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Expertise and Expression in Second Language Acquisition: An Embodied Perspective

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To abandon your native tongue and adopt another is to dismantle yourself, piece by piece, and then put yourself together again, in a different form.

<div align="right">—Costica Bradatan, Born Again in a Second Language</div>

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Chapter 1: Introduction

In directing our attention to mundane aspects of the human experience, we can discover new ways of interacting with and understanding the world. One such formative experience, regularly seen as mundane in much of the world, is learning a second language. It is no exaggeration to say that second language acquisition is one of the processes which most influences and drives our globalized world, and yet we understand and study this process relatively little.

Continuing the trends of naturalizing phenomenological inquiry, this project attempts to evaluate phenomenological approaches to skill acquisition alongside second language acquisition theory and research through an explicitly embodied lens. Through this pluralistic methodology, acquiring a second language can be reevaluated as a process which reveals much about how human beings interact with and understand their environment. In emphasizing the phenomenological aspects, it is possible to understand this process as attuned to lived experience. Finally, an embodied (especially enactive) lens decentralizes philosophically, and scientifically, problematic representationalist understandings of the mind and intelligence, further resituating our relationship with reality and language as a lived, irreducible process. Phenomenology of language, in general, offers an atypical take on language that moves philosophers away from use of representation and towards lived experience (Inkpin, 2017). This project focuses in on the understudied process of second language acquisition.

Due to the interdisciplinary nature of the investigation, I will take two chapters to explain the background concepts and theories involved. Chapter 2a (Background Concepts) will briefly explain the phenomenological method used in this project, followed by an explanation of

representational or embodied takes on the mind. Finally, I will present enactivism, a variation on embodied cognition, as the framework for the remainder of the investigation. Chapter 2b (Background Theory) will then explain a number of significant theories and debates in philosophy of language and applied linguistics (most especially second-language acquisition). I will explain both skill acquisition and sociocultural theory of second language acquisition as mutually compatible and amenable to enactivism and phenomenology. Debates related to this central topic, such as mentalese, linguistic relativity and universal grammar, will then be highlighted briefly.

After the second chapter's exploration of skill acquisition theory, Chapter 3 (Techne and Episteme) will explore the relationship between knowledge-how and knowledge-that, finding an informalist and practicalist approach the most amenable to a skill-based inquiry regarding language. Chapter 4 (Dreyfus: Skill Acquisition and Success) will explore Dreyfus' five-stage model of skill acquisition and Soar theory, both commonly referenced and accepted in SLA and skill acquisition literature, and then continue on to discuss more embodied and social frameworks, such as Dreyfus' skillful coping, Barnacles' gut learning, Collins' linguistic socialization, and Hutto's cultural permeation. While slightly different in terms of their base assumptions and the problems they are attempting to solve, these frameworks are mutually compatible in helping us restructure our understanding of learning, skill and language to a more social and interactive framework.

Chapter 5 (Heideggerian Disclosure and Attunement) will then explore Heideggerian phenomenology of language and Heideggerian phenomenology of skill as the underlying influence in Dreyfus' phenomenology. After exploring the disclosive function of language, Heideggerian attunement can be understood not only as a set of ways in which we understand the

world, but also as a set of ways in which we understand language. This underscores the contextual and social approaches, demonstrating language acquisition as a dynamic and non-linear process through which we understand and engage the world. In doing so, especially for the existential phenomenologists, we understand and engage ourselves. Chapter 6 (Towards a Phenomenology of Second Language Acquisition) will unify these various models to create a skill-oriented phenomenological account of second language acquisition.

Phenomenology of second language acquisition reflects an understanding of the human being as based in social context, through which in must negotiate thousands of specific instances, arriving at responses that are better or worse depending on these instances and the myriad factors that influence a decision. This is done without necessarily representing every aspect of the process internally, and as such may not involve much of what is traditionally considered necessary for intelligent learning. Our ability to acquire a new representational system through our social and contextual interactions has interesting consequences for what may constitute representation, content and scaffolding in enactivist and embodied inquiry. Second-language acquisition, as the rich process that it is, offers many potential avenues for enactivist and philosophical inquiry beyond the scope of an inquiry focused primarily on skill acquisition.

Chapter 2a: Background Concepts

It is necessary before proceeding in this investigation to clarify a number of philosophical approaches that will be employed. A phenomenological approach, which is at the heart of this investigation, attempts to understand "things precisely as they are given to us" (Sokolowski, 2000, p. 64). This can often entail a rejection of the appearance-reality distinction, and while *qualia* are key to this method, it is by no means the only feature noted. Rather, we are trying to understand certain features of lived experience in a way that is true to how we experience these features in our lives. In getting to the things themselves, to paraphrase Husserl's motto, we often need to cast off, question or "bracket" the cultural or theoretical approaches we have of the experience we are studying.

Sokolowski also identifies a number of concepts commonly used in phenomenological investigation. One such structure is the interplay between parts and wholes, in which the difference between an independent part of a whole and a moment should be considered. To describe an independent part Sokolowski uses the example of leaves and acorns, which are independent from their tree. In contrast, "the color red (or any other color), which cannot occur apart from some surface of spatial expanse" (2000, p. 65) is an example of a moment. This type of moment cannot be conceived of as separate from other moments or other parts of that experience of perception. A phenomenological investigation understands the interplay between the whole and the part, both when the part is independent, and when it constitutes a moment. Along the same lines, intersubjective experiences reflect differing and similar interactions with a feature of experience (p. 30).

Phenomenology has been paired with scientific methods of investigation with increasing frequency in the past few decades, especially with cognitive science. One result of such inter-methodological investigation has been embodied cognition, which is an interdisciplinary research program based in the general rejection of mind-body dualism. To varying degrees, advocates of embodied cognition do not put as much emphasis on representationalist or computationalist views of the mind (Gallagher 2017).

Computationalist accounts of the mind, as one type of representationalist accounts, gained steam in the past century, with the advent of the computer. While they often do not always make appeals to some spiritual aspect of the human being such as a soul, they can often face similar pitfalls when it comes to explaining how thoughts come to have content or come to represent something. Many find that this view of thought reduces thought to mere symbol manipulation, setting aside the importance of environment and context (Rescorla 2015). This critique of computationalism is best illustrated through the famous Chinese Room thought experiment.

Searle (1980) asks us to imagine that he has been placed in a room with two batches of writing in Chinese (which he does not speak) and is given a set of formal rules in English that allow him to match a question, in the first batch of writing, with the appropriate answer, found in the second batch. He can send these answers out of the room such that he appears to be a native Chinese speaker to those outside of the room. This production is entirely due to the formal rules at hand and not due to his understanding what is happening. The argument presented as an argument against artificial intelligence, and yet is frequently interpreted as a critique of representationalist views of the mind. Searle's central critique is that the program has syntax but

lacks semantics (p. 422), since understanding in the Chinese Room experiment depends on a mind within the room doing the understanding, resulting in infinite regress.

Advocates of embodied cognition attempt to integrate scientific and phenomenological accounts that can more accurately describe how a human being approaches reality without as much appeal to philosophically and scientifically dubious accounts that depend heavily on representation. Especially when discussing spontaneity and habitual responses, representationalist accounts impoverish the richness of response and are at times too slow for the processes we are looking at. This does not mean, even for the most radical philosophers of mind (Hutto & Myin, 2012), that representation has no role whatsoever, but rather that it has been given an outsized importance in philosophy of mind to this point.

An attempt to reconcile a view of the mind that decentralizes representation with a feature of human experience that by all accounts seems to be representational in nature could reveal interesting features both about embodied cognition as it has been defined and studied, and additionally have implications for the nature of language in our daily lives. Due to the spontaneous aspect of many variations on embodied cognition,[1] especially enactivism, this branch of philosophy of mind may also serve to explain automatized language expression. Embodied cognition and enactivism are commonly considered to have a basis in the phenomenological work of Husserl, Heidegger and Merleau-Ponty (Gallagher, 2017; Inkpin, 2017), meaning that such a line of investigation is not only empirically tenable, but aligned with phenomenological literature of the last hundred years. Phenomenology of language is extremely compatible with embodied approaches and can provide important insights about the nature of

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[1] These variations are referred to collectively as 4e; ecological, embedded, extended and enacted (Gallagher, 2017). These variations are everchanging and many philosophers of mind do not fall firmly into one camp or another, causing more dispute regarding these divisions. For a more complete discussion of these variations, see Gallagher 2017.

language (Inkpin, 2017). This project attempts to address what we mean when we talk about second-language use and acquisition.

Enactivists attempt to create a more coherent approach to the problem of content and mentality, especially with regards to responsiveness and spontaneity. Contrary to popular interpretation, the enactivist rejection of content in the majority of cognition does not lead to a total rejection of representation as "some cognitive activity– plausibly that associated with and dependent upon the mastery of language surely involves content" (Hutto & Myin, 2012, p. xviii). From this is does not follow that all of cognition or all mental processes necessarily involve content. The radical enactivist approach rejects the principle that content necessarily involves cognition, keeping content constrained to specific contexts like language.

Rather than working from the view that content and representation are involved in most of cognition and from there explaining exceptions, Hutto and Myin approach the problem from the other direction by explaining how most basic processes work without representation, and from there allowing for exceptions (p. 4). This approach is due to the fact that it is possible to account for representation in specific contexts for a mind that does not depend on representation, but it is not possible to account for action in a computationalist system due to the number of concepts and degrees of rapid customization that are necessary (2012). Enactivism focuses on understanding these processes as dynamic interactions with the environment in which a concrete division between in the mind and outside of it is not possible due to the "patterns of simultaneous, reciprocal causation [that] occur among the environments, the brain and the body" (p. 6). These interactions are grounded in and best explained by nothing more and nothing less than that same organism's prior interactions with the environment at hand (p. 8).

The enactivist dismissal of the traditional understanding of representation comes from a rejection of naturalistic accounts for informational content of thought (p. 36). The main issue with content necessarily involving cognition is that there is not a sufficient naturalistic explanation that allows for this assumption to be made due to the problem of conflating information-as-covariance with information-as-content (p. 67). Simply put, the fact something transmits information about something else is not sufficient for there to be truth-bearing content involved (p. 67). If and when our cognition relates information about something, it does not necessarily follow that said cognition has content. Rather, many cognitive processes can be understood adequately as directed intentionality in response to one's environment (p. 82). In a similar vein, cognition is not confined to the brain and representation, but exists in action across the brain, body and world in a social and intersubjective context (Gallagher, 2017, p. 6).

Natural languages and cultural background fulfill the role of representation when necessary (Hutto & Myin, 2012, p. 41). According to Clark and Chalmers, natural languages act as a complement to our inner state and extend cognition to the use of external representations (1998, p. 13, quoted in Hutto & Myin, 2012, p. 147). Their argument is dependent upon the distinction between a basic mind and a scaffolded mind. While the basic mind lacks content, the scaffolded mind can make use of linguistic representation as a *shared external* representation, and as a vehicle for what is meaningful semantic content. Language is explicitly and clearly to be understood as a tool in the enactivist framework, an idea that largely dismisses the traditional delineation between one's internal and external life. As such, mental processes that are traditionally considered to be representational are extensions of the same intersubjective, action-based and embodied processes that characterize less obviously representational aspects of the human experience.

This goes against the traditional cognitivist line of thinking in which these less obviously representational activities (that for instance don't make use of language) are in fact representationalist in their entirety. There are many philosophically interesting implications of such a radical questioning, one of which includes the foundations of intentionality as the mark of the mental (Gallagher, 2017, p. 66). Although this work cannot entirely avoid the issue of intentionality and the nature of mentality, it will not be addressed at length in the course of this investigation. For phenomenologists like Inkpin, phenomenology of language can clarify and illuminate what we mean when discussing scaffolding and mentality (2017), and so this project hopes to in part address such questions if only partially.

This will have interesting implications for the process of acquiring a second language, which should work in terms of acquiring a new system of external intersubjective and shared symbols (Hutto & Myin, 2012, p. 152). The enactivist view of language as presented by Hutto and Myin is additionally a decidedly social view, and likewise an evaluation of the acquisition process can be decidedly social as well. Due to the holistic take on the experience, changes in such a system would imply changes to other parts of the system. Gallagher writes of system components "at the very least a removal (or an addition) of any component will entail compensatory adjustments across the system" (p. 11-12). It then stands to reason that a consideration of language, particularly an experience with language that involves acquiring a new representational system would be one such example of adding a new component. The possibilities of cultural learning can imply an adaptability to human cognition and behavior (p. 46).

Furthermore, relatively recent trends in philosophy of language and neurolinguistics, such as Lakoff and Johnson 2003 and Pulvermüller 2005 support a view of language that considers

"body-related simulations (representations) as important for language and content processing" (Gallagher, 2017, p. 4). These views may not be entirely enactivist in nature, as they tend to include more appeals to classically cognitivist views of the mind, but even so they do indicate a shift in methodology and default viewpoint to one in which embodiment is a more thoroughly considered aspect of the lived-experience of language in recognition of the "embodied roots of abstract thought" (p. 38). Even if dubious of the enactivist approach to cognition, phenomenology of second language acquisition has significant implications for other peripheral research programs.

Through a marriage of phenomenological and investigation based in cognitive science, an enactivist approach to the process of second language acquisition can provide insight to philosophical questions regarding the mark of the mental, the nature of language, and the role of responsiveness for the human being. In taking an embodied, and especially enactivist, look at language, representation in language in decentralized to instead consider language as an intersubjective and shared scaffolding. Furthermore, second language acquisition (SLA) becomes the responsive acquisition of such a system, rather than mere representation. From this place, we can consider key SLA theories to amplify the investigation in a more interdisciplinary way.

Chapter 2b: Background Theories

Having laid forth much of the philosophical background necessary for this project, it is necessary to do the same for the linguistic aspects at hand. Upon defining some key terms and theories in SLA, the linguistic and scientific accounts of language acquisition can be used as a basis for a solid phenomenological account. There are many approaches to understanding SLA, one of the primary ones being a skill acquisition-based approach. The skill acquisition-based approach is one that is less fully based on a cognitive model and tends to consider a more social and enacted context. A second theory that can offer some illumination as well is the sociocultural theory of SLA.

This skill-based approach is somewhat more applicable to situations where the learner is being exposed to explicit rules in a more controlled setting, due to its focus on the proceduralization process (DeKeyser, 2007, p.103). Proceduralization is the process by which the declarative knowledge of the language is translated into expressive use of the language (or a transition from knowledge-that to knowledge-how). Regardless of some of its limitations in application, it is helpful in predicting student output, and accurately describes a model for how student's acquisition can vary with regard to certain features of grammar (p.108). This process is thought to end in automaticity, in which fast, unstoppable processing occurs regardless of the amount of information presented and elements key to understanding are obvious (Segalowitz, 2003, p. 390). Segalowitz explains the process in a more detail by stating that

> [proceduralization] involves passing from a cognitive stage where rules are explicit, through an associative stage where rules are applied repeatedly in a consistent manner, to an autonomous stage where the rules are no longer explicit and are executed automatically… automaticity, then, describes an end point in the acquisition of skill in this model (2003, p. 395).

The specific variation on proceduralization that Segalowitz has presented is the Atomic Components of Thought (ACT) theory, but he also states that there are other general cognitive skill development theories, noting specifically Newell's Soar theory (especially natural language Soar). These theories have not been explicitly applied to SLA, although some theorists make references to ACT theory (p. 395). Chapter 4, which will speak to various models of skill acquisition, will outline Soar theory as an example of ACT theory more thoroughly.

The process of SLA cannot be merely a question of the declarative knowledge becoming procedural knowledge, as the student needs to retain some amount of the knowledge-that in order to flexibly acquire more knowledge-how and prevent such issues as fossilization (Johnson, 1996, quoted in Segalowitz, 2003, p. 395). Fossilization refers to an advanced student's errors becoming entrenched in their speech despite their exposure to correct speech and explanations as to why what they are saying is wrong. Likewise, there may be issues when it comes to generalizing from knowledge-how to knowledge how without use of the knowledge-that which is the basis for the knowledge-how (DeKeyser, 2001, quoted in Segalowitz, 2003, p. 396). This proceduralization can be optimized since the student needs the appropriate declarative knowledge and examples through which the use of the rule can become clear (DeKeyser, 2007, p. 100). To give a specific example, an ESL student learning the difference between the articles *a* and *an* needs, in the skill acquisition model, to have the proper initial explanation of the difference and many examples through which he can eventually gain a procedural take on the difference and use it in his own writing and speech. Of course, any error in the initial explanation or in the practicing of the rule could lead to pretty bad fossilization, but this just shows how easy it can be to learn a language incorrectly.

SLA is an especially mysterious process if one considers that

even though many learners fail to achieve complete mastery of a target language, there is still a 'logical' problem of SLA [abbreviation mine] …learners eventually know more about the language than they could reasonably have learned if they had to depend entirely on the input they are exposed to (Lightbrown, 2006, p. 35).

This overstepping is made more intriguing by the fact that it is not confined to those that achieve mastery of a language, but rather is applicable to a wide variety of learners. This idea of the logical problem of language acquisition is not as readily visible with regards to other types of skills, since an individual who suddenly shows more expertise than is easily explained in doing a certain task may have achieved a certain break-through based on the input they have received. This may be less commonly seen when dealing with other types of skill, including cognitive skills, from baseball to chess, but it appears to be actively built into the process of SLA.

The sociocultural theory (SCT) of SLA provides another, but not incompatible account, for other aspects of the SLA process. Rather than initially assuming that language is a cognitive skill, "SCT [abbreviation mine] argues that human mental functioning is fundamentally a *mediated* process that is organized by cultural artifacts, activities and concepts…Language use, organization and structure are the primary means of mediation" (Lantolf &Thorne, 2007, p. 201). This view places the acquisition of language in terms of a manipulation of symbols that are to some degree external and is for this reason more compatible with the enactivist view of language as scaffolding or as tool manipulation. This tool-based process at its most basic level occurs through one's interaction with one's environment, and the ability to manipulated said tools changes one's social environment and one's self (p. 203).

One of the key aspects of SLA that SCT attempts to describe is the aspect of internalizing the language through private speech, or "appropriat[ing] the patterns and meanings of this speech and utiliz[ing] it inwardly to mediate our mental activity" (p. 206). Through processes such as this one we gain the ability to regulate ourselves in our second language expression (p. 203). In

this theory, the individual and his ability to internalize the language is fundamentally social and "emerges from social interaction" (p. 218), making no part of the language learning process either passive or incidental (p. 218). The SCT approach, in addition to the skill acquisition approach, are both amenable to an enactivist view of both cognition and language.

There are a number of other linguistic background concepts helpful for understanding this investigation, namely mentalese, linguistic relativity, and universal grammar. Mentalese refers to Fodor's hypothesis that there is some type of language of thought that is translated into our natural language (Aydede, 2010). Such a view of language and thought would mean accepting representationalist accounts of the mind to be true and would also imply that it is the same process to learn a first language and a second language. It would be the case that in each circumstance we are translating directly from our mentalese into natural language.

However, certain views of linguistic relativity (which can take the form of either linguistic determinism or linguistic influence) demonstrate that upon one's learning of a first language, one does not learn a system into which one translates one's thoughts, but rather learns the categories and ideas with which one from then on interprets the world. Linguistic determinism, or the Sapir-Whorf hypothesis, specifically attempted to note that "thinking is affected by the grammar of the language" (Hudson, 1996, p. 96). The Sapir-Whorf hypothesis is generally interpreted as being primarily an explanation of the influence of grammar on thought, and not merely the influence of vocabulary on thought. Regardless, the influence of vocabulary on thought is also worth exploring in its own right.

To give an example of the impact of vocabulary on one's phenomenological experience, perception of color is shown to be influenced by one's language. Winawer et al (2007) studied the impact of Russian words for the color blue on perception of colors. The Russian language has

two words for blue; *siniy,* or dark blue; and *goluboy,* or light blue. Before the tests, the subjects were asked to evaluate where on a scale of shades of blue they would place the *siniy-goluboy* distinction or the dark blue-light blue distinction, depending on their language. Both sets of speakers placed the distinction at the same place. This indicates that whatever difference there may be in active perception, it is a difference in the strength of the categories, and not that light is being processed differently or that their perception is physically altered in some other way.

The subjects were given three color blocks, and they had to say which of the two on the bottom row matched the block on the top row. They could see all three blue blocks at the same time to avoid testing memory and language, so that the test focused on perceiving the blocks. The discrimination of shades of blue had a different linguistic distinction in Russian that did not exist in English, meaning that Winawer et al predicted that Russian speakers would more quickly make cross-category decisions (2007), that is, decisions involving *siniy* and *goluboy* blocks. At no point did the English-speaking subjects have an advantage in the cross-category comparison (2007). The impact for Russian speakers was even more pronounced when cross-category colors that were very similar were being compared. This cross-category advantage along with the fact that both sets of speakers gave very similar sets of blue for each word demonstrates that,

> the critical difference in this case is not that English speakers cannot distinguish between light and dark blues, but rather that Russian speakers cannot avoid distinguishing them: they must do so to speak Russian in a conventional manner (Winawer, 2007, p. 7783).

This distinction is more habitual and automatic than it is for the English speaker (Winawer, 2007, p. 7784).

This advantage for the Russian speaker was still the case when the subjects had to remember an unrelated spatial pattern during the task, but interestingly was no longer the case when they were asked to repeat a string of numbers to themselves during the task. The difference in performance when verbal interference was involved indicates that this habitual distinction is

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employed during the task without the subject necessarily being aware and does not indicate that these linguistic differences change the structure of perception itself (p. 7784). One can argue that if the use of Russian during one's life actually led to a physically different perception of the color blue, the advantage would have remained during the linguistic interference task.

The issue at hand with regard to the Sapir-Whorf hypothesis, is not only the question of vocabulary, but the question of grammar. They were not the first to suggest the influence of natural language on thought. W.V. Humboldt is often considered one of their intellectual precursors (Al-Sheikh Hussein, 2012; Heidegger, 1971) when it comes to how language shapes a society's worldview. Regardless, their formulations are perhaps the most widely known variations on linguistic relativity, and so the hypothesis bears their names.

One of the issues with the original hypothesis is that it is unclear to what degree Sapir and Whorf wanted to say that language affected thought. Certain readings state that it is one key factor (linguistic relativity), while others state that they thought it to be the most central one (linguistic determinism). As Al-Sheikh Hussein (2012) writes, this is due to the Whorf's reformulation of the hypothesis later on in his career (p. 642). Sapir's original hypothesis, based on his work in languages indigenous to the Americas, is that one's language influences one's perception of the world, and that "the existence of many languages systems implies that the people who think in these different languages must perceive the world differently" (p. 642). Whorf extended Sapir's ideas and according to Al-Sheikh Hussein, "went much further than saying that there was a 'predisposition'; in Whorf's view, the relationship between language and culture was a deterministic one" (p. 643). Whorf's application of the hypothesis also extends to features of grammar instead of merely categories that are reflected in the vocabulary. Al-Sheikh Hussein finds that this aspect of the hypothesis indicates more linguistic influence on the way

one thinks "since classification systems that belong to sex, number, time, are both more subtle [sic] and more pervasive" (p. 643).

Al-Sheikh Hussein also argues that Whorf's view of linguistic relativity implies that there is no objective reality. He writes that,

> Sapir did not doubt the existence of an objective world. He said that human beings do not live in the objective world alone, but that the real world is, to a large extent, unconsciously built up on the language habits of the group. Whorf stated that the world is presented in a kaleidoscopic flux of impressions which has to be organized by the linguistic system in our minds. This would seem to make the objective world into something totally subjective for Whorf (p. 643).

This idea of having either objectivity or total subjectivity in either version of the hypothesis seems somewhat absolutist as it is possible to consider that both linguists were perspectivists. There is little reason to conclude that Sapir's view of language led him to an objective understanding of reality while Whorf's led him to a subjectivist view. Another issue with such a statement is that it has proved very difficult to empirically test or falsify. Many find that a hard version of language determinism would make it impossible for us to reflect about our own language, and also impossible to learn a different one, and so a softer version of their hypothesis, linguistic relativity, is more widely accepted.

When speaking of linguistic relativity, especially in a philosophical and phenomenological treatment of the subject, it is impossible to avoid considering Wittgenstein's apparent endorsement of linguistic relativity, represented in his famous aphorism, "the limits of my language (of that language which I alone understand) mean the limits of my world" (1961, 5.61, quoted in Williams 1974). Misquotations of this aphorism that eliminate the parenthetical phrase are rampant among endorsers of linguistic relativity, and such misquotations dismiss a caveat of this influential aphorism. The implications of the phrase "of that language which I

alone understand" are unclear.[2] A potential interpretation of this aphorism leads us to a view of language as a private language, which later Wittgenstein dismisses in favor of "language being an embodied, this-worldly, concrete social activity, expressive of human needs, as opposed to the largely timeless, unlocated and impersonal designatings of the *Tractatus*" (Williams, 1974, p. 79), which may not entirely rid Wittgenstein of his idealistic and relativistic tendencies (see footnote #2).

There is a crucial difference between what we may call Whorf's linguistic relativism and Wittgenstein's linguistic relativism. The most crucial of these is the conception of language in which the two thinkers operate. Whorf is speaking of language in a narrow sense, more or less following a folk definition of language as a social good and artifact that *heavily influences world-view*, while Wittgenstein speaks quite directly of language *as world-view* (p. 86). What he is willing to define as an aspect of language goes well beyond what a linguist or social scientist such as Whorf may consider, to the extent in one thought experiment he includes color samples as an artifact of language (Wittgenstein, 2009, p. 11). It is also important to note that Wittgenstein's linguistic relativism might in fact encourage us to think outside our world-view and enjoy what new perspectives we may find. Williams writes that,

> Thus, the different world-pictures, as so far introduced [in later Wittgenstein], are not inaccessible to one another; those who had one picture might come to see the point (in terms of interests, etc.) of another picture, and also perhaps come to understand why those who had it did so (p. 87).

Perhaps this implication is also unavoidable in Whorfian relativism. To the extent we can imagine these alternatives outside our native language through another, it would seem that we should engage in such imagination.

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[2] For a treatment of the idealist, solipsist and relativist consequences of the *Tractatus*, consult Williams 1974.

A third aspect that should be discussed in a treatment of SLA is the question of universal grammar. Chomsky's universal grammar (1977) refers to a number of structures that are common to every language, and therefore thought to be common to how humans think. Such structures include verbs being altered in some way to fit the subject and negation (VanPatten, 2017a). These grammar structures are not the surface grammar that is discussed when one learns how to write in a grammatically correct way but are thought to refer to more internalized structures that all or most languages have in common (VanPatten 2017b). The main advantage to such an understanding of the human mind is that it helps us account for the logical problem of language acquisition by allowing us to deduce patterns about how our target language works in terms of this system of internalized rules. Unfortunately, like linguistic relativity, it is somewhat difficult to design an experiment than can test for the hypothesis of universal grammar and not inadvertently confirm or reject some other hypothesis. It may be difficult to eliminate factors such as a student's broader pattern recognition abilities, or their ability to extrapolate more explicitly from structures in their first language. In general, universal grammar is related to many significant philosophical questions regarding philosophy of language and of mind, but unlike mentalese and linguistic relativity, universal grammar is less helpful in determining a phenomenology of second language acquisition, and so it will be not be extensively addressed in the course of this project.

When we look at second language acquisition as a cognitive skill, most accounts will emphasize the proceduralization and automatization of the skill. Considered in a more social context, accounts should prioritize the interactions of many speakers and the internalization of a particular way of understanding reality when acquiring a language. These new priorities recast language as a dynamic and responsive mediation with reality, rather than as mere representation.

In this light, mentalese is effectively disregarded due to its overly representationalist bent. Questions of linguistic relativity are open ended and key to an exploration of what it is to move between languages and between cultures. Finally, universal grammar should be considered as extraneous to an investigation that attempts to deal with language acquisition as a lived process. The nature of proceduralizing or internalizing a way of doing things, key to the description of SLA in this chapter, fundamentally hinges on epistemological issues regarding the knowledge-that and knowledge-how distinction, and so this is an appropriate moment for such a distinction to be addressed.

Chapter 3: *Techne* and *Episteme*

The concept of proceduralization calls to mind another distinction in philosophy, that of *episteme* (knowledge-that) and *techne* (knowledge-how). While there are maybe some cases in which we more or less easily distinguish between the two types of knowledge, many skills, especially cognitive skills, are not easily placed in either category. Language in particular might be seen as bridging or subverting this distinction in a unique way. The *episteme-techne* distinction has been by no means treated universally across the history of philosophy, indicating that it is not an obvious or necessary way to understand knowledge. There are many instances in which philosophers have attempted to question this distinction or eliminate it altogether, by either stating that knowledge-how is a variation of knowledge-that, or that knowledge-that is a variation of knowledge-how. Establishing an approach to this distinction in helpful for understanding the phenomenology of SLA, as it is a process often explained in terms of proceduralization, conventionally described as a shifting from knowledge-that to knowledge-how.

One solution to the problem of classifying language acquisition as either knowledge-how or knowledge-that is to dismiss the distinction. Practicalism[3] is the position that it is possible to account for knowledge-that in terms of knowledge-how (Fantl, 2012). Instead of understanding knowledge as justified true belief, this position accepts other ways to "manifest knowledge-that" (Fantl, 2012). Knowledge of *p* being the case can instead be understood as the capacity "to respond, to reply, to represent or to reason accurately that *p*" (Hetherington, 2006, p.77, quoted in Fantl, 2012). The primacy of knowledge-how is echoed in enactivism, where prior interactions

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[3] This position is also called radical anti-intellectualism. Since this phrase may be confused with a sociopolitical worldview, the term "practicalism" will be used instead.

with an environment lead to further interactions without internal representation (Hutto & Myin, 2012, p. 8). If we consider that knowledge-that is actually a form of knowledge-how, the problem of proceduralization in SLA is much less of a problem. Instead of being a transition from knowledge-that to knowledge-how, proceduralization then becomes a transition from the ability to express a certain grammatical rule or definition, to the ability to express oneself. This practicalist view of skill acquisition would still provide an account for first-language acquisition as the acquisition of the ability to express oneself. Aside from the ability difference in types of knowledge-how, SLA and first-language acquisition would be to a large extent, similar processes. SCT is also compatible with the practicalist approach to skill acquisition since both processes highlight responsiveness in a given context.

Collins (2004), in contrast, highlights the division between knowledge-how and knowledge-that as well, in favor of what he refers to as an informalist approach. In contrast, Collins defines formalism as the belief that we can represent tacit (or informal) knowledge in terms of rules, while informalists do not think tacit knowledge is reducible in this way (p. 125). He states that there are certain ways in which knowledge-that does not encapsulate aspects of experience, stating that "informalists tend to think that those who believe otherwise have mistaken propositional knowledge– that which can be said about a domain– with real understanding" (p. 126). The implication of this quotation is not only that there is a key difference between knowledge-that and knowledge-how, but furthermore that knowledge-how is in some sense superior to knowledge-that. In this sense, the process of proceduralization would involve the acquisition of this real understanding.

Informalism, unlike practicalism, would imply a difference between first-language acquisition and SLA. The native speaker of English has this procedural knowledge of how to

speak English, or as Collins writes, has real understanding. The language learner, on the other hand, needs to gain this propositional knowledge and then at some point gain this real understanding of the language. It may be possible to frame this idea of real understanding of a language in terms of either automaticity and proceduralization, or internalization of the language, or both. However, the native speaker is always, or is in most circumstances, the one who possesses the real understanding of the language. The myriad of instances in which a non-native speaker has more expressive ability than a native speaker (especially within certain social contexts) may imply that there are ways and circumstances in which a non-native speaker is the one with the real understanding.

While a normative projection onto second-language acquisition may at times be unsavory, it is unavoidable. Excellence in any field, and excellence in the acquisition of any skill, should be a part of any strong account of such topics. If anything, the practicalist emphasis on the primacy of knowledge-how permits both a consistent view of the nature of knowledge and allows language to be unique in its knowledge-how state as an act of appropriation. The practicalist epistemological approach is consistent in that it does not incorporate what must be considered a largely arbitrary distinction between these types of knowledge. Much of an accurate description of knowledge-how includes knowledge-that. Much of an accurate description of knowledge-that includes knowledge-how, indicating that the distinction is often arbitrary and therefore potentially not reflective of the nature of knowledge. This prevents the need to create an entirely separate second type of knowledge, when it seems to be that the primacy of knowledge-how can adequately explain knowledge-that, and additionally accounts for the appearance of difference between these types of knowledge. The informalist approach justifiably demonstrates a reluctance to reduce knowledge-how to knowledge-that, and yet this unity may

be more acceptable if it is knowledge-that that is being categorized as knowledge-how. The cases

of knowledge that we may term knowledge-that are in fact cases in which there is content to an

instance of knowledge-how. In this way, practicalist and informalist views are compatible.

Given the practicalist emphasis on the expression of whatever knowledge is at hand, or

the ability to "to respond, to reply, to represent or to reason accurately that *p*" (Hetherington,

2006, p.77, quoted in Fantl, 2012), language and one's manipulation of a language also become

indispensable as it is in some way key to most instances of response, reply, representation and

reasoning. The informalist conception of real understanding is also quite related to one's ability

to manipulate a language and the internalization of this scaffolded representational system. What

will henceforth be termed an informal practicalist approach gives a consistent epistemological

approach compatible with enactivism. Furthermore, such an informalist and practicalist approach

echoes the primacy of operative intentionality accepted by many enactivists (Gallagher, 2017, p.

80).

The knowledge-that and knowledge-how distinction is assumed in many philosophical

and linguistic circles and is how we often try to understand such processes as proceduralization.

But this distinction is by no means consistent across the history of philosophy, meaning that we

can question this categorization. While taking an enactivist point of departure, practicalism is

highly amenable to an investigation regarding language acquisition for the priority it gives to

knowledge-how. This is furthered by an informalist approach, which would go slightly further by

placing greater epistemological importance on knowledge-how. An informal practicalism

addresses the epistemological distinction while remaining consistent with phenomenological and

enactivist approaches. With such importance placed on knowledge-how, the acquisition of a

techne, or a skill, should be more thoroughly evaluated. Dreyfus' various models for

understanding skill acquisition present key debates in phenomenology and, together with more social and affective models, illuminate an understanding of language acquisition and use as embodied and responsive.

Chapter 4: Dreyfus: Skill Acquisition and Success

Now that we have established a practicalist and informalist approach to knowledge which prioritizes knowledge-how (*techne*), we can approach the acquisition of a new language as the acquisition of a skill. When appraising this process from a cognitive skill basis, Dreyfus' 1980 five-stage model of skill acquisition and Soar theory, commonly referenced in skill acquisition and second language acquisition literature respectively will be appraised. Since we can also consider language an embodied and social skill, other models such as Dreyfus's skillful coping (2002), Barnacle's gut learning (2009), and Collins' linguistic socialization (2004) and Hutto et al's cultural permeation (forthcoming) will be considered. By considering these various models, which evaluate cognitive, social and affective factors, we can begin to reach a varied enactivist account of some aspects of language acquisition.

The Dreyfus five-stage model of skill acquisition, created by brothers Hubert and Stuart Dreyfus, established a commonly referenced and accepted framework for understanding skill acquisition to the present day. For this reason, it offers a helpful initial stage from which an adjusted model may emerge. Their 1980 article is additionally interesting for the subject at hand due to the authors' attempts to use the model they were creating when discussing language learning. The first stage, or the novice stage, involves said novice finding "context-free features which the beginner can recognize without the benefit of experience…the beginner is then given *rules* for determining an action on the basis of these features" (p. 7).

At the competence level, the student has developed an idea of the guidelines, or "experience-based meaningful elements" (Dreyfus, 1980, p. 8). Here the authors seem to allow for the possibility of comprehension and meaning. They acquire a certain sense of guiding principles to make some predictions of future applications. At the proficient stage,

> the brain-state correlated with the performer's experiencing a whole situation from a particular perspective is organized and stored in such a way as to provide a basis for future recognition of similar situations viewed from similar perspectives (Dreyfus, 1980, p. 10).

At the expertise level, intuition becomes apparent in the student's approach.

This five-stage model of skill acquisition implies a linear shift from abstract rules to concrete responses, which may not entirely be the case in the context of language learning. Language learning as a process is not easily divided up into stages. VanPatten (2017a) puts forth that language learning as a process is piecemeal and involves working on pieces of all parts of the language at once. Tense, gender, case endings and use of more complicated phrasing are all pieces that develop in conjunction with each other, which does not follow the current popular model wherein language is taught one aspect at a time (VanPatten, 2017a). A student doesn't master a particular type of conjugation and then move on to another type; rather the student learns pieces of various grammatical structures at the same time. For this reason, a stage-based structure may not capture the immense variation in one student's language ability at any given time. This five-stage model, then, may be more accurately seen as a way to explain automatization and proceduralization.

The matter of measuring automatization is quite difficult, as it tends to focus in on specific performative and testable factors of language production. One such factor that is frequently used as a metric for automatization is processing speed, which can be somewhat problematic. As Segalowitz writes, "while all automatic processing may entail fast processing, it

does not follow that all fast processing is necessarily automatic…merely observing that performance was fast does not necessarily indicate it was automatic" (2003, p. 385). Furthermore, as DeKeyser explains,

> Automaticity is not an all-or-northing affair. Even highly automatized behaviors are not 100% automatic, as becomes clear when we stumble walking down the stairs, when we realize we are driving too fast when engaged in an exciting conversation with a passenger, or when we stumble over our words while uttering a simple sentence in our native language (2007, p. 99).

This problem of a seemingly random failure during a task that should come easily is also referred to as choking. The aspect of choking in and of itself is an interesting subject in the realm of philosophy of skill acquisition and cognitive science, with much work done on the topic, including Ilundáin-Agurruza 2015, which focuses on the experience as it applies to sport. In choking, an individual with the necessary expertise to perform the task severely underperforms (Ilundáin-Agurruza, 2015, p. 398).

Intuition in general is a rather poorly defined term in many contexts, and so it can be that Dreyfus' use implies the automatization of expression in the target language, but it can also be argued that the authors attempt to make a point about the proceduralization of knowledge, which is supported by their statement that "without his consciously using any rules, situations simply elicit from him appropriate linguistic responses" (Dreyfus, 1980, p. 12). This implies a certain leap from knowledge-that to knowledge-how, or barring that distinction, a certain automatization of responses. The final stage of mastery involves a state in which the learner "cease[s] to pay attention to his performance (Dreyfus, 1980, p. 14).

The cautious reader should resist this notion that the speaker ceases to pay attention at a masterful level. While basic sentences clearly do not demand the mental effort that they once did, a master in an important sense is perhaps more deeply aware of the conventions and rules they are manipulating. This is a common critique of early Dreyfus as well as late Dreyfus'

skillful coping model (to be explained in more detail later in the chapter), although late Dreyfus does seem to treat the question of what we are paying attention to with a little more nuance than early Dreyfus. Regardless, many are concerned, perhaps justifiably, that his statements about mindlessness and being unaware of certain steps in a process implies a lack of intelligent doing. Inkpin, for instance, characterizes Dreyfus's understanding of skill acquisition as one in which we are not aware and do not deliberate (2017, p. 274). While this is a component of some readings of Dreyfus, the mindlessness that both early and late Dreyfus emphasize is not a shorthand for unintelligent behavior, but rather emphasizes other factors like environment or goals (Gallagher, 2017, p. 192). Varied interpretations of Dreyfus aside, there is something to be said for accurately reflecting the role of attention in the phenomenology of skill acquisition. We should neither overemphasize or de-emphasize the role of paying attention.

Gobet and Chassy (2009) raise a number of critiques to the five-stage model proposed above and then put forth their own model for skill acquisition. The first critique is that the five-stage model depends on a transition from concrete situations to abstract understandings of the appropriate responses for a situation. They posit that there are some skills that may not include this transition from a concrete approach to an abstract approach and go even further in their critique by stating that there are some skills that develop in the opposite direction, which is to say, move from abstraction to concrete understanding. There example for this type of skill is physics "where experts in fact solve problems at a deep, abstract level, while novices perform at a superficial, concrete level (Chi et al. 1981; Larkin et al. 1980)" (Gobet & Chassy, 2009, p. 7).

Their second critique is that this linear progression for a skill does not account for variations of ability in the various sub-fields within a skill (p. 8). The variation for which the

authors want to account is particularly applicable to language learners whose skills in their target language vary wildly depending on the task that is being performed. The sub-fields aspect may be especially critical for language learning, as it is not necessarily possible to understand language learning as a series of separate tasks. Gobet and Chassy's critiques can accurately be understood as problems with a unified skill theory as a whole. Their proposed response to the five-stage model is the Chunk Hierarchy and Retrieval Sequences (CHREST) model, wherein long-term memory serves as a template that short term memory interacts with to make decisions.

The Soar theory, mentioned previously, is similar to CHREST in terms of short term and long-term memory interaction. This theory is commonly discussed in SLA literature, and should be evaluated as a potential component of an explanation of SLA. The most recent version of this theory of cognitive skill acquisition is Soar 9,[4] which is explained in depth by Lehman et al (2006). Newell's Soar theory is created with the goal of creating a unified theory of cognition for artificial intelligence, such that it would "be a set of computationally realizable mechanisms and structures that can answer all the ideas [they] might want to ask about cognitive behavior" (p. 2). The theory depends on a cognitive architecture, or a structure of fixed features of human cognition through which these cognitive behaviors are realized (p. 4). Although the functionalist paradigm is not aligned with the commitment to embodied cognition and decentralization of functionalist conception highlighted as my foundation, it could be helpful in putting forth other situated aspects of cognitive skill acquisition.

One of the potential issues in the attempted theory is that it desires to account for a wide range of skills as cognitive behaviors. Among the cognitive behaviors that Lehman et al list, there are "reading a book…solving equations, cooking dinner, driving a car, telling a joke, or

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[4] It is unclear why the naming convention is this way, but in principle the addition of a number prevents confusion regarding different variations of Soar theory advocated by different students of Newell.

playing baseball" (p. 4). They note a number of qualities that are common to cognitive behaviors, and these may serve as potential qualities through which SLA as skill acquisition can be considered. These factors are

(1) goal-orientation,

(2) being situated in a rich environment,

(3) using a large amount of knowledge-that,

(4) using symbols and abstractions,

(5) flexibility in response to the environment, and

(6) learning from said environment (p. 4-5).

All six of these features are tenable as features of the phenomenological experience. They are also, despite the underlying functionalist bent, compatible with an enactivist view of the mind as it exists through action and context. The enactivist emphasis on intersubjectivity and social context is largely missing from this model, which is unsurprising given its functionalist and cognitivist bias. More socially oriented looks at skill acquisition will be considered later on.

Goal orientation is an important aspect to consider when looking at second language acquisition, as much of communication is oriented towards the completion of a specific message. Indeed, the proposed shift on input-based language acquisition currently considered in the field is primarily considered useful as the student needs to decipher some meaning or message from the input they are receiving (VanPatten, 2017a). Instead of being inundated with many rules to memorize and learn how to apply, having the concrete goal of understanding the text at hand is helpful in directing the student's attention.

Points (2), and (3) are quite clearly important when it comes to SLA. This "rich, complex and detailed environment" (p. 5) as highlighted by Lehman et al is one that we also navigate

when learning our first language. The situatedness can be even more complicated if we are learning a language in which new ways of categorizing reality exist. The use of an extensive amount of knowledge-that is also quite self-evident when it comes to one's SLA. This knowledge-that can either refer to vocabulary, or grammatical rules. In the case of the vocabulary, this mental bank of words from which to pull is commonly referred to as a mental lexicon. A mental lexicon must be pretty substantially developed for the student to engage in meaningful exchange. To give one benchmark of what degree of a lexicon is required to draw meaning, students need to have the necessary vocabulary to understand 90% of a text if they are to be expected to learn new words through what they see in that text (Segalowitz, 2003, p. 309). This is merely one way in which it is possible to see the extensive amount of knowledge-that on which expression builds itself.

With regards to point (4), the authors make the claim that we "represent the world internally using symbols, we can create abstractions" (Lehman, 2006, p. 5). The degree to which we represent the world internally is certainly up for debate, but it does certainly seem that in manipulating a language in order to communicate, we are engaging in symbol manipulations and abstractions. The very nature of enactivism puts the idea of internal representations in doubt, since representation is a part of the extended or scaffolded minds and the very idea of internal and external worlds is dubious.

Flexibility in response to the situation, point (5), is also quite clearly applicable to SLA. As Lehman et al describes, "human cognition isn't just a matter of following a fixed plan, or of always thinking ahead, it's also a matter of thinking in step with the world" (p. 5). It is this responsiveness and situatedness of communication and expression that make the automaticity and proceduralization aspects of the language difficult to obtain, as one is at first limited in the

ways in which one can express oneself. If the original intent is not understood, especially in an immersive context, there are few ways in which a beginning speaker could attempt to express their same need, and thus there is not the optimal flexibility to handle the situation. As to feature (6), learning from the environment and experience is clearly evident in the input and proceduralization concepts in SLA.

A number of other features of Soar theory should be highlighted and considered in terms of SLA. They state that this cognitive model needs to help illustrate how one moves through problem space, which is the set of possibilities that arise from making a choice in that situation (Lehman, 2006, p. 8). Differences in the objects at hand in the situation create differences in the agent's problem space. Problem space could serve as a useful representation for the process of producing text or speech in the target language, as there is a progressive series of possibilities from which one must pick. Newell's original Soar theory, as well as Soar 9, assumes the principle of rationality, which they define as "if an agent has knowledge that an operator application will lead to one of its goals then the agent will select that operator" (Newell, 1972, quoted in Lehman 2006, p. 10). This principle may also be helpful when considering expression in the second language as a goal-driven activity. If a series of words do not produce the reaction nor the thing the speaker is seeking, she will use different ones until she gets her goals met. Once again, the problem of fossilization gives us pause as a learner who has fossilized problems is not communicating in the way that gives a successful result or results in successful communication but is rather communicating in the way that they have become accustomed to despite their knowing better. These six key factors of a skill will be integrated to a phenomenological account in Chapter 6. Although it is a heavily functionalist approach, it is not incompatible with phenomenological and enactivist discussions.

As has been the case with other understandings of skill seen in Dreyfus and CHREST, Lehman et al do assume that procedural knowledge is the principle aspect of cognitive behaviors, and that declarative or episodic knowledge only enters in the situation when the procedural knowledge in not adequate (2006, p. 14). This is aligned with the general position taken in this examination regarding the primacy of knowledge-how. Between Dreyfus' 1980 five-stage model and the six skill features of Soar 9, it is possible to consider that skill acquisition is a process that occurs within and in response to a rich environment and context through which the learner develops intuitive responses.

The theories that have been considered up to this point are all oriented towards thinking of language as a cognitive skill. It is also possible to consider language as a social skill and not merely as a cognitive one, which may offer other insights, as suggested by SCT. Language in such a context may offer a better understanding of the processes involved in implicit rule learning, not easily accounted for in proceduralization (DeKeyser, 2007, p. 103). However, this issue with proceduralization could be due to DeKeyser's conflation of cognitive skill acquisition and skill acquisition more generally (p. 104). Dreyfus's later work in skillful coping, while not constituting a total break from the 1980 model, offers a more socially motivated and environmentally aware look at skill acquisition.

Dreyfus' skillful coping (2002) offers a non-representationalist account for learning and skill acquisition with the use of Merleau-Ponty's ideas of intentional arc and maximal grip that places the actor in relationship to his environment. The intentional arc is

> the tight connection between the agent and the world, viz. that as the agent acquires skills, these skills are 'stored,' not as representations in the mind, but as more and more refined disposition to respond to more and more refined perceptions of the current situation (Dreyfus, 2002, p.1).

This idea corresponds with the abstract to concrete transition present in the five-stage model of skill acquisition, and yet as Dreyfus states, it does mark an attempt to explain the process in a non-representational way. The use of "refined" above does not necessarily only imply an abstract to concrete shift in skill acquisition but could possibly demonstrate a concrete to abstract shift as well in such cases where an abstract understanding of the situation is more appropriately responsive to what is going on than a concrete understanding.

One key aspect of this intentional arc idea is that the skill exists as a response of the person performing the skill to their environment, and yet it is important to not think of this responsiveness as an input-output oriented feedback loop. The agent is in much closer dialogue with his environment such that we cannot say where he ends, and his environment begins. This is an especially interesting aspect when considering skills with an obviously social aspect, such as second language acquisition, or even dance. In such skills, this responsiveness occurs within the community and within the present situation. SCT also considers the speaker in the context of his present social situation, noting that cognition arises from this situation. The key to this development of selective responses as it is understood by Merleau-Ponty and Dreyfus is that representation of the end stage, or of doing the task well, is not necessary in order to be directed toward the goal.

Through this intentional arc, the learner attempts to achieve maximal grip, which for Dreyfus is "the body's tendency to respond to these solicitations in such a way as to bring the current situation closer to the agent's sense of an optimal gestalt" (Dreyfus, 2002, p. 1). The learner is driven by the situation in which they find themselves to strive for a sort of homeostasis with that situation as

> Finite, involved, embodied coping beings are constantly 'motivated' to move so as to achieve the best possible grip on the world…acting is experienced as a steady flow of skillful activity in response to one's sense of the situation (Dreyfus, 2004, p. 234).

While the traditional understanding of intelligence and skill-acquisition is based on a trial-and-error approach in which successful actions are repeated and unsuccessful actions are eliminated, the maximal grip understanding is dynamic and gives us a view in which the learner is striving for an action which improves the situation towards the purpose at hand rather than fulfilling a certain static goal (Dreyfus, 2004, p. 241). The difference between skillful coping and a trial-and-error view lies primarily in that we have taken a radically different stance on what constitutes a mind which has not left us much room for internal representation nor for easily drawn distinctions between the self and the world. Rather than the trial-and-error view in which the agent makes attempts and then adapts their attempts based on the input they receive from the world around them, this is a view in which the environment and the self are not easily distinguished such that the agent is constantly adjusting.

In many situations, and with respect to many skills, there is not one 'right' way to do the task, but perhaps a variety of better ways. This dynamic process towards maximal grip depends on exploration of alternative approaches in order to understand the continuum of these superior and inferior ways (Dreyfus, 2004, p. 243), and in moving towards an expertise, the need for such exploration is gradually less necessary as the learner knows an optimal or superior approach to the situation more readily. This isn't to imply that the expert does not experiment, as many experts may still innovate through experimentation (Wrathall, 2014, p. 11), but rather that experimentation in order to achieve maximal grip is no longer strictly necessary.

Intentional arc and maximal grip provide interesting, non-representationalist accounts for certain features of second language acquisition. They explain purposiveness in such a way that representation of the end goal is no longer necessary to explain a skill. When someone is learning to beat eggs, for instance, they are not necessarily operating with a representation of

what they are aiming for and judging the difference between what they produce and what they wanted to. Likewise, a chess student is not comparing his chess game to a grandmaster chess match during play. Both learners are attempting to beat the eggs or play the game *well enough* based on their sense of the situation.

Since initial stages in skill acquisition for Dreyfus often include some amount of representation and abstract rules, the beginners may judge their grip on things based on such features, but this may not be a representation of the end goal. To return to the chess match, if the learner is assigning point values to pieces (abstract rules) rather than intuiting certain responses to the opponent (concrete response), he still may not be representing to himself a perfect chess match, to a large extent because he probably wouldn't know what one looked like. Even watching someone else beat an egg only tells us so much about what that process is. We may know what the physical end stage looks like and have an idea of the optimal viscosity, but angle and speed are achieved for the learner through repetition and experimentation, not through abstract ideas. Simply put, the learner experiments and in doing so engages with his world towards *better* but not necessarily *right* ways of doing the task because he has no way of knowing what success as a static moment looks like. He has no idea (and no representation of) what he is doing. A differential continuum, rather than a series of rigid dichotomies, is aligned with a knowledge-how approach to cognition, action, and language, considering knowledge-how is often a matter of degree (Ryle, 1949, p. 59; Inkpin, 2017, p. 216).

Just as a chess student is unlikely to have a mental representation of the best way to play the game, a language student is also unlikely to have a mental representation of the best way to say what they are trying to say. While the student may not have a concrete and static notion of how they maybe should say what they are going to say, a sufficiently advanced student would be

basing their decisions on prior encounters with the language to move towards maximal grip at that moment. The dynamic nature of the intentional arc and movement towards maximal grip is particularly visible in dyadic instances wherein a direct response to one's companion. Such instances include, among other practices, chess playing, tennis, sword-fighting, one-on-one formal debate and conversation. This last example is of course the most pertinent to second-language acquisition discussion.

The language student, without being able to represent and achieve a perfect utterance, is instead in the situation of the chess student, wherein experimentation is necessary. It is extremely unlikely that she would have heard the original utterance that she wants to express before, barring some basic commonly used phrase. It is necessary for the student to pick the *better* of the available options and adjust according to the subsequent situation. In this way the student must in the process of attempting to converse navigate concerns of grammar, word choice, tone, body language, gesture and content. Certain signs from her interlocutor, such as a change in facial expression that indicate whether or not her utterance was understood, may alter her perception of the situation so that she finds she is moving towards maximal grip or away from it. Experimentation in these utterances pushes the learner to fine-tune what she is trying to convey to move towards maximal grip. While with chess we may see a linear decline in experimentation as certain responses become normal for the player, the rate of experimentation for a language learner may vary during the process. In the beginning stages when a learner has limited vocabulary and grammar, there is little room for experimentation, as there is for a chess player who can only move certain pieces. Later on, when the student is exposed, through target language exposure or formal instruction, to more grammatical structures and vocabulary, there will be more room to experiment.

During the student's progress through more advanced stages, there may be more experimentation with regards to word choice, and less with regards to grammar, as certain errors become more obvious to the student, or the implications of certain types of verb conjugations are more obvious. Eventually, the automatized production of language in response to the interlocutor, with approximately the same immediacy and grammatical perfection as one's native language, happens with little to no experimentation. A sense of what feels right, or sounds right, may be the appropriate way for a language learner to approach the situation, and if they have learned to self-regulate their language productions sufficiently, they are showing the internalization of the target language as described in sociocultural theories of second language acquisition. Such auto-regulation is often considered a measurement of a more adept language speaker as well. Likewise, affective perceptions of the conversation incorrectly or correctly influence the learner's perspective of the conversation, steering further language choices.

Aside from auto-regulation and understanding of one's interlocutor, maximal grip in a language acquisition context is rooted in the ability to express. Expression has often been treated philosophically as the natural result of thought, such that this expression serves as one of the only ways to know what an agent has thought (Inkpin, 2017, p. 98). For Merleau-Ponty, thought bends toward language as musical abilities bend towards performance (2002, p. 31, quoted in Inkpin, 2017, p. 98). Through this same intentional arc, thought can bend towards expression with representation of the end stage.

One of the more interesting philosophical consequences of the intentional arc and maximal grip approach to skill acquisition and second language acquisition is that it fundamentally diminishes the significance of rules in expert behavior.[5] This echoes the

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[5] A secondary implication to the application of the intentional arc to language production is a reexamination of the potential gap between what is *said* and what is *meant* by a speaker (Wittgenstein,

practicalist view indicated previously, but the consequences of this for the fields of philosophy of mind and second language acquisition are easily underestimated. If this is indeed a phenomenologically, philosophically and empirically tenable explanation for skill acquisition then, "[the learner] is doing just what Feigenbaum feared he might be doing—recognizing thousands of special cases" (Dreyfus, 1985, p. 36). As previously noted, this possibility indicated our status as embodied and embedded creatures in a Heideggerian and Merleau-Pontian sense, and the primacy of knowledge-that in the form of conception and representation is dubitable. As far as its consequences for second language acquisition, such a knowledge-how orientation would to a large extent dismiss the poverty-of-the-stimulus motivated argument for universal grammar.

Chomsky's universal grammar (1977) refers to a number of structures that are common to every language, and therefore thought to be common to how humans think. Such structures include verbs being altered in some way to fit the subject and negation (VanPatten, 2017a). These grammar structures are not the surface grammar that is discussed when one learns how to write in a grammatically correct way, but rather are thought to refer to more internalized structures that all languages have in common (VanPatten 2017b). Such a system of internalized, unconscious rules is commonly referred to as a response to the logical problem of language acquisition, wherein "learners eventually know more about the language than they could reasonably have learned if they had to depend entirely on the input they are exposed to" (Lightbrown, 2006, p. 35). Learners often produce certain statements that are not entirely traceable to the input they have received from the language. Whereas a knowledge-that centered view of the mind makes it impossible to show such spontaneity without some structure like

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2009, p. 12). A speaker may not have some secondary representation of what they mean to say in mind (so to speak) when they fail to say what they meant.

universal grammar. On the other hand, if we can learn how to do something without a representation of what we are learning how to do, in a nearly perpetual state of adjustment and experimentation, we really do show a tremendous amount of special case knowledge, accrued through the intentional arc.

After all, a tennis player needs to adapt to the particularities of their opponent and respond to their shots based on past experiences with other opponents. The impressiveness of responsiveness and difficulty of generalization does not cause us to assume that we have innate pattern recognition abilities for tennis shots. The remarkable abilities we show as regards language learning can reflect that languages are a feature of our shared world in a Wittgensteinian sense. As Coope writes, "It is a curious fact of life that human languages are translatable" (1974, p. 261). Hopefully it is obvious that stating that all human languages are translatable does not mean that such translation is direct or easy. Despite overly dramatic statements about foreign terms that cannot be translated, there are precious few instances in which a term really cannot be translated and this compatibility between human languages should not be surprising at all. The central commonality of human languages is that they are spoken by humans, and so of course they are going to reflect similar common-sense aspects of reality. Subject-verb agreement, for instance, makes sense when we live in a world wherein actions originate from actors. When we consider the common-sense aspects of reality that are reflected in universal grammar, it is a possibility that these features are not engrained in the human mind's approach to language, but rather reflective of very basic commonalities to human experience.

Knowledge-how does not exist in the form of accessed representation, but rather is perpetually in response to our situatedness. To return to Dreyfus's example of the chess player,

> a careful description of the phenomenon suggests that, while beginners learn to distinguish specific patterns and follow rules for how to respond to them, the chess master, by playing thousands of games, has refined his dispositions to respond

appropriately to each situation, and these changing dispositions to respond are correlated with changing lines of force on the board, which in turn solicit appropriate responses. So there is no need for the expert to remember or in any way store a repertoire of 50,000 typical positions (2004, p. 239).

While it may be a stretch to say that language goes un-stored in exactly the same way, the role of immediacy and aptness of response is significant to second-language acquisition considerations. This role of responsiveness and adaptability to one's environment is significant to consistent theories of knowledge and approaches to the mind. If this responsiveness, or intentional arc, based in a fundamental unity with one's surroundings in considered, the problem of an end goal in conversation becomes, rather than the expression of a specific point, a fluid process towards maximal grip. Affect and social context, then, become indispensable tools in this navigation.

Barnacle (2009) echoes Dreyfus' emphasis on learning as a process that occurs socially through norms and institutional rules (p. 23), and so attempts to decentralize reason from its current place in education (p. 21). This leads her to a view of the acquisition of knowledge that attempts to more readily cross traditional mind-body divisions and accept the body as an integral part of the learning process. Her view of this process seems to maintain some degree of possible mind-body divisions, perhaps along the lines of functionalist embodied cognition wherein the body has a certain role in the inputs, outputs and representation that is occurring in the mind. Her goal is bridging this dualistic gap in the process of education, but she does this primarily through a focus on the role of the "gut" in one's interaction with the world and one's sense-making, or hunches (p. 24). The degree to which a phenomenologically experienced physiological response may be involved in a reflective sense of one's own knowledge is certainly an interesting topic, but Barnacle fails to account for the potential cross-cultural issues in asserting that we experience the world through our 'minds' and guts. Regardless, her description of this process as interaction and embodied endorses a knowledge-how based approach to learning itself, as well as an

emphasis on the role of interpretation in this approach (Kalantis and Martin, 2006, quoted in Barnacle, 2009, p. 26).

Once again, the representation using to non-representation using shift implies that it is the case for all skills, and, simply put, it may be the case that some skills involve a more complicated dynamic between non-representationalist and representationalist approaches. Even in an enactivist approach, one should be cautious about positing a universal transition away from representation, especially since representation is a significant aspect of the scaffolded mind. We should be open to social skill models that demonstrate an interaction between non-representationalist and representationalist processes. Despite the problems involved in creating a universal approach to skill acquisition, and some of the potential cultural biases in Barnacles' presentation, the intuition angle presented through gut-learning is a valuable component and a factor through which skillful coping is achieved. This further underscores the role of context and affect in skills such as SLA.

Through skillful coping, we can further consider the more directly social aspects of language acquisition. Collins (2004) in particular presents language acquisition as a more social type of skill. His analysis is not done in terms of second language acquisition per say and is more focused on what he terms "linguistic socialization" (p. 127) in terms of learning the specific vocabulary of an area of expertise, such as a field of science, and in terms of people with atypical embodied experience needing to adapt the language of their community. His explanation for the acquisition of vocabulary in a specific field is rather straight forward, but his idea of linguistic socialization in terms of people who live in the same community but have varying embodied experiences. This concept of acquiring a language depends on two theses; the social embodiment thesis and the individual embodiment thesis. His social embodiment thesis states that "the

language developed by a society is related to the bodily form of its members because bodily form affects the things it can do," (p. 130), while the individual embodiment thesis is that the "language of a community whose members are embodied in one way can be acquired by individuals with different shaped bodies and who cannot participate in the activities of that community" (p. 130).

While this particular argument for an idea of linguistic socialization involves an emphasis on disability, these embodiment theses demonstrate language acquisition as a social process that cannot be reduced to representations and depends on exposure to the language as it is used in an embodied and enacted way. This is particularly valuable in the context of language, since there is no meaningful private language. Meaningful languages exist in context and in intersubjective spaces. In this context the particular individual does not struggle to adopt the literal and idiomatic language use of their linguistic community despite the differences in their embodied experience. Mastering a language is interactional, and in interacting, the individual must have something to say. The intersubjective nature of language and language acquisition in this context leads us to the role that culture has in an enactivist view of the mind.

One such model, proposed in Hutto et al (forthcoming), proposes an enactivist take on the cognitive penetrability thesis that emphasizes the role of these intersubjective, cultural factors by taking these same factors to be included in cognition. Hutto et al support

> the possibility that cultural factors *permeate* rather than penetrate cognition, such that cognition extensively and transactionally incorporates cultural factors rather than there being any question of cultural factors having to break into the restricted confines of cognition (p. 6).

The authors further specify that the specific routines and practices an individual grows up with ultimately are influential to that individual's cognitive capacities, scaffolding and intuition (p.

15). Ultimately the cultural permeation hypothesis is much like linguistic socialization, but it emphasizes how such practices and socialization come to constitute a key aspect of the individual's environment and context, which according to enactivist tenets (and the tenets of extended cognition) is after all not separable from the mind of the individual. Changes across the environment or the brain result in changes across an entire system in this view; a metaplastic process (Gallagher, 2017, p. 209).

Taken altogether, these varied models of skill acquisition, from both cognitive and social angles, can provide a solid initial phenomenological account of SLA. With inspiration from the Dreyfus five-stage model of skill acquisition (1980), we can appreciate that this process for the speaker constitutes a general shift from using abstract rules to concrete responses. This shift is general in that the speaker may often continue using some number of abstract rules while progressing, and indeed may even do so more adeptly as they continue learning. In many cases this will mean that a more advanced speaker is not consciously doing some of the steps that previously occupied his attention. For instance, the speaker may find that they "automatically" produce the proper plural conjugation, rather than inadvertently producing a singular conjugation. This lack of awareness regarding certain steps should not be interpreted as a total lack of awareness of what they are doing as a speaker. Not having the experience of consciously conjugating a verb does not mean that the speaker is completely unaware of producing a sentence. The student may also experience that certain aspects of the language come more easily than others, resulting in an unevenness. Their learning process is primarily one of developing knowledge-how, which happens in a rich goal-oriented environment in which the individual learns from said environment. This learning, even when it uses the abstractions and symbols of language, is not entirely representation-dependent due to the intersubjective and social factors.

Instead of representing the end goal of their speech to themselves, the speaker must seek the optimal responses in each moment to achieve maximal grip. In this process, repetition and experimentation develop what might be called an instinctual sense of appropriate responses. This process cuts across arbitrary brain-body divisions, since this instinctual sense may be phenomenologically experienced through the gut. The process is reflective of an intersubjective linguistic community, in which more than the individual's embodied experience is considered, and ultimately takes cultural factors as inseparable from cognitive ones during this socialization process. Coping skillfully in and through social contexts is an indispensable aspect of Heideggerian phenomenology, which also serves as the intellectual backdrop to both Dreyfus' philosophy and enactivism more broadly. An exploration of his treatment of skill acquisition and language is helpful in arriving at a more thorough enactivist account.

Chapter 5: Heideggerian Disclosure and Attunement

Heideggerian phenomenology underlies the prioritization of skill throughout this investigation, and especially underlies Dreyfus' skillful coping. For this reason, a consideration of language and skill in Heidegger is relevant in understand the philosophical issues at hand. Through understanding a Heideggerian approach to the human being and to language, we encounter a deeper understanding of our fundamental relationship with language, and what we are talking about when we talk about language as a skill. Heideggerian phenomenology espouses an interesting analysis of the relationship between one's interpretation of meaning in the world and one's interpretation of language. After explaining this relationship, we can apply Heidegger's own terminology regarding tools to many of our own experiences with language. Throughout much of his work, language is considered as a key feature of the given context of a Dasein.

Dasein is for Heidegger a term that encapsulates what it is to be a human being. It is literally rendered as "Being-there," but can also be translated as "Being-then," and in this way we can see that a human being is for Heidegger an entity which exists at a given place and given time, in a given context outside of their control. For Heidegger we are thrown into this context (*Geworfenheit)*. Language is a part of this context, and a part of how we interpret and understand said context. Heidegger explains in *On the Way to Language* (1971) that,

> In order to be who [sic] we are, we human beings remain committed to and within the being of language, and [sic] can never step out of it and look at it from somewhere else. Thus, we always see the nature of language only to the extent to which language itself has us in view, has appropriated us to itself. That we cannot know the nature of language– know it according to the traditional concept of knowledge defined in terms of cognition as representation– is not a defect, however, but rather an advantage by which we are favored with a special realm, that realm where we, who are needed and used to speak language, dwell as *mortals* (p. 134).

In Heidegger's view, the hidden nature of language is intertwined with human existence such that it cannot be understood independently, and this intertwined nature is a positive aspect of our relationship with language. This intertwined status means that it is necessary to engage in some novel process that shocks our relationship with language, causing us to think outside of the categories we are used to (p. 93). That proximity to a feature of experience inhibits full understanding of that experience is frequently referenced in Heideggerian philosophy, so language is not unique in this way. In seeking atypical experiences, we hope to break out of our usual relationship and understand language differently.

For Heidegger, poetry is an especially valuable path to such an experience (p. 93), although there is room based on his understanding of linguistic relativity, to consider second-language acquisition an appropriately shocking experience with language. Inkpin also hints at the value of this experience when reflected on his own journey into becoming interested with the philosophy of language after teaching English in East Germany after the fall of the Berlin Wall and his struggles in rapidly adapting to his new environment and language (2017, p. 1). Language permeates a good deal of everyday experience, meaning that human beings ultimately do hear a foreign language as a series of "*unintelligible* words and not a multiplicity of tone-data" (1962, p. 207). We do not really experience even the strangest of foreign languages as alien, as there is some commonality of lived experience between us and the speakers of that language.

In addition, the revelatory potential of experiences outside of one's own culture and language could also bring with it a reassessment and subsequent appreciation of cultural tradition that Heidegger himself seems to encourage. Heidegger writes that Dasein is rooted in a certain

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cultural tradition that can often shape or dictate its potential. The way to perhaps avoid some of

this limitation is through a more reflective understanding of one's own traditions and context.

> The elemental historicity of Dasein may remain hidden from Dasein itself. But there is a
> way by which it can be discovered and given proper attention. Dasein can discover
> tradition, preserve it, and study it explicitly. The discovery of tradition and the disclosure
> of what it 'transmits' and how this is transmitted, can be taken hold of as a task in its own
> right (Heidegger, 1962, p. 41).
> .

Aside from broadening our linguistic horizons, the language experiences we are exploring also

require a reassessment of one's cultural context.

In seeking out a non-default experience with language, be it poetry, literature, or

language learning, we are also seeking out some time of non-default or reflective experience

with our tradition and context. It should hopefully be clear that despite some of the benefits

associated with intercultural exchange or reflection on one's own cultural tradition and heritage,

these benefits by no means necessarily arise from these practices in all cases. Heidegger's own

life demonstrates the error in assuming that morality necessarily occurs among the highly

educated and elite. Regardless, the value of learning from one's own intellectual tradition is

frequently referenced in many works of existential phenomenology (see Arendt 1958), and it

seems reasonable to interpret that certain intercultural exchanges can ultimately contribute to a

more complete engagement with one's own culture, hopefully to the enrichment of Dasein.

The value of this type of intercultural experience is particularly evident in "A Dialogue

on Language between a Japanese and an Inquirer," (1953) in which the contrasting German and

Japanese understandings of the role of language is discussed. Much of the dialogue focuses on

Heidegger's previous esoteric and by his own account poorly defined[6] statement that "Language

is the house of Being." This metaphor of a house is used throughout the dialogue both in

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[6] "I called language, clumsily enough, the house of Being" (p. 5).

reference to issues of linguistic relativity, and how language encapsulates our reality. These two topics are of course quite interrelated. Heidegger and Tezuka conclude the dialogue with a discussion of the Japanese word for language, which is *kotoba*. According to Tezuka, this word is a combination of the word for a moment of grace, and the word for a blossom or a petal, and so the very word for language is a flowering of graceful moments,[7] quite different from the standard European fallback on words that literally mean tongue (p. 45-47). Heidegger's own later philosophy of language is influenced by this intercultural understanding of the nature of a language.

As seen in "The Nature of Language" (1957) the production of language in particular is infused with a poetic sensibility and is an act of creation of meaning.

> When the word is called the mouth's flower and its blossom, we hear the sound of language rising like the earth … From Saying in which it comes to pass that World is made to appear. The sound rings out in the resounding assembly call which, open to the Open, makes World appear in all things. The sounding of the voice is then no longer only of the order of physical organs. It is released now from the perspective of the physiological-physical explanation in terms of purely phonetic data. The sound of language, its earthyness [sic] is held with the harmony that attunes the regions of the world's structure, playing them in chorus (p. 101).

Here, the very etymology of *kotoba* as presented by Tezuka to Heidegger is echoed in his poetic understanding of language. Language, more than representation for Heidegger, is an act of musical expression and creation.

This trend in his later writing fits well with much of his philosophy as he presents in *Being and Time.* While language is not one of its main focuses (perhaps to its detriment), there are certain sections and passages that reveal a commonly accepted interpretation of his

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[7] It is unclear to what extent Tezuka was a student of Japanese etymology, and to what extent he may have been engaging in a sort of 'folk etymologizing.' Nevertheless, he communicated a poetic image regarding the nature of language in Japanese that clearly influenced Heidegger's other writing on the subject.

philosophy of language, that of the disclosive function of language (Inkpin, 2017). The main role of *Rede* (most often rendered as "discourse") is to direct our attention to the truths that we cannot access via our senses or rational abilities (p. 67), meaning that discourse has a significant role in disclosure. Disclosure for Heidegger is constituted in one's laying out or revealing a certain state of affairs to be a certain way. His concept is fundamentally based in the literal translation of the Greek *aletheia* as "unhiddenness", rather than as truth (Dahlstrom, 2014; Heidegger, 1962, p. 261).

In directing our attention to these specific features through linguistic articulation, certain meanings are given to the world around us. Truth for Heidegger is not confined to language but is a concealed feature of reality revealed through our attunement *(Stimm)* as much as through our rational understanding (Inwood, 1999, p. 13). By saying that Dasein interacts with his world through both affective non-cognitive approaches and rational understanding, Heideggerian phenomenology is considered amenable to, if not an intellectual predecessor of, embodied cognition. This view of language as disclosure may be easily misinterpreted due to its surface similarities with the ostensive view of language normally attributed to St. Augustine (Wittgenstein, 2009, p. 5).[8] This view states that language's principle function is to point out objects or features of reality. The disclosure-based view, in contrast, does not claim that speakers are pointing out features of the world through language, but are rather revealing these features.

Disclosure bridges the gap between language and the world, such that there is no meaningful philosophical distinction between one's grasp of language and one's grasp of the world (Inkpin, 2017, p. 65). Many of the ways in which I seek unhiddeness with others depend on the use of language to go about revealing certain features of reality. As we will see with the

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[8] There is some ambiguity about whether or not St. Augustine actually proposed such a view of language. For a discussion of Wittgenstein's interpretation of St. Augustine, see Kenny 1974.

modes of attunement below, the role of language during certain types of engagement is not clear. Furthermore, there is no easy distinction between the disclosure of the world and the disclosure of the self (Heidegger, 1962, p. 205; Arendt, 1958, p. 179). I am not merely a Dasein, but also a Mitsein, or a Being-with-Others. When I disclose the world, I disclose something about how I see the world, and in doing so disclose something about my own context. I disclose my world and myself to these others, and they do the same to me.

The disclosive function of language, eschews an internal-external approach to philosophy of mind and philosophy of language. Heidegger maintains that "in talking, Dasein *ex*presses itself not because it has, in the first instance, been encapsulated as something 'internal' over and against something outside, but because as Being-in-the-world it is already 'outside' when it understands" (1962, p. 205). I express myself through speech, not in the sense of bringing my internal representations out into the world, but in the sense of already being drawn out into the world outside of myself when I apply language to my surroundings. In the previously used enactivist vernacular, through use of a shared linguistic scaffold, I am expressed outside of myself.

In engaging with the world, the self and the world are no longer separate and so no longer expressed in modular ways. This shift leads to a shift in the nature of communication.

> Communication is never anything like a conveying of experiences, such as opinions or wishes from the interior of one subject into the interior of another. Dasein-with [*Mitsein*] is already essentially manifest in a co-state-of-mind and a co-understanding. In discourse Being-with [*Mitsein*] becomes 'explicitly' shared… (p. 205).

To reiterate once again, expression is not bringing one's internal representations out into the world, but rather an engagement with a shared system of representations. Communication is for Heidegger the act of making explicit the understandings I already have with those around me by

virtue of being Mitsein. In this way, with others and through attunement and language "makes World appear in all things" (Heidegger, 1957, p. 101).

It is in this shared context that we cope with and navigate our reality. Heideggerian terminology regarding tool usage demonstrates the various senses in which Dasein engages reality (modes of attunement), and from this terminology we can extrapolate to understand Dasein's experiences with language itself. *Zuhandenheit,* or "ready-to-hand-ness" is one of the key one of the philosophical underpinnings for much of Dreyfus' work, as well as enactivist work. As previously discussed, Heidegger does not think that the human being encounters fixed and static things, but rather finds that the human being understands the things around him in terms of their potential. This idea is one of the most well-developed points of *Being and Time* and is rooted in Husserl's notion of ability influencing cognition (Gallagher, 2017, p. 5). In a direct dealing with an object,

> where something is put to use, our concern subordinates itself to the 'in-order-to' which is constitutive for the equipment we are employing at the time; the less we just stare at the hammer-Thing [sic], and the more we seize hold of it and use it, the more primordial does or relationship to it become and the more unveiledly [sic] is it encountered as that which it is– as equipment (Heidegger, 1962, p. 98).

The qualities of the hammer are disclosed in our use of the hammer, and in our experience of the hammer as an active component of our surroundings, not as a static object. To encounter a piece of equipment as a for-which is to experience something as ready-to-hand. In other words, when we are using a hammer, we do not experience it as a hammer but rather as something with which we perform the action of hammering to reach certain ends.

There are however ways that we interact with equipment that differ from readiness-to-hand. We can also encounter a piece of equipment in a present-at-hand (*Vorhandenheit*) or unready-to-hand state. Encountering something as present-at-hand happens for Heidegger

when Dasein engages in, for example, the practices of natural science, when sensing takes place purely in the service of reflective or philosophical contemplation, or when philosophers claim to have identified certain context-free metaphysical building blocks of the universe (e.g., points of pure extension, monads), the entities under study are phenomenologically removed from the settings of everyday equipmental practice and are thereby revealed as fully fledged independent objects, that is, as the bearers of certain context-general determinate or measurable properties (size in metres, weight in kilos etc.) (Wheeler, 2011).

The hammer is present-at-hand not when we use it, but when we attempt to reflect about the hammer in a metaphysical or scientific sense. When this equipment is broken in some way (relatively hard to do with a hammer),

> [the] equipment becomes conspicuous. This *conspicuousness* presents the ready-to-hand equipment as in a certain un-readiness-to-hand…The more urgently we need what is missing, and the more authentically it is encountered in its un-readiness-to-hand, all the more obtrusive does that which is ready-to-hand become– so much so, indeed that it seems to lose its character of readiness-to-hand (p. 103).

When I am hammering and the hammer breaks, my attention is shifted from my goal in hammering and my towards-which experience of the hammer to one in which the hammer is the object of my attention. In these contexts, we encounter the world anew, either in the sense of un-readiness-to-hand, or in the sense of present-at-hand objects and our environment (p. 105). This uncanny experience brings us to a certain different or new understanding of the world. This echoes the previously discussed Heideggerian mandate to seek out uncanny and shocking language experiences. If we extrapolate from the experiences that we have with equipment to those we have with language, a varied phenomenology of language that explores a wide range of linguistic ability for speakers is possible and philosophically useful. Countless philosophers and philosophical stances referenced during this examination have frequently considered language as a type of tool, and so the extension of the analysis of these experiences is promising.

We can begin to evaluate this experience with readiness-to-hand. An utterance can be understood primarily as a "for-which" just as a piece of equipment can. The native speaker, in most everyday contexts, rarely is directing attention to the sentence itself, but rather to the

situation in which they find themselves and their purpose in this situation. Likewise, a non-native speaker who can successfully automatize and proceduralize their expression of the language may not direct their attention to their utterances frequently. A speaker who is still lacking proficiency may find that the typical tool they have used to engage in a shared reality is lacking in some way when they are pushed into a situation using a language with which they have less proficiency. In this way, the utterance which works like a hammer for the native speaker is broken. At a rudimentary level of language learning, a new word or expression is present-at-hand, without a for-which through which the student can wield it, but also without the sudden lack of normal potential that one experiences when an utterance fails. The present-at-hand word or phrase is encountered in without context and so present to Dasein in the way that an object that is being contemplated philosophically is.

In this way and through these varied encounters with language, the individual's ability to grasp language and grasp the subsequent world is dynamic. Through the learning process, we move from a present-at-hand encounter with the language to a ready-to-hand encounter, with numerous moments of un-ready-to-hand-ness along the way. The intentional arc is the negotiation through these encounters with the language in all its minutiae to arrive at a maximal grip in the situation. As discussed in the previous section, maximal grip is not best thought of as an end state, but rather as a process of constant negotiation. Similarly, ready-to-hand-ness is precarious and can perpetually fall back into un-ready-to-hand-ness or present-at-hand-ness. In this way, excellence in second language acquisition is understood once more as fundamentally a dynamic and non-linear process. This interaction happens through various modes of engagement with our world and language, and in this process, we reveal the world to ourselves and others.

Chapter 6: Towards a Phenomenology of Second Language Acquisition

Although philosophy of mind and philosophy of language have traditionally be understood in a representationalist and rule-based way, trends in phenomenology of language and embodied cognition promote an exploration of the mind and language in a responsive and lived context. Second language acquisition in particular serves as an example of an atypical phenomenological experience of language that could be seen in this responsive light. Through these trends, it is possible to account for second language acquisition in a way that decentralizes the representation and rules and sees second language acquisition as a type of skill acquisition that is primarily responsive and that informs a way of interacting with the world.

Chapters 2a and 2b established the necessary background regarding key debates and concepts in philosophy of mind, philosophy of language and second language acquisition. Embodied cognition approaches, such as enactivism, allow for an understanding of intelligent human behavior that is not confined to representation manipulation. A new way of understanding this intelligence offers a new angle on the problems of proceduralization and automatization, wherein SLA is understood as a certain type of skill acquisition that involves knowledge-that and knowledge-how. Alongside this understanding of SLA, we must also consider such linguistic concepts as linguistic influence, universal grammar, and sociocultural theory to resituate language as we experience it. Chapter 3 investigates some of the philosophical implications of separating knowledge-that and knowledge-how, ultimately adopting an informally practicalist approach, where knowledge-how is irreducible to knowledge-that, and knowledge-that is an instance of knowledge how. This again allows our conception of SLA to be compatible with an

enactivist approach and decentralizes concepts such as content and representation. Chapter 4 explores a variety of cognitive and social skill accounts of language, ultimately pairing Dreyfus' skillful coping with a variety of more explicitly social takes on language use. In this way, we can begin to posit a new phenomenological account for these types of language experiences. Chapter 5 investigates the Heideggerian influence on enactivism and Dreyfus, especially when it comes to his philosophy of language and his account of attunement and disclosure, allowing this phenomenological account to be situated in dialogue with various historical debates in philosophy, and broader metaphysical debates regarding human nature.

To lay out this phenomenological account, we will first review several key concepts in SLA, namely proceduralization and automatization. Proceduralization has been commonly understood as the process by which declarative knowledge (knowledge-that) becomes procedural knowledge (knowledge-how) (DeKeyser, 2007; Segalowitz, 2003). Automatization, both in SLA and in other phenomenological investigations, is a bit more difficult to define since it may imply a degree of mindlessness or lack of attention in doing the task. The controversy arises when we consider that the relationship between mindlessness, attention and intelligent action are by no means settled questions. Regardless, we can consider automaticity to involve some amount of rapidity or lack of prior reflection when doing the task (Segalowitz, 2003), which does not mean that it is unintelligent or mindless.

It is overly simplistic to describe second language acquisition as merely proceduralizing and automatizing knowledge of the target language. The problem of fossilization, for one, demonstrates that there is some danger in getting stuck in certain habits, and that some amount of reflection and flexibility is necessary for expressing oneself well (Johnson, 1996). In addition, the logical problem of second language acquisition, wherein a non-advanced speaker knows

more about the vocabulary and grammar than is accounted for by their exposure to the language, indicates that there is something more to this process than a student learning and internalizing the material that has been put in front of them (Lightbrown, 2006). Some of these factors are highlighted by a sociocultural theory (SCT) of SLA, wherein language acquisition is mediated by culture and artifacts, and is best understood as the adaptation and internalization of a system of representation used by others (Lantolf & Thorne, 2007).

One of the factors that can make understanding our experiences regarding language difficult is that it is so intertwined with how we interact with the world, and according to the research and writings of many linguists and philosophers, is perhaps the most influential factor in our experience of reality. Linguistic relativity, commonly called the Sapir-Whorf hypothesis despite the fact that no one version of the hypothesis exists, broadly refers to the thesis that our language either heavily influences or determines how we see reality (Al-Sheikh Hussein, 2012). While many are doubtful regarding the stricter version of this hypothesis, linguistic influence has a good deal of scientific and philosophical support, depending on what you take to be language (Wittgenstein, 2019; Williams, 1974) and on what you take to be the most impactful feature of language (i.e. vocabulary or grammar) (Winawer, 2007). As highlighted, the important role of language in our daily lives and apprehension of reality makes atypical experiences with language more significant.

Setting aside the more cultural concerns like linguistic relativity, the debates over proceduralization highlight the philosophical distinction between knowledge-that (*episteme*) and knowledge-how (*techne*). This distinction varies throughout the history of philosophy and many examples demonstrate that these two types of knowledge are not nearly as separate as they seem to be. Practicalism (Hetherington, 2006; Fantl, 2012) takes knowledge-that to be a type of

knowledge-how due to the skills that are engaged in knowing and is amenable to an enactivist and skills-based approach to language acquisition. In a practicalist view, proceduralization is not reduced to a shift from knowledge-that to knowledge-how but is a change in someone's knowledge-how. An informalist approach (Collins 2004) gives a certain priority to knowledge-how as being real understanding. This helps prioritize the role of ability and responsiveness in language acquisition, despite largely questioning and diminishing the distinction between knowledge-that and knowledge-how.

It is in this context of current skills-based SLA research, linguistic relativity and epistemological questions that we can begin crafting an enactivist understanding of SLA.

While there have been previous phenomenological inquiries into language (Inkpin, 2017), and many enactivist approaches to various types of skill acquisition, in this account, an enactivist approach to human nature and responsiveness is being used to resituate second language acquisition as fundamentally responsive and not representational. In doing so, I am using a variety of enactivst and enactivist-adjacent understandings of social interaction and skill acquisition, and explicitly applying these to the learning of a second language, a type of language experience that has received, at most, a cursory mention in the majority of philosophical texts. Questions regarding language are frequently not approached with an embodied or enactive framework, since these approaches tend to prioritize exploring non-representationalist activities, but, as I have been highlighting, it is possible to understand language in a way that decentralizes typical notions of representation.

We can begin constructing this phenomenological account by overviewing the accounts that take language to be a cognitive skill. While the Dreyfus 1980 five-stage model of skill acquisition is frequently dismissed as being too linear, we can, broadly speaking agree that in

acquiring a language one moves to a more immediately responsive and less reflective state. Likewise, many of the features normally highlighted in Soar theory, are clearly compatible with a phenomenological look at this process, despite the former's AI and functionalist origins. These features were, once again,

(1) goal-orientation,

(2) being situated in a rich environment,

(3) using a large amount of knowledge-that,

(4) using symbols and abstractions,

(5) flexibility in response to the environment, and

(6) learning from said environment (Lehman, 2006, p. 4-5).

Features (3) and (4) are prima facie out of place in an enactivist look, but still essential to this investigation. To reiterate, this work does not directly address such issues as intensionality and what may constitute the mark of the mental, and yet cannot entirely avoid discussing the roles that representation and rules may have in intelligent human activity. Since we have adopted a practicalist standpoint, perhaps (3) would be reformulated as using abilities to express, reason and reply about a wide variety of facts and concerns as they relate to knowledge about the language, but also the cultural context. (4), the question of representation, is the central difficulty in philosophy of mind and enactivism and cannot be addressed comprehensively in the remaining pages. Since many enactivists use scaffolding to explain how a basic mind can use representation for certain processes such as language, and this scaffolding is a shared intersubjective external system, (4) can be happening in such a shared, intersubjective, and external system. This type of shared system is compatible with a Heideggerian take on expression as being the act of making explicit what is known between Mitsein.

Features (1), (2), (5) and (6) are clearly explained by the various social and affective models explained in Chapter 3. In skillfully coping (Dreyfus, 2002), the learner is moving towards better and more finely tuned responses to her situation, without necessarily representing to herself what she is doing or being aware of each step she is making in the decision-making process. We also can't reduce this responsiveness to a matter of input and output, as this assumption overemphasizes a distinction between the actor and her environment that is not easily drawn. Skillful coping is a matter of constant adjustment for the speaker, such that she is constantly evaluating the information she is getting from her environment and interlocutor or interlocutors to navigate towards a more skilled responsiveness. While we must allow for more scientific inquiry about the nature of cognition, it is not necessary to use structures such as universal grammar to explain language learning since "[the learner] is doing just what Feigenbaum feared he might be doing—recognizing thousands of special cases" (Dreyfus, 1985, p. 36).

We must be hesitant about over-rationalizing this process by sticking it away in the brain and consider that she is not only processing her environment in this way, but also in an affective sense through what her "gut" might be telling her (Barnacle, 2009). The role of the gut in learning is not uniform in all cultures or individuals, but broadly speaking refers to how the speaker may have a sense that the conversation is going well or poorly, or even that a phrase is grammatically correct or not, in a way that she cannot rationalize or explain. The situation or the utterance may simply sound right or feel right, and this sense is a piece of a complete vision of skillful coping that does not assume cognition or intelligent action is confined to the skull.

Collins (2004) and Hutto et al (forthcoming) lay out certain features that help us further understanding language as a feature of interaction not confined to the private life of the

individual's mind. Collins' individual embodiment and social embodiment theses highlight how many people, especially those who have some type of disability, need to adopt a language and do adopt a language that reflects the embodied experience of their community more broadly in order to communicate, despite the fact that their experience may be remarkably different. Hutto et al (forthcoming) similarly proposes that cultural factors permeate thought process such that we cannot easily assume a separation. In both cases, the broader social context for the speaker is not only indispensable if we are to understand the process of SLA, or language use in general, but is a key factor in how the speaker herself approaches language, embodiment and communication. This responsive, affective and social process is metaplastic, such that changes across one aspect of the brain-body-world system require other adjustments to compensate.

Considering the emphasis on responsiveness and skill, a Heideggerian phenomenology of language and phenomenology of skill serves as the unaddressed underpinning of much of the phenomenology done to this point, especially Dreyfus' phenomenology and enactivism. While Merleau-Ponty is clearly another indisputable influence, Heideggerian phenomenology frequently addresses the issues of language, context and goal-orientation in a way that is more directly relevant to this topic of investigation.

Heidegger appears to endorse seeking out unique and atypical language experiences in order to understand language and considers language a key aspect of disclosure (Inkpin, 2017; Dahlstrom, 2014) wherein through the speaker's state as a Dasein and a Mitsein, she makes her understanding of the world explicit to others and they do the same to her (Heidegger, 1962, p. 205). Furthermore, she herself is not separate from the world and language involved. In this sense, she is also continually disclosing herself. Expression is for Heidegger, consistent with the enactivist and socially oriented views presented, not an act of bringing out ideas from the private

mind into the world, but an act of making the understanding you've projected onto the world explicit (Heidegger, 1962).

It is possible to gain more insight regarding varied first-person experiences of language through the application of Heidegger's terminology regarding attunement (*Stimm*). An object may be ready-to-hand (*Zuhandenheit*) or experienced in an active way with the subject's attention on the end goal of the use. Since language is quite commonly described as a tool, an utterance may be understood in the same way. It may become un-ready-to-hand, or broken in some way, such that the attention shifts from what the goal is to the object as an inconvenient barrier to the goal. Similarly, a mispronunciation or incorrect utterance can derail the goal of the speaker, drawing her attention to the language itself and her error or confusion. An object may be present-at-hand (*Vorhandenheit*), or as it is when studied in some scientific or philosophical way outside of a lived or active context. Language may be similarly placed in such a context, such as when you look up a word in a dictionary.

The speaker, then, is navigating a dynamic process through which she reaches more attuned responses to the situation, or maximal grip, through her apprehension of the world, or intentional arc (Dreyfus, 2002). While we cannot completely disallow representation, representation is not at all times necessary to understand goal orientation. Rather we can understand goal orientation as responding in a better way to the situation to reach this, perhaps undefined, best possible outcome. This process is not merely cognitive, but affective, involving emotions and feelings that assist in the apprehension and regulation of this situation (Barnacle, 2009). This is an intensely social and cultural process, such that not only the speaker's circumstances and experiences shape it, but that even the circumstances and experiences of the others in her linguistic community are influential (Collins, 2004; Hutto et al, forthcoming). These

experiences additionally navigate shifting modes of attunement (Heidegger, 1962) with respect to the language and failure and success dictate further attempts at expression. In understanding this responsive process as an act of disclosure that is affective, social and cognitive, SLA can be understood as a dynamic instance of skillful coping which is not merely based in manipulation of representations but instead based on this shared intersubjective world in which she is with others.

In this context, the speaker expresses through this new, shared representation system. She is not bringing some representation out of the private world of her mind but making explicit her engagement with the world in a situated state and as a Mitsein through this shared representation system. Her perceptions, perspectives, beliefs and values are included in these acts of expression. There is no expression outside of what is communicated. There is no fluency within her, away from the eyes of her interlocutors. Her ability with the language and her presentation of herself is only present in what she expresses. In this way, she may often fall painfully short of what she has attempted to say, such that her own attention and that of others is directed to the language and to the nature of language, rather than the ends she had in the course of the conversation. In this sense, she chokes much like an athlete, and is shaken out of her habitual responses in the situation.

However, she may achieve what she has attempted, or even go beyond what she would have thought she knew. The speaker may experience how she presents herself in a new way, in the context and eyes of a new culture and new language. In internalizing this language, she sees herself through the eyes of this other culture and language, which she has to whatever degree and for however long, adopted. The process of second language acquisition is deeply responsive, and a matter of dynamic negotiation within social and cultural contexts, with and through others, to

express one's self and one's world in a new form. To express well, or well enough, is the ever-changing target.

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