IRTP INTERNATIONAL REVIEW OF THEORETICAL PSYCHOLOGIES

• Vol. 3, No. 1 • 2026 • (pp. 104–123) •
https://tidsskrift.dk/irtp/

DOI: http://doi.org/10.7146/irtp.v3i1.167374

Theorizing: A Phenomenological, Theoretical, and Quantitative Case Study

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Abstract

A theory is discussed which attempts to provide a basic understanding of the work of theorizing. It is developed from an analysis of the author's own experience. According to this theory, theorizing consists, fundamentally, in a series of intellectual engagements. Each engagement begins with the theorist selecting and performing an epistemic, or knowledge seeking, behavior. In doing so, the theorist activates associated cognitive operations. These always begin with attention and interpretation, followed by thoughts, memories, images, or whatever information-based procedures the theorist is utilizing. Cognitive operations write information into a theory space where it is immediately subject to the forces of the theory space's field—expansion, integration, and contextualization. The purpose and consequence of this process is the development of a network of connections between the theory and its ground. Repeated engagements result in the theory space becoming an integral whole, not simply a collection of ideas. A mature theory space is marked by precise statements of the ground and theory, along with an information-rich, well-articulated support network.

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Keywords: theorizing, creative problem solving, information dynamics, 4E cognition

Introduction

In a recent issue of *Theory & Psychology*, Eronen, Osbeck, and O'Doherty (2024) initiated a debate on the nature of psychological methodology. The various learned responses they received made it apparent that, though psychology maintains a strong link to the natural sciences (Fernandez, 2024), in practice, the field has no single, simple characterization and therefore has no single method or philosophical orientation. Not only must psychology's method follow its subject matter (Teo, 2024), but it must be prepared to go where the natural sciences fear to tread (Proctor and Ashley,

2024). This is especially true with respect to the relation between subjective and objective experience (Wertz, 2024).

These concerns are of particular relevance to the psychology of theorizing. Theorizing, of course, produces theories. The factual, logical, and linguistic natures of theories have long been the concern of philosophers of science (see Colodny, 1970; Godfrey-Smith, 2012) and epistemologists (Russell, 1948; Hanson, 1970; Maxwell, 1970; Weimer, 2023). The present work, however, is a psychological study. This means the central concern is the *process* of theorizing, not its product. Specifically, the cognitive and behavioral dynamics of theory development will be the focus, rather than the resulting symbolic statement, per se.

Following the Subject

Naturally, it is intended that the model proposed below will constitute a general theory of theorizing. However, a necessary peculiarity of the present work is that it focusses on an analysis of five of the author's own projects in theoretical psychology. There are several reasons for this.

The first is practicality. The author is an independent scholar unaffiliated with any academic institution. He is not, therefore, in a position to enlist other colleagues in a study of this sort; particularly, before it is clear that the approach has merit.

The second reason is simply that the author was curious to see if his work revealed meaningful information concerning the theorizing process. Would the author's efforts indicate a generalizable perspective, or would they look idiosyncratic and content sensitive? The underlying issue here is that a process as complex as theorizing certainly cannot be explained by averaging over a set of theorists. This is not reaction time. What is expected is universality, but not necessarily similarity (Valsiner, 2014). Every theorist and every theoretical problem will have unique paths of resolution. Nonetheless, across all such paths, critical cognitive and behavioral processes should be symmetric. The author's efforts, truly made, regardless of their ultimate fate, should indeed, therefore, provide evidence of universal elements. The projects span a range of theoretical issues. Finding invariant elements across these projects despite their differences would thus be of great interest.

And finally, the present work utilizes a fundamental set of data that the author could not expect others to possess. Over the years spanning the present analysis (2016-2024), the author kept a detailed chronological record of his conceptual development of each of the five different projects involved in this study. These records are the basis for the quantitative analyses discussed later in the text.

The Studies

The five projects are divided into two separate studies. The first study examined three different projects. Project P1, which spanned 54 months from March 2018 to August 2022, was a phenomenological analysis of the various elements operative in the experience of "walking a labyrinth" (Artress, 2006; Doner, 2022). Project P2, which covered 41 months from March 2020 to August 2023, was concerned with uncovering a class of mental actions hidden in plain sight. These were termed conscious phenomenological transformations or CPTs (Doner, 2024a). Project P3 is the longest running of all the projects examined, spanning the entire 85-month timeframe of the study. This work is devoted to developing a theory of intelligence, not simply as a human

characteristic, but as the fundamental ground of all living beings. Piaget (1950, 1952, 1971) was among the first to conceptualize intelligence as a basic organic function. Project P3 seeks to understand this function in terms of the relation between information-based and energy-based processes. This project spawned a book chapter (Doner, 2008) in its earliest manifestation. In its current manifestation, however, it has been the subject of two talks (Doner, 2018, 2020), another book chapter (Doner, 2017), and one controversial and ultimately rejected paper (Doner, 2024d). So, the "final product" of P3 remains to be seen. Nonetheless, it has involved ongoing serious effort and was a good candidate for the present analysis.

The two projects comprising the second study were both begun in August, 2023. They were initiated as responses to conference CFPs (call for papers) for two associations of theoretical psychologists. Project P4 resulted in a paper delivered at the biennial conference of ISTP, the International Society for Theoretical Psychology (Doner, 2024b). That paper was the forerunner of the present work and will be discussed further below. Project P5 developed the concept of epistemic disciplines as a step toward a psychological conception of rationality. The resulting paper was read at the divisional conference of STPP, the Society for Theoretical and Philosophical Psychology, APA Division 24 (Doner, 2024c).

The projects in both studies were chosen for three basic reasons. They represented the author's most recent work. They were all serious ongoing interests. And each of the projects achieved a level of acknowledgement (presentations or publications) which make them an existing part of the professional community.

The projects naturally divided into two different studies. The projects in the first were all antecedent to the reception of the announcement from ISTP. Additionally, each was a long-term, multi-year effort. When the author decided to develop a paper for the ISTP conference, these three were the primary focus. As work continued on papers for both conferences (ISTP and STPP), however, various aspects of the phenomenological interactions of the two efforts prompted the author to also pursue the second study, specifically with respect to these two projects. These projects' timeframes were much reduced, therefore, compared to the first study. Overall, they covered 41 weeks or approximately nine months, compared to the 85 months of the first study.

Theorizing as Multiple Engagements

All intellectual endeavors are embedded within and extended throughout their time, place and culture (Csordas, 2002). The present work would probably not exist were it not for the CFP from the ISTP conference. The conference theme was "Theory as Engagement". In the mind of the author, this theme immediately became *theorizing as engagement*. When he considered his efforts with the three projects now part of the first study, it was clear to him that theorizing is definitely a process of engagement. But theorizing is not a unique event; it's not a single Aha!-style inspiration (Shrady, 1972). Theorizing is *work*; it is a consciously pursued interaction between oneself and both the subject matter and the intellectual community. The author's theorizing involved an ongoing series of intellectual engagements. Some of these were inspirational, most were simply functional, and some were just frustrating. Nonetheless, every engagement contributed to moving the work onward.

These considerations were the initial impetus for the development of Project P4 and in fact, the eventual conference presentation emphasized the nature of theorizing as a non-linear (Cook, 1986), multi-engagement process. The talk presented a model of the dynamics within engagements along

with a discussion of the 4E (Newen, De Bruin, and Gallagher, 2018b) infrastructure that supported the process as a whole. This perspective was further developed after the conference and eventually written up and submitted for publication in an online journal.

An Unexpected Transformation

The reviewers demanded revisions. It was clear that they felt the author had failed to fulfill the promise of the paper's possibilities. Considering their comments, the author realized that he had attempted to normalize the work. He had tried to fit it into a more standard experimental format and had emphasized the 4E connections. There was nothing wrong with these attempts, but insofar as neither had been the actual basis for the work to begin with, the resulting paper was stiff and easy to misinterpret.

Then, a further realization initiated a critical transformation in the author's perspective: despite his own experience theorizing, the author realized he could not actually state, *in a completely psychological manner*, what a theorist is trying to do. There is a Zen story about a monk who finds enlightenment when he sees the bottom fall out of a pail of water. Even seemingly random events can be transformative. The bottom fell out for the author when he realized *his mistake had been to think that what a theorist does is develop theories*.

What Theorists Really Do

There are many reasons this seemingly straightforward idea is false. However, there is another way to demonstrate what must be true. We start by considering the psychological structure of a mature scientific theory. It would be hubris for the author to consider his own works in this manner. So for the moment, let us examine Darwin's theory of evolution (Darwin, 1859/1968).

In order to get a proper sense of the theory's psychological structure, imagine a blackboard. Across the top of the blackboard is written the theory: *transformation through random variation and natural selection*. Across the bottom of the board is written a statement of the problem the theory solves: *the origin of species*. This is the ground of the theory. A theory's ground, in general, could be any acknowledged question or confusion. It is, simply, the foundation for understanding the purpose of the theory.

In this space, with the ground at the bottom and the theory at the top, we can imagine drawing *informational* lines of connection between the two. From the ground to the theory, one line might begin with the concept of origins and show, through argument and evidence, that species have not always been the way they are now and therefore transformation is a fact of life. Another line might go from the theory to the ground; it might explain the term random variation and show, through argument and evidence, that such variation is an integral aspect of every species. Clearly, for a mature theory like the origin of species, a countless number of such lines can and have been drawn. This is because, in a mature theory, theory and ground are connected by a complex symbolic *network*. This network can be termed informational, semantic, or epistemological. It is all of that. But most simply and directly, it is the *support network* of the theory.

What was described metaphorically as a blackboard, the author calls the *theory space*. In its essential nature, the theory space consists of three information-based elements, a symbolic statement of the ground, a symbolic statement of the theory, and a network of supporting semantic,

logical, and evidential information which links theory to ground and ground to theory. This is the actual psychological structure that every theorist works to construct.

The theorist may focus on the development of the theory, but this only succeeds to the extent that their full efforts produce a well-organized theory space. This is evident in every theorist's presentation of their theory to the intellectual community. Whether in a talk, paper, or book, the theorist is expected to clearly state the problem, clearly state the solution, and thoroughly present the network of information that allows both theory and ground to form a coherent, functioning whole. Darwin's *Origin of Species* is a classic example. But the history of science, including psychology, is built upon countless such examples, big and small.

The theory space is a psychological structure. It is a way of representing what someone, who truly knows a given theory, *actually knows*. Just because a person can state Darwin's theory does not mean they understand it. If they do understand it, they will, at the least, possess the capabilities of stating the theory, stating the issue it addresses, and in some manner providing evidence or argument concerning how the former explains the latter. They might do this from memory or by appropriate citations of other's writings. Both methods would indicate knowledge and understanding of the theory.

The theory space is both an informational and a 4E (Newen, De Bruin, and Gallagher, 2018a) psychological structure. What fills the theory space is information. Yet, a functioning theory space can have a multifaceted existence. It can be *embodied* in the mind of the knower (Varela, Thompson, and Rosch, 1991; Galagher and Zahavi, 2012), *extended* across the minds of the knowledgeable (Hutchins, 1995; Osbeck, Nersessian, Malone and Newstetter, 2011; Kiverstein, 2018), or physically *embedded* in texts and images (Menary, 2018). All of these representations, mental or physical, are symbolic and require conscious human engagement for their *enactment* (Csordas, 1994). Hence, from both an informational and a 4E standpoint, the theory space is inherently psychological.

Creating the Theory Space

Theorists don't develop theories, they develop theory spaces. This is what must be understood psychologically. The development of the theory space involves three general stages: the *initial* state, a *developing* phase, and the *mature* state. The concept of a mature theory space has already been discussed using Darwin's theory of evolution as a classic case. A mature space is marked by precise statements of the ground and theory, along with an information-rich, well-articulated support network.

The Initial Theory Space

The *initial* state of the theory space is its structure prior to any actual theorizing. A realistic characterization of the initial state of the theory space must acknowledge that no issue and resolution emerges out of nothing. The grounds of most scientific questions have been thoroughly discussed in those communities where they are relevant. And likewise possible solutions to tough issues are often available in discussions if not in print. Hence, many theoretical approaches, though undeveloped, may nonetheless have, within the *extended* community, partial theory spaces with interpretable, but ambiguous, statements of both ground and theory.

Hence, prior to the theorist's efforts, if an extended theory space exists within their potential audience, the initial state of the theorist's theory space could vary widely depending on the degree

to which said theorist was an active participant in the relevant community. The more thoroughly connected the theorist is to an extended group pursuing similar goals, the more pre-developed must be the theorist's initial theory space. For example, theory development in grant funded research groups would necessarily begin from the specific theory space of the original grant (e.g., see Osbeck, Nersessian, Malone and Newstetter, 2011).

The author's situation and experience, however, are very different. As an independent scholar with interests in a variety of psychological questions, the author's initial theory space for a particular project can be relatively sparse. Project P1 is an excellent example. It began with the extended event of the author purchasing a book on the experience of walking a labyrinth (Artress, 2006). The author had an existing interest in mazes and labyrinths, but knew little of their history. Nor was he aware of the extensive literature, from brief examinations to weighty tomes, concerned with the nature of labyrinths and the phenomenology of walking them. There were no specific questions, psychological or otherwise, that drew his interest. At this point, there were no issues, so there was no theory space.

When the author read the book and made notes on the text, it occurred to him that an important psychological element in walking a classic labyrinth could relate to the interaction of feelings of uncertainty and certainty experienced during the effort. This was the dawning of P1 and the first emergence of its theory space. This initial space possessed basic statements of the ground (the experience of walking a labyrinth) and the theory (the dynamic interaction of certainty and uncertainty). However, theory support was sparse, comprised primarily of a few quotes from the book (Artress, 2006) and applicable psychological knowledge possessed by the theorist.

Projects P1, P4, and P5 all began with relatively sparse and uncertain theory spaces. Project P2, however, began with partial development from previous work. The longest running project, P3, began with a theory space significantly developed due to its history. The initially sparse theory space is thus a useful conception; nonetheless, each project will be what it is.

The Developing Theory Space

When the state of an initial theory space is compared with that of a mature theory space, it is clear what the work of theorizing must accomplish. The initial uncertainties and ambiguities of the statements of ground and theory must be transformed into coherent, precise, and completely conceptualized renditions of both. The sparse and tentative nature of the theory support field must be transformed into a mature, fully-articulated, information-rich support *network* which allows the full integration of ground and theory.

To accomplish these goals, the work of the theorist involves three levels of function. These are volitional behavior, volitional cognition, and information dynamics. The first two categories are consciously pursued actions of the theorist. The third, however, is a process which, like breathing, can be consciously manipulated but is fundamentally unconscious in its operation.

The three levels are interrelated: behavior initiates cognition which activates information dynamics. This is where the concept of *engagement* appears front and center, making its multidimensionality clearly evident. In order for the theorist to seriously engage in the behaviors of theorizing, they must seriously engage in the cognition of theorizing. Engaging in both behavior and cognition energizes information dynamics. These dynamics bring coherence and order to the development of the theory space.

The Behavior of Theorizing

The behaviors volitionally employed by the theorist in their theorizing are ways of creating different forms of engagement with the issues of concern. Through the interweaving of multiple series of these engagements, the theorist works to create the theory space.

There are, at least, three general categories of theorizing behavior. The first is *research*. It includes empirical research, scholarly research, mathematical research, and intellectual research (analytic writing). *Social discussion* includes interactions with colleagues and students concerning issues relevant to the theorist's perspective. It also includes talks the theorist gives, formally or informally, before interested colleagues. The final category is *contemplation*, where the theorist simply sits and thinks about the theory, or ground, or support field. Of course, they do not have to be sitting. Yet whatever action the theorist prefers, it will minimize physical distraction, thus fully supporting the theorist's intellectual efforts.

Note that engagement in any of these behaviors contributes to the construction of the 4E infrastructure of all theorizing. To put it succinctly, the behaviors of theorizing create embedded levels of embodied and extended systems of information enaction. That is, these behaviors essentially define the theorist's domains of operation. These domains are within the theorist due to the theorist's background and actions; they also encompass the theorist in their engagements within the extended community. The work of most theorists will involve all or several of these behavioral forms. The author's work is no exception. Intellectual and scholarly research, contemplation, and social discussion were all critical to the conceptual development of the five projects and the present work. In addition, this paper includes a quantitative, empirical analysis.

The Cognition of Theorizing

In general, each class of behaviors, whether research, social discussion, or contemplation, is purposeless without the theorist's simultaneous engagement in a critical set of cognitive functions. In fact, though all cognitive functions are available to all behaviors, each type of theorizing behavior tends to emphasize and is supported by particular sets of cognitive functions. Scholarly research depends on knowledge and memory, empirical research on logic and analysis, and so forth. The behaviors of intellectual research and contemplation tend to provide the theorist with the greatest cognitive freedom.

All cognitive engagement, especially contemplation, begins with *attention*. The theorist actively attends (Pashler, 1998) to some issue relating to ground, or theory, or the support field. Active attention creates and maintains a focal awareness of the engaged material which makes *interpretation* possible. In its broadest sense, interpretation is the giving of meaning to that to which the theorist attends. Together, attention and interpretation create a meaningful focal subject for the theorist to consider. This *focal concern* is the starting point of every theorizing engagement. It confirms that every act of theorizing is necessarily and essentially hermeneutic (Richardson, Fowers and Guignon, 1999).

What follows this initial engagement depends on the theorist's purpose. If, as one example, the theorist is interested in relating the focal concern to the relevant literature, the interpreted focus may activate the theorist's *memory*, bringing in relevant past information. It may also activate the *analytic capabilities* of the theorist as they consider the nature and ramifications of the focus. And finally, the interpreted focus may activate the *imagination* if, for example, the theorist wishes to consider a variety of ideas and possibilities.

All of these functions are basic thought processes. Theorizing is not distinct in its cognitive functions; it operates utilizing general cognitive operations (Merton, 1973; Barnes, Bloor, and Henry, 1996). Note that, regardless of what else these operations might do, each of them *increases* the amount of information the theorist must consider. Attention begins the process as it creates a focus. Interpretation of that focus then necessarily increases information further. Weizäcker (1972) opined that meaning consisted primarily in the expansion of information (a fact proven by every dictionary). In the case of the theorist's efforts, this continued information expansion is further powered by subsequent cognition, whether mnemic, analytic, or imaginal. Each entails the further generation of information. Consequently, handling this expansion in a functional manner is a critical aspect of theorizing. A project can be paralyzed by information expansion that is unchecked.

Each cognitive operation—attention, interpretation, memory, analysis, and imagination—generates and transforms information in the theory space. Nonetheless, there must be functions intrinsic to the space itself which can then operate independent of the cognitive operations. When the author focusses on his own cognition, it is clear that despite the conscious aspect of a particular operation, relevant information consistently arises within awareness from largely unconscious processes. The theorist sets the functional context by the cognitive operation engaged, but there is the clear sense that underlying processes are operating on their own and that these mostly unconscious processes are critical to a project's success (Kahneman, 2011). Insofar as they are relevant to theorizing, the author refers to these processes as information dynamics.

Information Dynamics

The underlying processes of information dynamics are psychobiological processes for transforming information. These processes generally operate without direct awareness. They can be influenced by the operation of the cognitive functions, but fundamentally, information dynamics operate intrinsically.

A physical system is dynamic if forces are acting to create transformations in the physical state of that system. The term information dynamics, similarly, is meant to indicate a system where forces are acting to transform the information contained within an information-based system. In a previous version of this paper, the author argued that information dynamics primarily constituted the antagonistic processes of information expansion and information abstraction. This view made sense of important aspects of the theorist's experience, yet there were several unavoidable ambiguities. Given the concept of the theory space, however, these have been largely resolved.

Consider again the blackboard metaphor of the theory space. At the top of the board is a symbolic statement of the theory; at the bottom is a symbolic statement of the ground. In the center region is the network of connections between the ground and the theory and between the theory and the ground. In the early stages, most of these connections do not yet exist. Yet, as the support field transforms into a network, not only are more and more connections added to the space, but these connections are organized and interrelated with each other. What is more, the symbolic statements of both the theory and the ground become clearer, more coherent, and more precise.

These changes cannot be caused by either the behavioral or cognitive operations of the theorist, alone. The behavioral forms determine the general category of information that will be applied to the process. They affect what sorts of information are available to the space's development, but not how that information is utilized. Despite their obvious importance, neither can the theorist's

cognitive operations be solely responsible for the theory's development. It is tempting to imagine the theorist's cognitive operations as if the theorist is writing on the board. Even taken metaphorically, however, this image is seriously misleading. First, whatever is written into the theory space cannot be erased. Brains are not blackboards. All information that comes into the theory space must be handled. In this sense, information is like energy; it can be transformed but not simply erased. Second, when a person is writing on a board, they are only representing what is already in their mind. Consequently, the board is no longer a dynamic psychological structure. It has become a prop for the theorist, and consequently, is of no help in understanding their mental processes. These remain unexplained.

The theory space is embodied within the mind of the theorist. And the theorist consciously engages in behaviors and cognitive operations which actuate the development of the theory space. Nonetheless, the dynamics of theory development cannot just be something that happens *to* the theory space. Rather, it is the nature of the theory space that the fundamental dynamics of its development are intrinsic, occurring *within* the theory space itself.

The Dynamic Theory Space

This approach to information dynamics allows new understanding on several critical issues. For example, it helps clarify the origin of information expansion and how it is modulated. It provides new understanding of how linkages are established between theory and ground and therefore how the support field grows into an organized network. And finally, it provides a way of seeing how the symbolic statements of theory and ground develop in clarity and precision and the nature of the advantage this actually creates.

The Field of the Theory Space

The application of the concept of fields to the analysis of mind has a long history. Husserl (Magill, 1990) and Merleau-Ponty (1964) talked about the *phenomenal* field. The American philosopher, John Dewey, emphasized the centrality of individual experience, which he conceived as a *semantic* field (Dewey, 1929). In psychology, the Gestalt school talked about perception and cognition as being the consequence of *neural* fields (Koffka, 1963).

These conceptions of a field were generally derived from physics. A physical field, such as an electric field or gravitational field, is a physical force distributed throughout space according to specific laws. This perspective proved to be inappropriate, however, as Sperry and others demonstrated that such physical-type fields do not exist in the brain (*Sperry, Miner, and Myers, 1955*).

The concept of field being applied to the theory space is more correctly modeled according to the character of purely mathematical, or computational, fields (Herstein, 1964). Such a field is a dimensional space, where every point in that space computes the same function (or set of functions). The theory space should be considered as this sort of field. Information enters the field at any point, depending on the action of the cognitive operations. Yet, regardless of its entry point, the information is then acted on by the same ensemble of functions.

The field of the theory space is not a physical field spreading across the cortex. Rather, it is an abstract, computational structure assumed to be generated and maintained by the activity of a particular ensemble of cortical areas. The functional interactions of these areas generate the dynamic structure of the theory space. Different lines of argument point to the default mode

network (Callard and Margulis, 2011; Callard, Smallwood and Margulis, 2012; Callard, Smallwood, Golchert and Margulis, 2013) playing an integral role in these processes (see also, Bartoli et al, 2024). Exactly how the theory space is represented in the nervous system, however, is a problem beyond this presentation. The following characterization will be sufficient for present purposes.

Three types of forces are postulated to be acting within the field of the theory space. These forces act on information according to distinctly different functions, yet act together in a coordinated fashion. They are the vertical force, **α,** the horizontal force, **β,** and **γ,** the force of contextualization.

The Vertical Force, α

In the blackboard metaphor, the **α**-force acts vertically between ground and theory and vice versa. The vertical force is a conceptualization of the author's experience of *information expansion*. Every engagement with a project leads to an expansion of information, which undergoes transformation and ultimately contributes to the substance of the theory's supporting network. The vertical force is termed ***α*** because of its primacy in the act of theorizing, but also because it seems to be primary in virtually all mental action. The **α**-force could also be considered the force of *semanticisation*, that is, the production of meaning. It would be **α**, therefore, that gives a foundation to Weizäcker's sense of meaning mentioned earlier.

The **α**-force is bi-directional, acting either from the theory toward the ground or from the ground toward the theory. It is the context of the focal concern that determines directionality. If the focal concern is an aspect of the ground, **α** expands related information *toward* the theory. If the focal concern is an aspect of the theory, then **α** expands related information toward the ground. This directionality can be understood in terms of the interaction between the **α** and **γ** forces. Together they promote the possibility of connection between theory and ground.

The Horizontal Force, β

The **β**-force acts horizontally in the sense that it acts perpendicularly to the **α**-force. As the **α**-force expands information, seeking connection between the poles of the theory space, the **β**-force acts across the theory space; its general function is the association and integration of information in the field, creating connections across different aspects of the support field.

Acting in this way, the **β**-force is responsible for the phenomenon of *endocapsulation*. It was the clear experience of the author, and one supported by quantitative data discussed below, that as projects progressed, they took on a certain integral wholeness. They became encapsulated (Fodor, 1975). However, the term *en*capsulation implies force acting from the outside. In the case of the **β**-force, integral wholeness is achieved from the inside. To reflect this, the author refers to the ongoing development of wholeness by a neologism, *endo*capsulation.

The **β**-force is also responsible for the action of "Occam's razor", the transformation of the statements of ground and theory into their most concise and precise forms. A full discussion of the issues involved here is beyond the scope of the present work. The central point, however, is that statements can be understood to be like algorithms. They are symbolic strings which, when activated, are meant to generate other symbolic strings. For example, one could write {an infinite string of the pair 01}, or one could write {∞ string: 01}, or one could write {0101010101010101010101010…}. All are algorithms for the same construction, the third representing the infinite sequence itself. The second is the most concise, but the first would be the

most generally understood. If the sequence of 0s and 1s was mathematically random, however, there could be no shorter algorithm for generating the sequence than the sequence itself (see Chaitin, 1987a, 1987b). Looking at the statements of theory and ground in these terms, Occam's razor essentially promotes the compression of the statements into their minimal (though still comprehensible) algorithmic representations (see also, Zenil, Kiani, and Tegner, 2023). This forms the most concise and precise rendition of each.

The algorithmic compression of the statements of theory and ground is critical to the growth of the theory space. Primarily, it strengthens the contextual impact of both theory and ground in the modulation of the **α** and **β** forces.

The Force of Contextualization, γ

The author first regarded context effects in theorizing as deriving from the conscious effort of the theorist. This was unsatisfactory for several reasons, but no effective alternative presented itself. The concept of the dynamic theory space, however, allows contextualization to be understood as a force, call it **γ,** acting *within* the theory space. For the theorist, the most relevant contexts for all aspects of their work are the theory and the ground. These poles of the theory space are relevant to every aspect of the field.

In the present usage, contextualization has two primary dynamic consequences when applied to a volume of information. First, a context can act as a filter, eliminating those elements that are incompatible with the context (Glass, Holyoak, and Santa, 1979). Second, a context can act as an attractor, drawing together those ideas that are simpatico with the context (Bransford, 1979).

In the theory space, the function of contextualization varies according to its relations to the other forces. In its interaction with force **α**, the action of **γ**, in a sense, *curates* the expansion of information caused by **α**. Consequently, this expansion is of the most relevant information. With respect to **β**, **γ** modulates the integration of information in the supporting field, promoting contextually energized linkages in the developing support network. Thus, both **α** and **β** are modified in their action by the force of **γ**.

Rather than context being imported from outside the theory space, **γ** functions within the field such that both theory and ground are the source of contextual impact. It is the author's experience that the strength of the contextual effects depended on the clarity of the theorist's understanding of theory and ground. The more clear and precise be the theorist's statements of the theory and of the ground, the more powerful will be their action contextually. In other words, **γ** differentially strengthens information as a function of its relation to the ground, theory, or both.

How it All Works

A theory has been discussed which attempts to provide a basic understanding of the work of theorizing. It is developed from an analysis of the author's own experience. According to this theory, theorizing consists, fundamentally, in a series of intellectual engagements. Each engagement begins with the theorist selecting and performing an epistemic, or knowledge seeking, behavior. In doing so, the theorist activates associated cognitive operations. These always begin with attention and interpretation, followed by thoughts, memories, images, or whatever information-based procedures the theorist is utilizing. Cognitive operations write information into the theory space where it is immediately subject to the forces of the theory space's field—expansion, integration, and contextualization. The purpose of this procedure is the development of

a network of connections between the theory and its ground. The theorist and others evaluate the results of these efforts. This evaluation might consider the issue resolved, or it may initiate a new round of engagement. And so it goes.

The Quantification of Theorizing

From the beginning of this project, the author was interested in the quantitative analysis of his own efforts put toward each of the projects. The general question was to what extent is quantitative data informative regarding the dynamic processes of theorizing? And specifically, is there a *pattern* to be found in the author's theorizing effort over time?

The author knew of no other work of exactly this sort. So the approach was necessarily exploratory. The point was made, above, that studying theorizing is not like measuring reaction time. And yet, could a simple measure of the effort made over time working on each project provide useful information regarding the dynamic structure of theorizing?

The answer turns out to be that, just as an aerial photograph of an event provides a perspective unseen by someone within the event, the quantitative analyses provided a temporal perspective lost in the ongoing transformation that was the work of each project. So the author found the results fascinating. But that is in part because he experienced it all first hand. The question is whether the results are informative without the experiential context. Do the numbers stand on their own?

Measuring the Effort of Theorizing

There are many ways to measure effort exerted in the performance of some task. In the present case, the theorist took advantage of the record being kept for each project. As part of the ongoing intellectual research of the theorist, all work on each of the five projects was recorded and ordered by date of entry. Entries were initially hand-written and then scanned into a computer.

Each entry is equivalent to a day's effort on a given project. It may be of a single page or multiple pages. A given day may include entries from one or more projects, or none at all. The dependent measure of the "theorizing effort" was thus computed by combing entries into successive time intervals. Consequently, theorizing was measured either in terms of *pages per month*, p/m (first study), or *pages per week*, p/w (second study).

First Study. Figure 1 displays the resulting data for projects P1, P2, and P3. In this graph, time is represented along the horizontal axis as successive months. The first study spans 85 months, from December 2016 to December 2023. The vertical axis of the graph represents the dependent measure, pages/month. The three projects, labeled P1, P2, and P3, are represented by the blue, red, and green lines respectively. All three projects are cotemporaneous over significant portions of their trajectories.

The analysis in Figure 1 was based on a total of 3919 pages of text recorded for all three projects. This constituted 44.4% of the 8824 total number of pages recorded for all intellectual work over that period. For individual projects, the numbers were: P1 – 631 pages; P2 – 443 pages; and P3 – 2845 pages. Relative to each project's length, *on average*, P1 generated 14.2 p/m, P2 generated 10.6 p/m, and P3 generated 33.5 p/m.

Several features of the graphs in Figure 1 are of interest. Note that the graphs for each one of the projects demonstrate non-periodic but nonetheless repeated episodes of effort. A project's effort

is never constant for a sustained period of time. Rather, it often rises and falls over a period of one or a few months, varying substantially from the project's overall mean. This pattern can be repeated several times over the course of a project. This sort of patterning is consistent with the idea that theorizing is a process of multiple engagements. It does not indicate the exact nature of those engagements, of course, but it does imply an expansion of information followed by its integration.

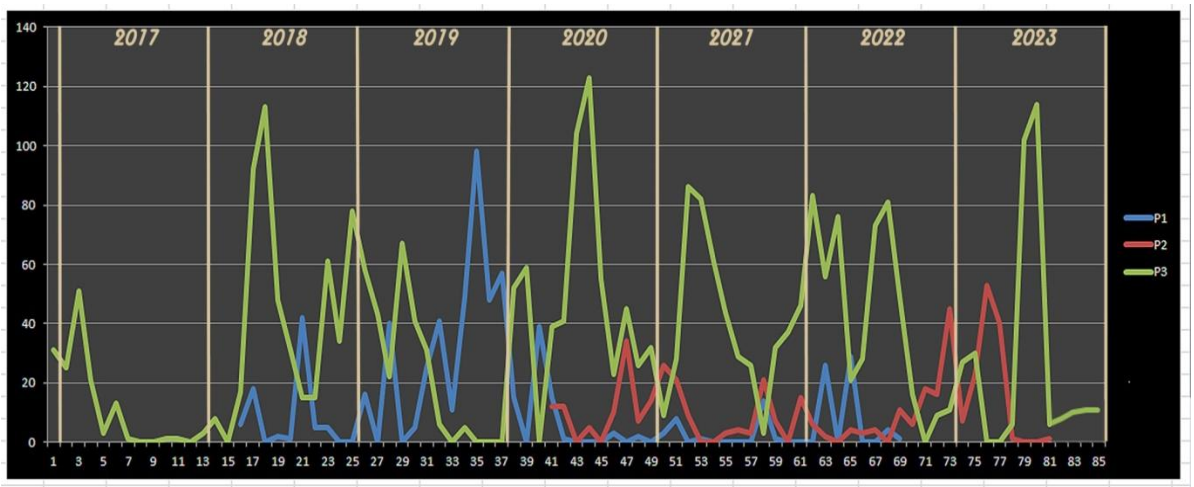

Figure 1: First study: Effort expended on projects P1, P2, and P3. Note: Abscissa values are successive months; ordinate values are pages/month. The three projects are plotted in blue, P1, red, P2, and green, P3. Years are marked to provide perspective.

A second feature of interest in Figure 1 is the relation between projects during those times when projects overlapped. More often than not, projects alternated in their effort. As one project increased in effort, another or both other projects would decrease in effort. Extended events like submission deadlines can influence these interactions, but the interplay is not a function of resource or energy competition, per se. As noted above, the number of pages in all three projects is only about 44% of the total effort expended on all the theorist's pursuits over the study period.

Rather, an interpretation consistent with the theorist's experience is that the interactions are indicative of the phenomenon to which the author has given the name, endocapsulation. Each of the projects in the first study is an integral whole within the mind of the theorist. It is not just a collection of information and ideas. It has developed a theory space of sufficient internal complexity to give it its own integrity, its own *embodiment*.

Second Study. The central interest of this second study was the dynamic interaction of projects P4 (paper for ISTP) and P5 (paper for STPP). The theorist's initial efforts in the development of P4 and P5 resulted in an interesting phenomenon of linkage between the two—when writing about one of the projects, the theorist would sometimes find that he had unknowingly shifted to writing about the other. At some point in the work, however, this changed. It seemed to the theorist that this constituted the experience of both projects differentiating from each other and becoming integral wholes.

How could this be demonstrated, however? This second study was an effort to see if this transformation was evident in the quantitative data. If so, it would be a powerful indication of the

actuality of the differentiation. It would also provide support for this sort of quantitative analysis. Because the timeline for this study was much shorter than the first, it seemed natural to likewise shorten up the temporal interval used in the dependent variable. Consequently for this second study theorizing effort was measured in *pages/week,* or p/w. Figure 2 plots this data for projects P4 and P5.

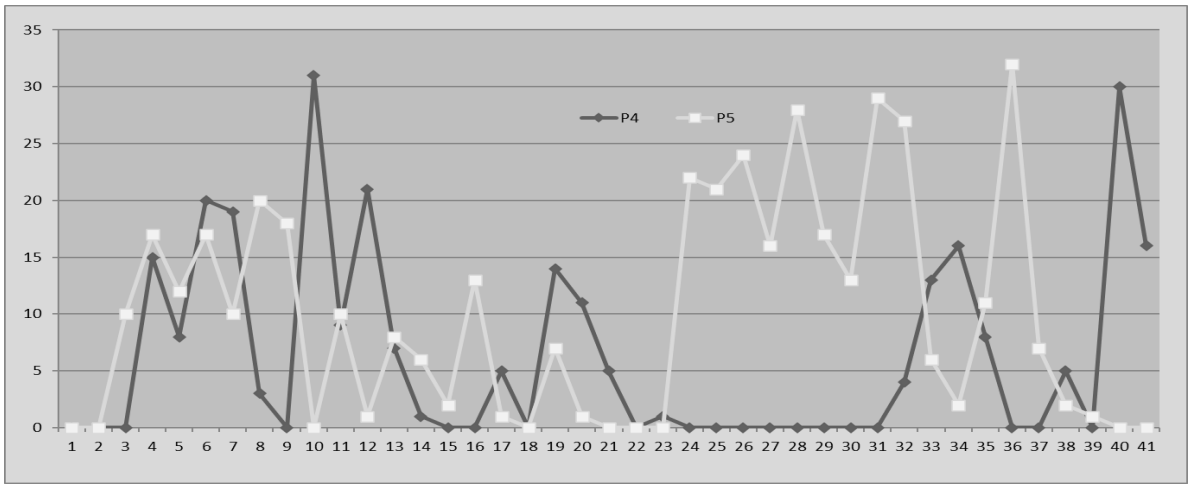

Figure 2: Second study: Effort expended on projects P4 and P5. Note: Abscissa values are successive weeks; ordinate values are pages/week. The two projects are plotted in dark gray, P4, and light gray, P5.

First, note that the graphs in Figure 2 look generally similar to those in Figure 1. These two projects show the same sort of non-periodic, yet repetitive cycles of increase and decrease as were evident in the first study. This is the case despite the difference in the temporal scales of the analyses. That is an issue for future consideration.

For the immediate interest, the most important aspect of the graphs in Figure 2 is seen in the first ten weeks. In weeks 1 & 2 the CFPs ultimately producing P5 and P4 were received. Though nothing was written immediately, the theorist gave both CFPs serious consideration. Work began in week 3 and for the next four weeks, through week 7, the effort data of both projects vary in synchrony. Then, beginning with week 8, the projects seem to differentiate. Work on P4 decreases sharply and work on P5 increases. From then on, the effort devoted to each project generally followed the more typical pattern of alternation—if one's up, the other's down. Interesting things happen later in the development of both projects, but those issues are beyond the present work.

The results of this analysis demonstrate an important relationship. The subjective experience of the theorist with respect to the dynamic relation between P4 and P5 was that it transformed from the two being undifferentiated to their complete differentiation. This process was then clearly visible in the objective analysis of the theorist's effort.

Final Discussion

This paper closes with a brief examination of three relevant issues. These are, 1) the work's greatest limitation, 2) the most important question it raises, and 3) an important direction for further research.

The Greatest Limitation

This work's autoethnographic nature is both its greatest strength and its greatest limitation. It is the study of one person's efforts at *theorizing*, the complex behavioral, cognitive, and generally intellectual activity of resolving scientific conundrums. As autoethnography, it was able to examine and compare theorizing's subjective and objective manifestations. Yet, the degree to which these efforts are successful only magnifies the importance of the question of their generality. Does the model generalize across theorists? What are, and how critical are, the differences among them? Similarly, does the model generalize across scientific domains? Surely there are differences between the domains, but of what nature? The present theory could shed light on such an issue.

The Most Important Question

One of the most important questions raised by the present work also concerns its generalizability, but in a very different sense than above. The issue of creative problem solving was a big topic at the end of the last century (Osborn, 1963; Van Gundy, 1981). However, other than the development of a myriad of techniques for "brainstorming" and "thinking outside of the box", little understanding of the processes involved resulted.

At the same time, the philosophy of science was struggling with interestingly similar concerns. The empiricist hope that theories are solidly built through inductive logic (Sprenger, 2016) was being dismantled and replaced by the idea that theories are human constructions (Lakatos and Musgrave, 1970) subject to refutation (Popper, 1963) and revolution (Kuhn, 1962). How then, does theorizing contribute to the growth of scientific knowledge?

Together, these concerns indicate the most important issues raised by this work. Is the theory space only a device relevant to psychological theorizing? Or is it a very general psychological construction with applications from creative problem solving to the construction of new scientific paradigms? Is it, in other words, a general model of complex, intellectual (i.e., symbolic) problem solving?

A Direction for Further Research

The limitations and questions above provide ample resources for further research. In this sense, the theory supports the inevitable goal of science—the doing of more science (Gillespie, 2024). However, one research issue has claimed the attention of the author, both because of its fundamental nature and because of its elusiveness.

Reflecting on his theory, the author recognized that, though he had provided a theory of the person-as-theorist, he had left unmentioned the necessity of the person-who-is-a-theorist. Yet that person is clearly present throughout the current paper. The author has tried to minimize purely autobiographical information, and to make sure that all discussions, no matter how autoethnographic they might be, are clearly directed toward the development of the theory's

presentation. Yet *persons* remain in the shadows. The author is present, hidden behind his words; the reader too is here, in silence.

What is this issue? Are persons always present within their own Dasein (Heidegger, 2010)? Is this our humanity (Brill, 2021)? Can we be the person-who-is-the-person-as-theorist *and* the person who is not? Certainly: a direction for further research.

References

Artress, L. (2006). *Walking a sacred path: Rediscovering the labyrinth as a spiritual practice* (2nd ed.). Riverhead Books.

Barnes, B., Bloor, D. and Henry, J. (1996). *Scientific knowledge: A sociological analysis*. University of Chicago Press.

Bartoli, E., Devara, E., Dang, H. Q., Rabinovich, R., Mathura, R. K., Anand, A., Pascuzzi, B. R., Adkinson, J., Kenett, Y. N., Bijanki, K. R., Sheth, S. A., & Shofty, B. (2024). Default mode network electrophysiological dynamics and causal role in creative thinking. *Brain*, *147*(10), 3409–3425. https://doi.org/10.1093/brain/awae199

Bransford, J. D. (1979). *Human cognition: Learning, understanding and remembering*. Wadsworth Publishing Company.

Brill, G. A. (2021). The view from humanity and the practice of psychological inquiry. *Journal of theoretical and philosophical psychology, 41*(2), 97–114. https://doi.org/10.1037/teo0000147

Callard, F., & Margulies, D. S. (2011). The subject at rest: Novel conceptualizations of self and brain from cognitive neuroscience's study of the 'resting state'. *Subjectivity, 4*(3), 227–257. https://doi.org/10.1057/sub.2011.11

Callard, F., Smallwood, J., & Margulis, D. S. (2012). Default positions: How neuroscience's historical legacy has hampered investigation of the resting mind. *Frontiers in Psychology, 3*, 1–6. https://doi.org/10.3389/fpsyg.2012.00321

Callard, F., Smallwood, J., Golchert, J., & Margulis, D. S. (2013). The era of the wandering mind? Twenty-first century research on self-generated mental activity. *Frontiers in psychology, 4*, Article 891. https://doi.org/10.3389/fpsyg.2013.00891

Chaitin, G. J. (1987a). *Algorithmic information theory*. Cambridge University Press. https://doi.org/10.1017/CBO9780511608858

Chaitin, G. J. (1987b). *Information randomness & incompleteness: Papers on algorithmic information theory*. World Scientific. https://doi.org/10.1142/1048

Colodny, R. G. (Ed.) (1970). *The nature and function of scientific theories*. University of Pittsburgh Press.

Cook, P. A. (1986). *Nonlinear dynamical systems*. Prentice-Hall International. https://doi.org/10.1016/0005-1098(90)90016-B

Csordas, T. J. (1994). Words from the Holy People: A case study in cultural phenomenology. In T. J. Csordas (Ed.), *Embodiment and experience* (pp. 269–290). Cambridge University Press. https://doi.org/10.1007/978-1-137-08286-2_9

Csordas, T. J. (2002). *Body/Meaning/Healing*. Palgrave Macmillan. https://doi.org/10.1007/978-1-137-08286-2

Darwin, C. (1859/1968). *The origin of species*. Penguin Books.

Dewey, J. (1929). *Experience and Nature*. Open Court.

Doner, J. (2024a). Conscious phenomenological transformation. *The humanistic psychologist, 52*(4), 325–340. https://doi.org/10.1037/hum0000337

Doner, J. (2024b, May 20–24). *Theorizing as a multi-engagement nonlinear process: An individual case study* [Conference presentation]. The Conference of the International Society for Theoretical Psychology 2024, Belgrade, Serbia.

Doner, J. (2024c, April 26-28*). Rationality in epistemic disciplines: Unity, diversity, and the growth of knowledge* [Conference presentation]. The Divisional meeting of the Society for Theoretical and Philosophical Psychology, APA Div. 24, Pittsburgh, PA.

Doner, J. (2024d). *Information efficacy* [Unpublished manuscript].

Doner, J. (2022). The dynamic uncertainty of narrative, place, and practice in spiritual experience: Clues from the phenomenology of walking a labyrinth. *Archive for the psychology of religion, 44*(3), 129–146. https://doi.org/10.1177/00846724221131114

Doner, J. (2018, 2–4 March). *Information efficacy* [Conference presentation]. The Midwinter Meeting of the Theoretical and Philosophical Society, APA Div. 24, Richmond, VA.

Doner, J. (2020, February 28–March 1). *Information efficacy and mental causation* [Conference presentation]. The Midwinter Meeting of the Theoretical and Philosophical Society, APA Div. 24, San Diego, CA.

Doner, J. (2017). Evolution in information-driven systems. In G. B. Sullivan, J. Creswell, B. Ellis, M. Morgan, and E. Schraube (Eds.), *Resistance and renewal in theoretical psychology* (pp. 88-99). Captus University Publications.

Doner, J. (2008). The origin and nature of intelligence. In J. Dillon, & M.-E. Zovko (Eds.), *Platonism and Forms of Intelligence* (pp. 25–38). Akademie Verlag.

Eronen, M. I., Osbeck, L. M., and O'Doherty, K. C. (2024). Should psychology follow the methods and principles of the natural sciences? An introduction to the debate. *Theory & Psychology, 34*(3), 285–294. https://doi.org/10.1177/09593543241257916

Fernandez, M. A. (2024). A case for using methods of natural science in advancing the field of cognitive neuroscience. *Theory & Psychology, 34*(3), 392–404. https://doi.org/10.1177/09593543241255335

Fodor, J. (1975). *The language of thought*. Harvard University Press. https://doi.org/10.2307/2184356

Galagher, S., & Zahavi, D. (2012). *The phenomenological mind* (2nd ed). Routledge. https://doi.org/10.4324/9780203126752

Gillespie, A. (2024, May 20–24). *Pragmatism: Humble theory for uncertain times* [Keynote address]. The Conference of the International Society for Theoretical Psychology 2024, Belgrade, Serbia.

Glass, A. L., Holyoak, K. J., & Santa, J. L. (1979). *Cognition*. Addison-Wesley Publishing Company.

Godfrey-Smith, P. (2021). *Theory and reality: An introduction to the philosophy of science* (2nd ed.). University of Chicago Press.

Hanson, N. R. (1970). A picture theory of theory meaning. In R. G. Colodny (Ed.), *The nature and function of scientific theories* (pp. 233–274). University of Pittsburgh Press. https://doi.org/10.1007/978-94-010-3108-0_1

Heidegger, M. (2010). *Being and time*. State University of New York Press.

Herstein, I. N. (1967). *Topics in algebra*. Xerox College Publishing.

Hutchins, E. (1995). *Cognition in the wild*. MIT Press. https://doi.org/10.7551/mitpress/1881.001.0001

Kiverstein, J. (2018). Extended cognition. In A. Newen, L. De Bruin, and S. Gallagher (Eds.), *The Oxford handbook of 4e cognition* (pp. 19–40). Oxford University Press. https://doi.org/10.1093/oxfordhb/9780198735410.013.2

Kahneman, D. (2011). *Thinking, fast and slow*. Farrar, Straus Giroux.

Koffka, K. (1963). *Principles of Gestalt psychology*. Harcourt Brace & World. https://doi.org/10.4324/9781315009292

Kuhn, T. (1962). *The structure of scientific revolutions*. University of Chicago Press. https://doi.org/10.7208/chicago/9780226458106.001.0001

Lakatos, I. and Musgrave, A. (Eds.). (1970). *Criticism and the growth of knowledge.* Cambridge University Press. https://doi.org/10.1017/CBO9781139171434

Lamb, M. and Chemero, A. (2018). Interacting in the open: Where dynamical systems become extended and embodied. In A. Newen, L. De Bruin, and S. Gallagher, (Eds.), *The Oxford handbook of 4e cognition* (pp. 147–162). Oxford University Press. https://doi.org/10.1093/oxfordhb/9780198735410.013.8

Maxwell, G. (1970). Theories, perception, and structural realism. In R. G. Colodny (Ed.), *The nature and function of scientific theories* (pp. 3–34). University of Pittsburgh Press. https://doi.org/10.2307/jj.12570393.5

Menary, R. (2018). Cognitive integration: How culture transforms us and extends or cognitive capabilities. In A. Newen, L. De Bruin, and S. Gallagher (Eds.), *The Oxford handbook of 4e cognition* (pp. 187–216). Oxford University Press. https://doi.org/10.1093/oxfordhb/9780198735410.013.10

Magill, F. N. (Ed.). (1990). *Masterpieces of world philosophy*. HarperCollins.

Merleau-Ponty, M. (1964). *The primacy of perception*. Northwestern University Press.

Merton, R. K. (1973). *The sociology of science: Theoretical and empirical investigations*. University of Chicago Press. https://doi.org/10.1017/S0007087400013716

Newen, A., De Bruin, L., & Gallagher, S. (2018a). 4E cognition: Historical roots, key concepts and central issues. In A. Newen, L. De Bruin, and S. Gallagher (Eds.), *The Oxford handbook of 4e cognition* (pp. 3–28). Oxford University Press.

Newen, A., De Bruin, L., and Gallagher, S. (Eds.) (2018b). *The Oxford handbook of 4e cognition.* Oxford University Press. https://doi.org/10.1093/oxfordhb/9780198735410.001.0001

Osbeck, L. M., Nersessian, N. J., Malone, K. R., & Newstetter, W. C. (2011). *Science as psychology: Sense-making and identity in science*. Cambridge University Press. https://doi.org/10.1017/cbo9780511933936

Osborn, A. E. (1963). *Applied imagination: Principles and processes of creative problem-solving* (3rd ed.). Charles Scribner's Sons.

Pashler, H. E. (1998). *The psychology of attention*. MIT Press. https://doi.org/10.7551/mitpress/5677.001.0001

Piaget, J. (1950). *The psychology of intelligence*. Routledge & Kegan Paul. https://doi.org/10.4324/9780203164730

Piaget, J. (1952). *The origins of intelligence in children.* W. W. Norton & Company. https://doi.org/10.1037/11494-000

Piaget, J. (1971). *Biology and knowledge: An essay on the relations between organic regulations and cognitive processes.* University of Chicago Press.

Popper, K. R. (1963). *Conjectures and refutations*. Harper and Row.

Proctor, R. W. and Warren, A. D. (2024). Mechanism and contextualism in psychology. *Theory & psychology, 34*(3), 328–346. https://doi.org/10.1177/09593543241234654

Richardson, F. C., Fowers, B. J., and Guignon, C. B. (1999). *Re-envisioning psychology: Moral dimensions of theory and practice*. Jossey-Bass Publishers.

Russell, B. (1948). *Human knowledge: Its scope and limits.* Simon and Schuster.

Shrady, M. (1972). *Moments of insight: The emergence of great ideas in the lives of creative men*. Harper & Row Publishers.

Sperry, R. W., Miner, N., & Myers, R. E. (1955). Visual pattern perception following subpial slicing and tantalum wire implantations in the visual cortex. *Journal of Comparative and Physiological Psychology, 48*(1), 50–58. https://doi.org/10.1037/h0043456

Sprenger, J. (2016). Confirmation and induction. In P. Humphreys (Ed.), *The Oxford handbook of the philosophy of science* (pp. 185-209). Oxford University Press. https://doi.org/10.1093/oxfordhb/9780199368815.013.10

Teo, T. (2024). Subjectivity and method: Why psychology needs more armchair scholarship. *Theory & psychology, 34*(3), 347–361. https://doi.org/10.1177/09593543231219534

Valsiner, L. (2014). What cultural psychologies need: Generalizing theories! *Culture & Psychology, 20*(2), 147–159. https://doi.org/10.1177/1354067x14527841

Van Gundy, A. B. (1981). *Techniques of structured problem solving*. Van Nostrand Reinhold.

Varela, F. J., Thompson, E., & Rosch, E. (1991). *The embodied mind*. MIT Press.

Weber, A. M., & Vosgerau, G. (2018). Critical note: Brain-body-environment couplings. What do they teach us about cognition? In A. Newen, L. De Bruin, & S. Gallagher (Eds.), *The Oxford handbook of 4e cognition* (pp. 405–414). Oxford University Press. https://doi.org/10.1093/oxfordhb/9780198735410.013.21

Weimer, W. B. (2023). *Epistemology of the human sciences: Restoring an evolutionary approach to biology, psychology, and philosophy*. Palgrave Macmillan. https://doi.org/10.1007/978-3-031-17173-4

von Weizäcker, C. F. (1972). Evolution und entropiewachstum. *Nova acta Leopoldina, 37*, 515–531.

Wertz, F. J. (2024). Phenomenology and natural science: What kind of discipline is psychology? *Theory & psychology, 34*(3), 405–424. https://doi.org/10.1177/09593543241248128

Zenit, H., Kiani, N. A., & Tegner, J. (2023). Algorithmic information dynamics. Cambridge University Press. https://doi.org/10.1017/9781108596619

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