains Peirce’s challenge to empiricists come from direct experience, through the use of abduction turned into signification on the biological, the psychological as well as the sociological levels. At the same time all being is equally real and based in an ontological emptiness “where everything is connected to everything else in a hyper-complexity”. This means Peirce’s fallibility is part of a real that is “wholly open to our pragmatic observation and thinking” (IBID., p. 14). Peircean intra-semiotic ontology affords GT a way out of the inductive-deductive duality of its scientific endeavors.

**Heideggerian GT**

Like Charles Sanders Peirce, Martin Heidegger (1963) wanted to go beyond the limitations of Hegelian dialectics. 3rd wave GT claims Heideggerian ontologies one aspect of triangulation (Annels, 2006) via its interest in phenomenology. Rennie (2000) says Heidegger’s prioritizing of ontology and epistemology is a way to reconcile realism and relativism in GT. However, Laverty’s (2003: 22) rightly points out that GT still uses hermeneutics and ontology interchangeably without questioning differences between them.

While both phenomenology and ontology are concerned with the life world, Heidegger’s *Dasein* was a human situated ontology. This was a break from Husserl’s mode of sensing, recalling or conscious perceiving experiences of the life world (see Laverty, 2003: 24). By contrast, Heidegger included antecedent pre-understanding (fore-having -structuring, conceptions, -sight) as something people do not bracket or put aside or step out of. The antecedent pre-understanding seems to be a Heideggerian way of further developing the Hegelian living-fluid conceptual medium and intuitive knowing of the futural becoming of being (Boje & Saylors, 2014). The Heideggerian view was further developed in Gadamer’s hermeneutics (1975). From a Heideggerian ontological perspective, the positivistic qualitative framework of GT is unacceptable. GT still views ‘reality’ as something out there to be made sense of by reflective notes in triangulation of data (Flick, 2004). That is also the case in the hermeneutic view of the “merging of horizons” after a dialectic and reflected interchange of views.

Kirby’s (2007: 51) critique of GT in prison research proceeds by accepting Heideggerian contextually developed experience in specific environment and context. Scerri’s (2015: 121-2) critique of GT addresses the coding analysis fragments participant stories, taking away from the flow of the story and taking interpretation away from the context in which stories were told. However, her dissertation has but one citation of Heidegger and does not unpack his ontology as separate from phenomenology. Another example is Solli’s (2014: 34) critique of constructivist GT, in agreement with Charmaz, 2003: 269) is that the methodology of coding with its “high conceptual level was in danger of fracturing the data so that the experience became distanced to the experiencing subject”. Both do not explore Heidegger beyond passing reference. The question remains, what would a Heideggerian GT look like?

Heidegger’s (1962: §2) project was done, in part, to get beyond limitations he saw in Hegel (1807/1977) dialectics, as well as what was valuable in Hegel had been “trivialized.” Heidegger (1963) refers to Hegel 145 times, and at the end of the text attempts to re-theorize Hegelian dialectics. Heidegger (1962: §405), brings into question spirit as actualizing in history:

“In Hegel's Interpretation of time both possibilities are brought to the point where, in a certain manner, they cancel each other out. Hegel tries to define the connection between 'time' and 'spirit' in such a manner as to make intelligible why the spirit, as history, 'falls into time'. We seem to be in accord with Hegel in the results of the Interpretation we have given for Dasein's temporality and for the way world-time belongs to it.”

While a full review is beyond our scope, we can develop some ways Heideggerian ontology could be helpful in a fourth wave GT. For example, GT, by most critiques, in its ontic coding of social facts, becomes ahistorical, which for Heidegger is methodologically inadequate:

“'But, on the other hand, in view of the inward historicality of self-consciousness, a systematic that is divorced from History is methodologically inadequate. Just as physiology cannot be studied in abstraction from physics, neither can philosophy from historicality – especially if it is a critical philosophy. Behavior and historicality are like breathing and atmospheric pressure; and - this may sound rather paradoxical - it seems to me methodologically like a residue from metaphysics not to historicize one's philosophizing’” (Heidegger, 1962: §402)

If a separation by GT between its method, practices, and its historical presentation, is investigated then perhaps GT can pay more attention to historical inquiry that does not turn positivistic (see Heidegger, 1962: § 403). Heideggerian ontological inquiry offers GT a way to get at participants in organizations ways of Being-in-the-world. It is also an Ontical inquiry concerned with ‘facts’ about entities. For Heidegger (1962) epistemology is schemata of the sense-maker. In this sense, Heidegger seems to be inspired by the Hegelian ontico-ontological inquiry and epistemological sensemaking schemata. In modern organization studies, Weick (1995) is the author of ‘sensemaking,’ retrospective (backward looking) narratives, as ways of knowing – c.f. Pentland’s (1999) narativist ontology. Ontic has the limitation of the positivity of logical positivism, in its epistemology. Heidegger makes Ontic-Epistemologic (dialectic) connections worked out from vantage point of *Dasein* (Being-there or Being-here) and Being-now in the meaning of Being-in-the-world, in space and in time. What Heidegger (§428) might consider ‘ground’ in GT seems to be in line with Hegel’s account for time and spirit: “The grounds which Hegel has explicitly provided for the connection between time and spirit are well suited to elucidate indirectly the foregoing Interpretation of Dasein as temporality and our exhibition of temporality as the source of world-Time.”

**Bhaskarian GT**

Like Peirce and Heidegger, Roy Bhaskar (1993) intends to rescue Hegelian dialectics from epistemic, oncologic, and ontic fallacies. His intent is to overcome shortcoming in Marx’s historical materialism. Bhaskar (1993: 317), like Popper, evokes the problem of induction. Bhaskar critiques Hegelian dialectics for relying on two fallacies. First in an epistemic-fallacy, the subject-object ontological status is reduced to an epistemology, that is to say being and knowledge are fallaciously unified. Second in an ontological-fallacy, Hegelian dialectics are monovalent, they rely on a single sense of the meaning of being.

Bhaskar’s dialectical critical realism (DCR) keeps epistemology separate from ontology, allowing a stratification of ontologies, maintaining heterogeneity, retaining contention, denying unity (1993: 111). Bhaskar criticizes “making inferences from past to future from closed system logic” (1993: 232) in ways that deprive an “openness of the future” (367). We read Bhaskar as criticizing GT, finding it ontologically ungrounded, dislocating structure and agency dialectics, overcoming the problem of induction fallaciously, reducing ontology to epistemology. For Bhaskar (1993: 318) the problem of induction has “real consequences including the unfalsifiability of inductive inferences” (p 43) because “dialectic is at the heart of every learning process.” We therefore read a Bhaskarian critique of GT’s as relying on fallacious reasoning.

A Bhaskarian critique reveals two epistemic fallacies and one ontic fallacy. Epistemic Fallacy 1: In DCR, retrospective sensemaking of experience reduces ontology to a cognitive competence, often simply the five senses. Epistemic Fallacy 2: In DCR, social norms among stakeholders are taken out of ontological-ground and reduced to social constructivism. Ontic Fallacy: in DCR, the connection between that which is observed and that which is observable is even more impenetrable than in Peirce or Heidegger. All three fallacies are based on positivistic approaches. DCR could, however, develop a critical extension of GT.

Bhaskar (1978, 1979, 1986, 1989, 1993) asserts in DCR: there is a reality totally independent of human representations. Empirical and Actual domains are transitive-epistemological, and Real domain is intransitive-ontological. For Bhaskar (1993: 90), a Hegelian uncritical idealism creates a limitation that must be overcome. Bhaskar even accused Hegel, in his dialectic epistemology, of being more positivistic than positivism, resulting in negativity being “lost in a pacific sea of positivity” (1993:90) or positivistic empiricism. Overcoming positivity, and its denial of the critical (Alveson, 2003), is central to GT achieving its potential fourth wave. Here we develop the possibilities of a Bhaskarian fourth wave GT.

Despite his criticism of Hegel, Bhaskar picks up the idea of a dialectical process theory of identity-in-difference and ontological transformative being - nothing (the absent) - becoming dialectics. To some extent, the Hegelian dialectics thus shines through in the kinds of dialectics Bhaskar (1993) could bring to GT: 1) A dialectic of the otherness and difference that builds the stratified levels of Marxist ideological super structures, Alterity; 2) A dialectic of absence, revealing how what is dismissed or ignored matters when things change, transition, or transform, Nothingness; 3) A dialectic of social isolation, a dialectic which can reveal our social unification as being dismissed or ignored, giving voice to local cultures on a global scale, revealing the marginalization of the peoples on the periphery by those in the center, integrating fragmented agency through unity, Alienation; and 4) A group of dialectics that bring agency back to the now-totalized periphery, that increase mutual recognition and respect for identity differences, that seek unity through diversity and recentralize transformative praxis, regressing against the status quo to create a stalemate against opressors. In these ways the DCR offers steps critical GT can use.

In DCR, there are two steps GT can use to illuminate experiences of participants in organizations: 1) revealing a sensemaking of how things-in-themselves have an existence separate from human interpretation; 2) revealing experiences of what seems to be the real world but which fail to sense things directly. The physical thing that reflects light to form an image is filled with meaning by human observation. Bhaskar’s DCR, however, can offer fourth wave possibilities to GT; however, it fails to address the ontological status of agency.

**Žižekian GT**

Žižek (2010) makes the bold claim that Hegel (1807/1977) is making a comeback in our time because his dialectic presages the new ontology wrought by quantum mechanics. Up to this point we have looked at Peircean pragmatic realism, Heideggerian ontologic realism, and Bhaskar’s DCR. Žižek (2010) incorporates Barad’s (2007) *‘agential realism*’, the intra-activity of materiality *with* discourse, an interpenetration of epistemology with ontology. Unlike Bhaskar, Barad does not separate epistemology and ontology. This ruptures theoretical intent and expressed theorizing leading to what Žižek (2012) contributes as a fourth wave GT,

By our reading of Žižek a way of engaging grounding and theory stems from a dialectic approach to critical realism in which *intra-activity* of discourse *with* materiality treats the hyphen between intra and activity as a mediation process. Žižek’s (2012: 950) main criticism is that “Com­ple­ment­ar­ity in quan­tum phys­ics (wave or particle) excludes any dia­lect­ical rela­tion­ship; there is no medi­ation between the par­al­lax gap that sep­ar­ates the two aspects―is this gap the non-dia­lect­ical ground of neg­at­iv­ity?” This is a question key to understanding the ‘ground’ of GT, in the context *differeance*, what Žižek terms parallax.

Žižek says Barad does not take into account the mediation process due to her implicit naturalism. Reducing classical physics of nature to the encompassing quantum frame means one cannot locate the‘agential cut because, as Louis Dumont posits (Žižek 2012 p. 670), a higher ontological order in which lower order is subordinated. This means that the classical order has to appear within the higher quantum order. Like Bhaskar, Žižek is bringing up the importance of specifically theorizing about stratified and multiple ontological levels.

Žižek makes the point that the uncertainty principle’s observer effect undermines the naturalistic notion of a unified ontic world independent of the observer. Naturalistic origins for Quantum processes are unable to grasp an observer creating the observed; they demand a secret Origin or Ground. On the other hand, just as the observer in quantum is a subject that observes Hegel makes epistemological limits into a positive ontological possibility. This is called the possibility of being-Other, which reveals that cause and effect are illusions of observation, contingent on the experience of an encounter, necessary to sustain a space of agential possibilities. What Žižek does not see in Barad is a relation to the nothing that exists before the something of a connection, the Hegelian dialectical determination of ontological ’being’ through its antithetic nothing, her naturalistic holism denies the de-cohering ontological processes.

For Hegel, the subject is “not only the name for a cut, but also the name for the emergence of appearance, is no so-called de-coherence, the collapse of the wave function which makes ordinary reality appear, also the name for a cut, a break, in the entanglement of quantum fluctuations?” (Žižek 2012: 947). Then Žižek (2012: 947) asks this amazingly insightful question, “Why does Barad not make this point?” Because Barad’s attention is on the material details that lead to enormous difference, whereas Hegel stresses, “the same global form persists through all the variations of the details ... exerting its own efficacy... the same global form persists through all the variations of the details” (Zizek, 2012:948), generating the same material effects as her progenitors Butler and Focault.

Barad points to make the quantum turn in organizational studies while relying materialism. She emphasizes how the apparatus we use creates the reality we observe, integrating the materialism of Butler, accepting the discursion of Focault. Barad relies on naturalism, resisting anthropocentrism, accepting a material relativist ontology. Running alongside this, Žižek’s dialectical revisions to agential realism, like Brier’s Peircean pragmaticist realism dialectic, Bhaskar’s critical realism, Boje’s Heideggerian work and Hegelian work, attempt to deal with the implication of the quantum turn. The quantum turn in organizational studies is how researchers and reviewers can reveal and appreciate ground when building theory.

**CONCLUSION**

Eisenhardt and Graebner’s (2007: 30) critique of GT, recognize that reviewing GT is part of the intersubjective co-creation of knowledge that creates GT. What reviewers allow to pass as GT is not rigorously conducted, replacing ground with popular citations, replacing theory with positivistic denials of critical problems (Alvesson, 2003), developing examples justifying existing world views, challenging reviewers to find anything new instead of challenging them to help the new make sense (Gephart, 2004). Reviewers act to maintain ignorance by demanding authors build theory based on the theoretical mistakes of the past. Too much of our theory building is a function of witlessly following ignorance-increasing myths and mantras (Flick: 2016). The theoretical mistakes of the past have mutated reviewer’s mental picture of GT, creating ignorance about what is ground and what constitutes theory (Prasad, 2005: 26). Because of this ignorance, many researchers must water down their own work, removing ground, ignoring theory. Researchers can build better theory that is better grounded by understanding and overcoming the theoretical mistakes of the past and joining in developing a fourth wave of grounded theory.

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**Figure 1: Alternatives for Fourth Wave GT**



**Figure 2: Six Types of Induction Inferences**

|  |  |
| --- | --- |
| Equivalence | We observe that all Swans observed have a property of White-ness property, by inference we conclude that the same White-ness will be true of unknown Swans.When we observe white swans in any number of cases, there are still unknown swans, which may not be white. The problem with equivalence is that there can always be a black swan discovered in the very next sample. Therefore keep enumerating more cases, to test for the exception to the ‘all swans are white’ inference (also known as ampliative induction).  |
| Natural Law | White is natural property of known Swan members, and all other Swans are White. The problem of Natural law induction is that find one Black Swan (*Cygnus atratus)* and the universal inferred law is falsified. If you sample breeds of swans in southeast and southwest Australia, you are more likely to find the black swan. Therefore search for the black swan in different places (almost hunted to extinction in New Zealand versus a bird collection in zoological garden) |
| Causal Law | Whiteness is an effect of being a Swan. The problem is that we could observe a number of instances of whiteness of swans, but still not conclude that there is a cause and effect relationship occurring. Aristotle posited four types of causes. Material cause: from the Swan, after molting, whiteness comes into being. Formal cause: one essential attribute of the swan is its whiteness. Swans are white by definition (logos). Efficient cause: the source of swans being rarely black, is the poacher hunting them to extinction. Final cause: Black swans are popular in zoological preserves and collections because an audience admires them so. |
| Statistical Generalizations | Some portions of Swans are White with regularity. The problem is that sample randomly drawn cannot achieve falsifiability, because there still could be at least one black swan out there not selected. The same is true of opportunity sampling, because in the future some species of black swan could be found to exist. There is a possibility of being conclusive, that by continuing to do sampling, the N+1th Swan in a series of sampled Swans, will be white swan, or be black swan (aka recursive induction). Due to its use of iteration and lack of discrete boundary between data, grounded theory implicates a messy nature of saturation encouraging a drift toward positivism (Suddaby 2006). |
| Intuitive | The intuition ‘all Swans are White’ is relevant to epistemology and metaphysics. The intuition is a kind of prediction, an *a priori* bet done before testing. It can be based on the idea of white swan, or sense-experience (all white swans thus far, so future swans encountered will be white). The problem is that the intuition can take on what Hume called the force of a habit. Certainly Europeans before landing in Australia had the habit of believing all swans must be white. The habit force of an idea and even a sense-experience (so far all are white) can be a case of naïve realism. Up until the discovery in Australia, there was an intersubjective belief among Europeans that all swans are white. |
| Eduction | Eduction does not make the claim to generalization. Rather, for the particular cases examined, the swans are white. In eduction, the swans observed thus far have been white. There is potentially large number of swans in the world. Estimates are 4.5 million swans exist, at present, in the world.  |