SPEAKING THROUGH IT:
BEING FLUENT IN A NEW LANGUAGE AS A TRANSFORMATIVE EXPERIENCE

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ABSTRACT

MIN TANG: Speaking Through It: Being Fluent in a New Language as a Transformative Experience
(Under the direction of L.A. Paul)

In this paper, I will argue that the experience of being fluent in a new language can be a transformative experience. The experience can be epistemically transformative in the following ways. First, having the experience of being fluent in a new language gives us the understanding of what it is like to fluently speak the new language. Descriptions or testimonies cannot replace that experience. This is what I call the Irreplaceability Thesis. Second, the experience of being fluent in a new language can give us new epistemic capacities to represent and understand the world. This is what I call the Capacities Thesis. Third, the experience of being fluent in a new language allows us to gain new experiences and grasp ideas that are only represented and understood in the new language. Besides being epistemically transformative, the experience of being fluent in a new language can also be personally transformative. The epistemic transformation of becoming fluent in a new language can scale up into a personal transformation.
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TABLE OF CONTENTS

Section

1. Introduction .......................................................................................................................... 1
2. Knowing through Having the Subjective Experience ....................................................... 9
3. Knowing by Having the Capacities ................................................................................... 18
   3.1 Case One: Absolute Frames of Reference ................................................................. 19
   3.2 Case Two: The Grammatical Gender of Nouns ......................................................... 23
   3.3 Case Three: Gaining Distinctive Epistemic Capacities from Learning Chinese ... 29
4. Knowing by Gaining New Experience and Concepts ....................................................... 31
5. Being Fluent in a New Language as a Personally Transformative Experience ............ 42
6. Conclusion .......................................................................................................................... 47

REFERENCES ......................................................................................................................... 49
1. Introduction

Experience is a great teacher. Sometimes, an experience teaches you something you could not have learned without having it. In the philosophy of mind, there are well-known arguments for the necessity of experience in representing possible qualitative states, such as the experience of seeing a color. One classic argument proposed by Frank Jackson is called the knowledge argument (1982). The argument is based on a thought experiment about a super scientist Mary. She grew up in a black and white room and knew all the scientific knowledge, stories, and testimonies about color and color vision. Jackson argues that Mary did not know what it is like to see a color until she left her room because her experience of seeing a color is necessary for her to understand what it is like to see a color.

In her book, Transformative Experience (2014) and papers (2015a, 2015b, 2015c), L.A. Paul argues that the necessity of experience in representing those qualitative states from the philosophy of mind should be extended to our ability to represent the outcomes of life-changing decisions—for example, deciding to have a child. She (2015c, pp. 513-514) firstly argues that unlike the experience in the super scientist Mary case from the philosophy of mind, experience involved in a life-changing decision, which changes us in a profound and fundamental way, is not mere qualitative or subjective feel. Moreover, unlike super scientist Mary (2014, pp. 9-10), we are simply ordinary people and must rely on the current best science and our limited experiences when we make a decision. She (2015c, pp. 514-515) then argues that in most ordinary cases, the experience is necessary for our ability to represent and imagine the nature and character of the outcomes of such a decision.
On the basis of the argument for the necessity of experience, Paul argues that a life-changing experience can be a transformative experience. She then distinguishes between two ways in which an experience can be transformative. An experience is epistemically transformative if it teaches you something you could not have learned without having that kind of experience (2014, p.10). For example, when ordinary Mary, who lives in a black and room and knows color experience only through contemporary science and her friends' descriptions on the outside, sees color for the first time, she has an epistemically transformative experience. An experience is personally transformative if it changes your subjective value for what it is like to be you, and changes your core preferences about what matters (2014, p.17). For example, when an ordinary person experiences a horrific physical attack, her sense of herself and core preferences will be substantially revised. Her experience is a personally transformative experience. The experiences, such as a person having her first child (2014, pp. 71-94) and a congenitally deaf person receiving a cochlear implant and a congenitally blind person (2014, pp. 56-70) having retina surgery are both epistemically and personally transformative experiences.

There have been many interesting and thorough discussions about the decision-theoretical implications of transformative experience. In these deliberations, the cases of transformative experiences involve a big and life-changing decision—for example, deciding to have a child, to change one's gender, to receive a cochlear implant and to have retina surgery. As Paul mentions (2015a, p. 475), many real-life experiences, which could be transformative and influence a person in a deep and fundamental way, do not depend on or involve a significant decision. For instance, a person's transition from childhood to adulthood, especially her physiological change, does not depend on her making a choice to undergo the experience. Similarly, a person's descent into dementia through Alzheimer's
disease does not depend on her choice (Genova, 2014). Moreover, in many real-life experiences, the transformation arises by the accumulation of small and gradual changes and happens slowly. There is no a unique deciding point where the transformation takes place. All the changes happen gradually and lead to a dramatic transformation only as a whole.

Among many of the real-life experiences, there is a distinct kind of experience that has not been investigated and discussed yet—being fluent in a new language. Language is a unique communication system. It varies radically in forms and meanings across social groups of the same species. Suppose you are born and grow up in a monolingual community. After college, you decide to learn to speak a new, radically different language. For instance, your mother tongue is English; and you want to learn an Asian language or an aboriginal language.

Take Chinese (Mandarin) as an example. Chinese is radically different from English regarding vocabulary, phonology, and grammar. For instance, Chinese characters and English words look and sound entirely different. You cannot remotely guess the meaning and the pronunciation of a Chinese character just by your knowledge of English. Second, Chinese and English grammars are also radically different. Chinese depends on its characters to realize its grammatical function, so the characters themselves do not change in form. English depends on the changing of the words themselves to show different grammatical elements. For instance, when describing a past, present or future event in Chinese, you do not change a verb to indicate the time of the event. Instead, you use the right time word to mark the time of the event. There are just no different verb forms in Chinese. In English, you have to use different verb forms to mark the tense. With your immersion in Chinese, you will identify not only linguistic but also cultural differences between Chinese and
English. More importantly, you will realize that the experience of being fluent in Chinese is very different from the experience of speaking your native language.

In this paper, I will argue that the experience of being fluent in a new language can be a transformative experience. The experience can be epistemically transformative in the following ways.¹

First, having the experience of being fluent in a new language gives us the understanding of what it is like to fluently speak the new language. Descriptions or testimonies cannot replace that experience. This is what I call the Irreplaceability Thesis.

Second, the experience of being fluent in a new language can give us new epistemic capacities to represent and understand the world. This is what I call the Capacities Thesis.

Third, the experience of being fluent in a new language allows us to gain new experiences and grasp ideas that are only represented and understood in the new language.

Besides being epistemically transformative, the experience of being fluent in a new language can also be personally transformative. The epistemic transformation of becoming fluent in a new language can scale up into a personal transformation.

To defend the Irreplaceability Thesis, in section 2, first of all, I argue that having the experience of becoming fluent in the language allows us to see how we build our epistemic relationships in the language in a long-lasting and challenging process. Second, our experience of standing in these relationships constitutes much of what it is like to fluently speak a new language. Third, we must actually stand in these relations or instantiate them in order to be fluent, and we cannot fully understand what it is like to stand in these

¹ Here, the ways the experience of being fluent in a new language being epistemically transformative do not strictly match with Paul’s original definition of epistemically transformative. Paul formulates the notion in terms of “what it is like”. I extend the condition of being epistemically transformative to (1) having new epistemic capacities and (2) gain new experiences and grasp ideas only represented in a new language. For the discussion of the language learning case, I think that such an extension of Paul’s original definition is natural and fits with the context.
relationships or instantiate them merely via description or testimony. Fourth, the distinction between understanding by description and understanding by subjective experience is an important distinction and has been recognized in the literature of philosophy of mind (Brian Loar, 1997; L.A. Paul, forthcoming). Under this distinction, knowing facts about what it is like to be fluent in a new language from description or testimony is different from understanding what it is like to be fluent in that language through our subjective experience. Therefore, without actually having the experience of being fluent in a new language, a distinctive way of fully understanding what it is like to fluently speak the new language is missing. Descriptions or testimonies cannot replace our subjective experience.

In section 3, to defend the Capacities thesis, I draw on two cases from cognitive science and linguistics. These cases show how being fluent in a new language can affect some fundamental domains of our experience and give us distinctive epistemic capacities to represent and understand the world. Moreover, by drawing on empirical evidence from cognitive psychology, I show that in the case of an English native speaker learning Chinese, a speaker can also gain particular epistemic capacities—such as distinct ways of representing the direction of time and motion in time.

To further argue for the epistemic transformativeness of being fluent in a new language, in section 4, I explore some structural similarities between the experience of being fluent in a new language and the experience of having a child. After that, I argue that the experience of being fluent in a new language can also be epistemically transformative in the following way: such an experience can allow us to gain new ideas and concepts, and have further new experiences, that are only fully represented and understood in the new language.
In section 5, I argue that the experience of being fluent in a new language can also be personally transformative in that the experience can change a person’s worldview, personality, and preference.

Before moving on, I want to make three remarks. The first remark is about “being fluent” in a new language. What I mean by “being fluent in” or “fluently speaking” a new language is the following. First of all, being fluent in a new language is a kind of ability or capacity. It means being able to easily and articulately communicate with the speakers of that language in natural social contexts as one would in her native language. If someone else is fluent in the new language, it means that she can speak the language easily and articulately, be easily understood by native speakers and understand the majority of what is said to her in the relevant contexts. It is worth noticing that being fluent in the new language does not mean being perfect in that language or being the same as a native speaker of the language. Nor does it mean the speaker is immune from criticisms and mistakes. Nor does it mean that the speaker is fluent in every social situation. For instance, a learner can speak a new language fluently in a casual and everyday context, but she might not be able to take part in an intense philosophical, legal, or political debate. Second, fluency comes in degrees. It is not an on and off status. Third, if a speaker is fluent in a language she needs to be able to think in the language. That means a learner needs to be able to articulate her thoughts in a way that fits with the requirements of the language, such that she can communicate well with other speakers of that language.

The second remark is about the Capacities Thesis. The thesis does not assume or imply an implausibly strong relation between language and thought. A hypothesis, sometimes called the Sapir-Whorf Hypothesis, Whorfianism, or linguistic relativism, is a hypothesis that advocates a particular relation between language and cognition. The Sapir-
Whorf Hypothesis is originally from two linguists, Edward Sapir and Benjamin Lee Whorf (1956). It is debatable what exactly the hypothesis is and which version of the hypothesis is plausible and verifiable by empirical evidence (E. Hunt & F. Agnoli, 1991). However, a popular formulation of a strong or radical Whorfianism is that our thoughts are determined by or depend on the language we use. Some linguists (N. Chomsky, 1973), philosophers (J. Fodor, 1975), and psychologists (P. Bloom & F. Keil, 2001) deny strong Whorfianism. For instance, Steven Pinker (1994) extensively criticizes a strong Whorfianism—linguistic determinism. He (p. 57) defines it as “people’s thoughts are determined by categories made available by their language”. He then argues that such an idea is “wrong, all wrong.” It is highly debatable whether Whorf suggests linguistic determinism or any strong correlation between language and thought by his empirical investigations. Nevertheless, in this paper, my Capacities Thesis suggests only a weaker connection between language and thoughts in the context of an adult’s second language learning. That is, language plays an active role in affecting our lived experience—including our representation and understanding of the world. Such an active role is especially salient when we have immersed ourselves in a new language.

On the other hand, it is worth mentioning that the Capacities Thesis is not trivial Whorfianism either. Trivial Whorfianism holds that language draws our attention to the things that we might happen to neglect without it (M. Francisca Reines and J. Prinz, 2009, p. 1028). Rather, the Capacities Thesis emphasizes that: (1) language learning equips us with a conventional way of representing, understanding and communicating by default. Without knowing that language, we would not have thought and spoken in a certain way. (2) Any radical changes in those conventions will reorient and affect our representation and understanding of the world. (3) As we become more and more fluent in a new language, we
represent and understand the world in a way that matches with the conventions and requirements of the new language. So, what the Capacities Thesis advocates is the active role of language in affecting our experience of representing and understanding the world. Such thesis can be read as a weak version of Whorfianism in the context of second language learning.\(^2\)

The third remark is about the transformativeness of the lived experience of speaking a new language fluently. It is worth mentioning that one might question the idea that such an experience is transformative. For example, when a person has learned three languages, her experience of being fluent in the fourth language might not be transformative. For instance, if she has learned English, Chinese (Mandarin), and German, her experience of being fluent in Spanish is not necessarily transformative. Partly because English, German, and Spanish have many similarities, and partly because she could expect, when becoming fluent in Spanish, what the changes of her points of views and preferences would be. Another worry is that the transformative nature of becoming fluent is contingent. It depends on the person’s talents, the impact of her first language, and her sociolinguistic environment. For example, an adult English speaker might find being fluent in German not transformative but might have a transformative experience of being fluent Mandarin. Alternatively, an adult Mandarin speaker might find being fluent in an Aboriginal language, which requires a speaker using absolute spatial terms extensively in everyday life, is not transformative (or unnatural), because she grew up in an environment where most people frequently and proficiently use those terms. However, she might find being fluent in German is transformative because of the unusual grammatical gender and inflection.

\(^2\) Some readers would demand that my version of Whorfianism be made much more precise, but the debate is not the topic of my paper and greater precision is not needed for my purposes.
I would say both worries are very natural, but they misunderstand the nature of transformative experience on many levels. First, it is too quick to draw the conclusion that the person’s experience of being fluent in Spanish is not transformative just based on the number of the languages that a person has learned. It might be right that the individual can predict some difficulties with becoming fluent in the new language, but that does not mean that she knows the changes in the way she represents, understands the world, the changes of her opinions, her preferences, and her sense of self. Different languages affect individuals’ experiences in a different way. Without having the experience of being fluent in the language, the person cannot predict what the changes will be and how those languages will affect her thinking and speaking. Second, it is tempting to treat transformativeness as an inherent property of some particular set of experiences. Without such a property, an experience would be non-transformative. However, “transformativeness is not an on/off status of experiences. It’s not the case, that is, that either an experience is transformative or it isn’t.” (In her paper (2015a, p. 174), E. Barnes defends the idea that transformativeness comes in degrees.) The project of transformative experience is not aiming to label some experiences as transformative and some as non-transformative. Rather, the project explores the possibility of how transformative an experience can be and what the philosophical implications of the transformativeness of the experience are. Moreover, it also does not matter if the transformativeness of an experience is contingent in the sense of being about the individual involved. These are real life cases, and different individuals bring different backgrounds to their decisions and life experiences. What matters is that for a particular person with a particular epistemic background the experience will be transformative.

2. Knowing through Having the Subjective Experience
In this section, I argue that coming to be fluent in a language allows us to see how we build and stand in distinctive relationships with the language in a long-lasting challenging process. Second, our experience of standing in these relationships partly constitutes what it is like to be fluent in a new language. Third, as before, knowing a description of being fluent in a new language is very different from understanding what it is like to be fluent in the language through the subjective experience of actually being fluent. Fourth, we must actually stand in (that is, experience) these relations or instantiate them in order to be fluent, and we cannot fully know what it is like to stand in these relations or instantiate them merely via description or testimony. Therefore, without actually having the experience of being fluent in the new language, a distinctive and significant way for the individual to fully understand what it is like to be fluent in a new language is missing.

To establish the claim that we build our relationships with the language in a long-lasting and challenging experience, first of all, I want to discuss a similar experience—becoming an academic. The experience of achieving fluency in a new language is like the experience of becoming an academic. For most ordinary people, both states, being fluent in a new language and being a successful academic, are hard to achieve. Moreover, the accumulated tasks, challenges, your responses, and your immersion in both experiences will gradually change you as a learner and as a person. (They can also change your preferences. I'll discuss this as I go along, and will come back to it in my final section.) Without going through the experience, you cannot know what it is like

Let’s look at the case of becoming a successful academic at first and then see how this case is parallel to the case of being fluent in a language. For those of you who have gone through the graduate school and become a professional academic, you might remember your experience in its early stages. Here is a possible pleasant scenario. You are very excited to
take classes, audit seminars and join research groups. You are exposed to exciting topics and projects. You see successful senior graduate students and professors you admire. You see them give great lectures and talks. You read their work and feel their passion, carefulness, and dedication. All the excitement leads you to think about what it would be like for you to become an academic. You think you know what it will be like by imagining yourself over the next five years and comparing yourself with the successful ones.

Here is a slightly depressing possible scenario. Just at the very beginning, you are completely overwhelmed. You are exhausted by taking five graduate level classes and attending all the department events at the same time. You are intimidated by intelligent people who can identify every single problem of your work, give you prompt feedback at five o’clock in the morning, and take care of their five children at the same time. You see senior graduate students giving fabulous talks and professors doing wonderful research. You read their work and hope that one day you can reach that level. You might think now that you know what it will be like for you to become a professional academic: it is to be one of those successful people around you in some distant future.

The next possible scenario is a somewhat plain one. You do not feel that your life in graduate school is particularly exciting or depressing. You take classes, go to labs and join research groups. You do the research you plan to do and meet the experts you want to work with. You see senior graduate students’ work and compare it with your own. You start envisioning what it is like for you to become an academic: you assume that in the next five years you will do the same research and be just like one of the experts you work with.

You may find yourself in one of these scenarios or something in between. However, more importantly, at this beginning stage, you might think you know what it is like for you to become an academic, but you actually don’t. Five to six years of training will change you
as a scholar and as a person. The specific, accumulated tasks you perform and either accomplish or fail will gradually change your opinions, understanding, academic and personal preferences, priority, and sense of self.

The epistemic changes start with your growing knowledge. With your training, you will become much more knowledgeable in your discipline. Your knowledge about a specific area might also go deeper and deeper through your intensive reading, writing, experimenting, and your constant communication with your colleagues and experts. With your growing knowledge, your academic preferences might change as well. You might hold a strong opinion about certain issues but learn to appreciate different voices. You might be keen to pursue a certain research project but instead, open yourself up to a brand new one.

You might think that you want to become a scholar like others you see but realize that you do not want to. For instance, you might regard a particular scholar as your role model, as someone telling you what scholarship is. Then you see the scholar fiercely defend a point of view in public, destroy an opponent’s work, and leave no room for opposition. You are left puzzling about whether being a scholar is just like being a fighter in a Fight Club. You might regard another scholar who always raises witty and sharp criticisms as your role model. Then you see the scholar react to other scholars’ work by making faces in public and keeping pressing the same destructive objection. You are also left puzzling about whether being a successful scholar is just like being a smart predator, aiming to hunt an animal down. Through five to six years of training, you might meet and work with different scholars. Through your observations and interactions with them, you are given different conceptions of scholarship. You might admire some of them initially and want to become one of those successful scholars. However, throughout the training, you change your beliefs about scholarship and realize that you do not want to become any of those scholars.
Moreover, throughout your training, you change your idea of friendship. For instance, you might think that what it is like to have friends is to be part of a circle as soon as possible and socialize with people there. You might think that what it is like to have friends is to have someone whom you can unwind with. Alternatively, you might think that what it is like to have friends is to have people who adore you. Throughout five to six years of training, your ideas about friends change. You might think that what it is like to have friends does not at all involve a rush to become a member of a circle. You might think that what it is like to have friends is not just to have someone whom you can unwind with, but have someone you can share your ups and downs and your feelings with. You might think that what it is like to have friends is not just to have someone adore you, but understand you as a person, accept your weakness, and appreciate your personality. More importantly, you might think that what it is like to have friends is to have a strong support system, like a special family.

With the changes in your knowledge, academic preferences, and ideas about scholarship and friendship, your priorities and sense of self will also change. Through many years of training, you might still be just as passionate about your intellectual life but prioritize your work and life differently. You might think now that what it is like for you to become a successful academic is to be able to pursue your academic goals but at the same time have a physically and mentally healthy life. You might think that what it is like to be a successful academic is not to sacrifice your health and your family time for your academic success. You might think that what it is like for you to become an academic is to be resilient and come to love your research and teaching genuinely. You might think that what it is like for you to become an academic is not to be easily intimidated by criticisms and instead simply deal with them on a daily basis. Alternatively, you might become more open-minded, develop new
interests and start doing something you never thought you would be interested in. You might think that what it is like for you to become a successful academic is to be able to challenge yourself and embrace the new, the exciting and the uncertain. You might think that what it will be like for you to become a successful academic is not to be someone else but embrace who you are and who you will be. There are more scenarios and possibilities than the ones I just listed, but they show us that you cannot know what it is like for you to be an academic in the next five or six years simply by imagining events before you’ve actually gone through the formative experiences.

Can others’ descriptions and testimonies teach you what it is like for you to be an academic? To answer this question, let us consider a simple version of this question first. Can others’ descriptions and testimonies teach you what it is like for you to overcome a challenge? Before discussing this question, let’s make some remarks about the challenge we talk about here. A challenge could be mundane one, such as trying to pass a midterm exam or getting up five o’clock in the morning for a run, or an especially difficult one, such as defending your doctoral dissertation. In fact, whether or not a challenge by itself is mundane or difficult does not affect the transformativeness of the experience of becoming an academic as a whole. Here is why: For a mundane challenge, the experience of overcoming it generates a small epistemic transformation. For instance, you know what it is like to get up at 5 o’clock in the morning via your own experience. What the experience of getting up early is like is something new to you. Such an experience might not lead to a big epistemic transformation. Alternatively, similar mundane challenges can accumulate and lead to a big epistemic transformation—for instance, getting up 5 o’clock in the morning becomes a routine. You know what it is like to get up in the morning every day. Your experiences can bring in a big epistemic transformation or even personal transformation to you. For instance,
you believe that getting up at that time in the morning is a great lifestyle for you. You do not like staying up in the night anymore. You care about your breakfast and your health. For a difficult challenge, the experience of overcoming it can bring in a big epistemic transformation. In other words, some difficult challenge can by itself make a significant contribution to the transformativeness of the experience of being an academic. So whether or not the particular challenge you face at a time is mundane or difficult does not directly affect the transformativeness of becoming an academic.

Now we are back to the discussion of the question, “can other’s descriptions and testimonies teach you what it is like to overcome a challenge?” There is no doubt that descriptions and testimonies can teach you many facts about what it is like to overcome the challenge—for instance, the fact that you will feel accomplished after you overcome the challenge and the fact that you will trust yourself more. However, what the descriptions and testimonies cannot teach you is your understanding of what it will be like to overcome the challenge through your own subjective experience. What is special about your subjective experience is that you will establish your own epistemic relation to the particular challenge you face with. Such an epistemic relation to the particular challenge can be a mixture of cognitive, conative, and emotional elements that partly constitute your subjective experience. You stand in this epistemic relation. It belongs to you, not to other people. Your experience of standing in this epistemic relation gives you the ability to understand what it will be like for you to overcome the challenge. Other people’s descriptions and testimonies cannot give you this. Moreover, your experience of overcoming a series of challenges, or a significant challenge can change you as a scholar and as a person. Specifically, such an experience can change your opinions, preference, and maybe your sense of self. For instance, you change your idea of scholarship and friendship. Without your experience of standing in the
epistemic relation with the challenge, you cannot know what it is like for you to overcome the challenge. Other’s descriptions and testimonies cannot fully replace your subjective experience of overcoming the particular challenge.

Now we come back to the question of whether others’ descriptions and testimonies can teach you what it is like to become an academic. There are no doubt that other’s descriptions and testimonies can teach you many facts about what it is like to become an academic. However, what the descriptions and testimonies cannot teach you is your understanding of what it will be like to become an academic through your own subjective experience. What other people’s descriptions and testimonies cannot give you is understanding of what it will be like for you to become an academic via your subjective experience. Moreover, those challenges and accomplishments might gradually change you. They might change your opinions, understanding, preferences, priority, and sense of self. Without your active, dynamical presence and constant interactions with them, you cannot know what it is like for you to be an academic.

The case of becoming an academic is parallel to the case of becoming fluent in a (new, radically different) language. Becoming fluent in a new language could be exciting, frustrating or boring at the very beginning. At the early stages of becoming fluent in a new language, you might be excited to practice your pronunciations and amused by the funny long words and the strange grammatical rules. You might be excited to talk to experienced learners and native speakers and not feel ashamed of your elementary level. You might think that you know what it is like for you to be fluent in that language in the future by imagining yourself in the future. Alternatively, in another possible scenario, you might have trouble with correctly pronouncing words, memorizing long words and applying grammatical rules. You might feel embarrassed by making mistakes and missing a ton of information when you
speak with a native speaker. You might think that you know what it is like for you to fluently speak a language by imagining yourself in a distant future. Alternatively, you might not have much trouble in the language, but just feel bored by learning the new words and practicing pronunciations.

No matter whether you have an exciting, frustrating or boring start of becoming fluent in a new language, you cannot fully understand what it is like to be fluent in a new language until you go through the whole experience. First, like becoming an academic, being fluent in a new language is a long-lasting and challenging experience. Achieving fluency in a new language takes time. If we are creatures like Super scientist Mary, Neo, or Trinity in the Matrix, we can achieve fluency in a new language within seconds or days. However, for an ordinary human being, achieving fluency in a language takes a long time. Besides being long-lasting, being fluent in a new language is challenging. It is not only hard to achieve fluency in a new language but also difficult to maintain. You need to keep practicing and speaking the language. Second, like the experience of becoming an academic, your experience of being fluent in a new language can also gradually change you. Specifically, such an experience can change the way you represent and understand the world, and change your opinions, your abilities, and your sense of self.

Can other people’s descriptions and testimonies teach you what it is like to be fluent in a new language? There are no doubt that other’s descriptions and testimonies can teach you many facts about what it is like to be fluent in a new language—for example, facts about using the correct rules and making the correct pronunciations. However, what the descriptions and testimonies cannot teach you is your understanding of what it will be like to be fluent in the new language through your own subjective experience. What is special about your subjective experience is that: (1) you will establish your epistemic relations to the
challenges you face with through your subjective experience; and that (2) you will fully represent and understand the world in a way required by the language. Your experience of standing in these epistemic relations to the language is part of what it will be like for you to be fluent in the new language.

Moreover, through your subjective experience, you will gain new epistemic capacities to represent and understand the world in a new way (I will develop the account of these new capacities and new ways of representing the world in the next section). When you have these challenges and stand in these relations, you can fully represent and understand the world in a new way. What matters with fluency in a new language is that you must actually represent and understand the world in the new way, not just have a description or a testimony from someone else about representing and understanding the world in a new way. Your subjective experience of having your thought restructured (to some degree) through the new language you are speaking is the distinctive experience. We must actually stand in (that is, experience) these relations or instantiate them in order to be fluent, and we cannot know what it is like to stand in these relations or instantiate them merely via description or testimony. What other people’s descriptions and testimonies prior to your subjective experience are missing is your experience of standing in these relations and your new epistemic capacities to fully represent and understand the world in a way required by the language. So, descriptions and testimonies cannot replace your subjective experience.

3. Knowing by Having the Capacities

In the previous section, I have defended the Irreplaceability Thesis. Specifically, having the experience of being fluent in a new language gives us the understanding of what it is like to fluently speak the new language. Descriptions or testimonies cannot replace that experience. The point of the Irreplaceability of such an experience is to show how the
experience of being fluent in a new language can be an epistemically transformative experience. In what follows, I will describe how an experience can be epistemically transformative. Specifically,

Being fluent in a new language can give us distinctive epistemic capacities to represent and understand the world. The experience of what it is like to be fluent in a new language can give us new epistemic capacities to represent and understand the world. This is the Capacities thesis.

That is, being fluent in a new language can be epistemically transformative in the sense that such an experience can give us distinctive epistemic capacities. To defend the thesis, I will draw on three cases from cognitive science, linguistics and psychology. The first case is about the exclusive and extensive use of an absolute frame of reference in an aboriginal language. The second case is about the grammatical genders in German. The third case is about different representations of the direction of time and motion in time among Chinese (Mandarin), English, Chinese-English bilingual speakers. By walking through these cases, I show that the nature of the way we represent and understand the world changes relative to the language we are using. Being fluent in a new language can give us distinctive epistemic capacities to represent and understand the world.

3.1 Case One: Absolute Frames of Reference

Suppose you are a native-English-speaking adult trying to learn to speak Guugu Yimithirr.\(^3\) Guugu Yimithirr is an indigenous language of North Queensland, Australia. According to the linguistics and anthropology literature, there are several differences between Guugu Yimithirr and English regarding the vocabulary, phonology, and grammar.\(^4\) Among all the differences, Guugu Yimithirr has a distinctive feature that English does not have. The language of Guugu Yimithirr exclusively uses absolute frames of reference to

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\(^3\) See Brown and Levinson (1993)
\(^4\) See Levinson (2003)
describe directions and locations. Those frames include fixed bearings, cardinal directions, or other stable geographic landmarks. The terms of spatial relations between objects are only north, south, west, and east and some combinations of them. There are no relative terms—no terms such as “left”, “right”, “in front of”, and “behind” are used in the language of Guugu Yimithirr. That is to say, to speak Guugu Yimithirr, a person only uses the absolute frames of reference to describe the spatial relations of any two things regardless how locally small or geographically large the scale of her experience is. The feature of exclusively using absolute spatial terms is very different from English. For English speakers, the spatial terms for small-scale descriptions are relative terms—for instance, “left”, “right”, “in front of”, and “behind”. The absolute terms, for instance, “north”, “south”, “west”, “east”, and the combinations of them are only for the large-scale and geographical descriptions. The following example illustrates the difference. If someone asks a question, “where is the chair?”, then (1) would be a natural answer for English speakers and (2) for Guugu Yimithirr speakers.

(1) English: The chair is to the left (or right) of the table.

(2) Guugu Yimithirr: The chair is to the north of the table.

It is important to stress the fact that Guugu Yimithirr speakers use absolute spatial expressions exclusively in their lived experience. For example, to describe how to get to a location, a Guugu Yimithirr speaker would say, “You go out this door, turn to the north, walk along the road until the end and then turn to the west.” By contrast, a speaker of English would usually say, “You go out this door, turn right, walk along the road until the end, and then turn left.” Moreover, a speaker of Guugu Yimithirr uses the absolute frame of reference to represent the location of an object on a body part—a Guugu Yimithirr speaker
would say that “there’s an ant on your south leg.” However, a speaker of English rarely uses the absolute frame of reference to represent the small-scale spatial relations. She would rarely say that “there’s an ant on your south leg.” Instead, what she would say is that “there is an ant on your left (or right) leg.”

Moreover, it is important to emphasize that Guugu Yimithirr speakers not only use absolute spatial expressions exclusively in their life, but also use them extensively, consistently and accurately. In linguistics and anthropology literature, there has been an extensive study of the use of directional terms in Guugu Yimithirr verbal interaction and story-telling. These studies show that directional terms have a high frequency of use. Furthermore, speakers of Guugu Yimithirr specify directions with a consistency and accuracy that allows them to play an essential role in reference identification and tracking—for example, to report a conversation. The interlocutors may be identified as the one to the north and the one to the south. The exclusive, extensive, consistent and accurate use of absolute frames of reference lead the Guugu Yimithirr speakers to represent spatial relations in a way that is very different from English speakers.

Guugu Yimithirr speakers have a “mental compass”. They can represent the spatial relations between any two points they want to talk about in the absolute coordinate system. They are also able to “dead-reckon” their current locations such that they can correctly describe where the unseen points are from the current location. That is, they possess spatial abilities to represent and comprehend how things in the world are positioned relative to cardinal points. It is also worth mentioning that “the Guugu Yimithirr” speakers do not only refer to adult speakers but also include teenagers and young kids. Guugu Yimithirr speakers use absolute frames of reference from childhood. By contrast, English speakers usually do

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not have a “mental compass”. They usually do not represent the spatial relations between objects in the way the speakers of Guugu Yimithirr do. For everyday communication, English speakers usually use relative spatial terms for the small-scale directions and locations of objects. Hence, we can say that English speakers do not gain abilities to use the absolute spatial terms by the language they are using.

How do these differences between English and Guugu Yimithirr give us insight into the case where an English speaker learns to speak Guugu Yimithirr? What are the epistemic requirements that the English speaker needs to satisfy to speak Guugu Yimithirr fluently? The following passage describes such a requirement.

“[T]o speak Guugu Yimithirr, you need to know where the cardinal directions are at each and every moment of your waking life. You need to know exactly where the north, south, west and east are since otherwise, you would not be able to impart the most basic information. It follows. Therefore, that to be able to speak such a language, you need to have a compass in your mind, one that operates all the time, day and night, without lunch breaks or weekends.” (Deutscher, 2011, p.172)

In other words, as a native English speaker, if you can speak Guugu Yimithirr fluently, then you have a “mental compass” in your mind. However, to achieve such a “mental compass”, you might have to undergo a moderate “epistemic revolution”. Specifically, you will have to re-identify the spatial relations between any two objects such that you can refer to them whenever you need to. Such re-identification requires you to shift your attention from “how objects are positioned relative to you” to “how they are located relative to absolute cardinal points”. Such attention shifting is not always easy. It might require a lot of practice. With the extensive practice, you can be trained to represent and understand objects in the required way and form a stable memory of using the absolute terms. Eventually, you can gain the
distinctive epistemic capacities to represent and understand the spatial relations of objects in the required way.\footnote{Some readers might find the requirements of Guugu Yimithirr unimaginable or implausible. Here I am merely drawing on the best published research on the question and cannot adjudicate these larger issues here.}

The Guugu Yimithirr is an example that shows how a monolingual English speaker’s representation and understanding can be changed when she is fluent in the dramatically new language. In fact, many languages extensively use absolute spatial terms in small-scale descriptions of direction (Deutscher, 2011, p.177). Many empirical types of research show that the reliance on geographic coordinates is very common in Australia. Most aborigines speak (or at least used to speak) in a distinctly Guugu Yimithirr style—for example, the Djaru language of Kimberley in Western Australia, the language of Warlpiri spoken around Alice Springs, and Kayardild once spoke on Bentinck Island in Queensland. Moreover, languages that rely primarily on geographic coordinates turn out to be scattered around the world—for example, Polynesia, Mexico, Bali, Nepal, Namibia, and Madagascar. Take a look at Mandarin. Some Mandarin speakers, born and raised in North China (the north of Yangzi River), habitually and proficiently use absolute spatial terms in small-scale descriptions. Empirical research shows that Mandarin speakers from the north have higher frequency and accuracy of using absolute spatial terms than those from the south (Liu, L. et al., 2005; Zhang, J et al., 2008). Alternatively, if you have ever traveled or lived in a city of north China, for instance, Beijing and Xian, you will hear people using absolute spatial terms to describe small-scale directions all the time. It is not unnatural for Mandarin speakers from those areas to use absolute spatial terms in small-scale directions. Staying oriented is just something they do on a daily basis, just like speaking their mother tongue.

3.2 Case Two: The Grammatical Gender of Nouns
Suppose you are a native English speaker and just start learning German as your second language. First, you are learning some basics such as how to greet someone, introduce yourself, and ask someone's name. For example, you see the sentences, “Wie heißt der Mann?” (What is the man's name) moreover, “Wie heißt die Studentin?” (What is the student's name). You have noticed that the nouns Mann and Studentin have different articles before them, which are der and die respectively. You then learn that der and die are two definite articles that are used to denote the masculine nouns and the feminine nouns respectively. Besides “der” and “die”, there is a third definite article “das” that is used to denote the neuter nouns—For example, "Wer ist das Mädchen?" (Who is the girl). As a matter of fact, all nouns have gender in German.

This is different from (Modern) English. For English, there is no such grammatical gender system whereby all nouns are assigned gender. However, when you speak a sentence in German, which has a noun, you have to assign a gender to that noun and then modify the adjective and verb to agree in gender with that noun. The following is an example that demonstrates this difference between English and German. Suppose you get a new key for your roommate. You tell her that the new key was on the desk.\footnote{The term “fact” does not have or indicate any deep metaphysical meaning. A fact is just something represented by a target language. It would be odd to use the word "object" since we mainly talk about the neighbor in the case, which refers to a person. It would also a bit strange to use the word "event" because the case does not explicitly indicate cause and effect or any causal relations.} The following are the two sentences about the same fact.

(a) English: The new key is on the desk.

(b) German: Der neue Schlüssel ist auf dem Schreibtisch.

There are many differences between these two sentences—such as grammatical inflection and case. Among these differences, the difference concerning grammatical gender is salient. In sentence (a), the noun “key” does not have a gender. English does not force you
to specify the gender of a noun. you are not **obliged** by the language to do so.\(^9\) By contrast, the word “Schlüssel” in a sentence (b) is a masculine noun. It clearly has a gender. When you describe the fact about the new key in German, you are forced or **obliged** to specify the gender of the noun key. Another way to put this point is that the German language encodes the specific information about the gender of the nouns while English does not. In a word, for the same fact, the linguistic representations in English and German are different. When you represent a fact in English, you do not have to specify the gender of the noun in the sentence. However, when you represent the same fact in German, you have to specify the gender of the noun in the sentence you construct. The change in linguistic representations is from non-gender-specific to gender-specific.

The changes in linguistic representations suggest something interesting about the cognitive process of being fluent in a new language. When you are switching from English to German, your thinking process is changing.\(^10\) Here, by saying that your thinking process is changing, I am not suggesting that the new language you are trying to learn to change your way of thinking in any strong sense. For example, when you are becoming fluent in German, you learn how to specify the gender of a person while you do not know how to do that when you speak English. What I mean is that the specific linguistic requirement of the new language orients your thinking. For example, the new linguistic requirement in our case is to specify the gender of the noun “key” in the sentence you want to utter. This requirement is something new for you, a native-English-speaking and German beginner. Such a linguistic

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\(^10\) The thinking process I refer to here is in the neighborhood of the process “thinking for speaking”. The idea of “thinking for speaking” was originally proposed by Slobin (1987). It says that the language we learn shapes the way we perceive reality and think about it. Specifically, Slobin (1987, p.435) suggests that “thinking for speaking” involves picking the characteristics that (a) fit some conceptualization of the event and (b) are readily encodable in the language. He suggested that each type of language fosters its own modes of “thinking for speaking”. Speakers need to organize their thinking to meet the demands of linguistic requirement during acts of speaking.
requirement imposes a non-linguistic requirement on your thinking. The requirement is that you have to pay attention to some aspect of a fact, which you were not obliged by your first language to do, and then express that aspect explicitly through your speaking. That is to say, to speak grammatically or properly, you have to think at first consciously in a certain way such that you can produce a sentence in a certain way.

The changes in shifting your attention to a certain aspect of a fact, which is required by the new language, are something crucial to your becoming fluent in the language. Without those changes, you will not be able to think or speak properly. In our case, paying special attention to the grammatical gender of a noun is crucial to your becoming fluent in German. Without correctly specifying the grammatical gender of a noun, you cannot even get past the basic greetings, self-introduction, and some daily conversation. To achieve the fluency of the language, you have to constantly and consciously think about the genders of the objects and match them with the proper pronoun, alter the adjectives and the verb forms. Only if you accumulate these changes and immerse yourself in the way of thinking can you speak the new language fluently.

What is particularly challenging about grammatical gender is that grammatical gender is not strictly related to biological sex and whether something is animate or inanimate. Specifically, as you are learning, you will notice that the masculine nouns do not necessarily refer to males. Likewise, the feminine nouns do not always refer to females. Moreover, the neuter nouns do not refer exclusively to inanimate objects. That is, there are no rules that help you systematically memorize the grammatical genders of nouns. There are always
exceptions. The following is a passage from Mark Twain's famous essay, *The Awful German Language*. He stresses the peculiarity and arbitrariness of the grammatical gender.\(^\text{11}\)

"In German, a young lady has no sex, while a turnip has...a tree is male, its buds are female, its leaves are neuter; horses are sexless, dogs are male, cats are female--tomcats included, of course; a person's mouth, neck, bosom, elbows, fingers, nails, feet, and body are of the male sex, and his head is male or neuter according to the word selected to signify it, and not according to the sex of the individual who wears it--for in Germany all the women have either male heads or sexless ones; a person's nose, lips, shoulders, breast, hands, and toes are of the female sex; and his hair, ears, eyes, chin, legs, knees, heart, and conscience haven't any sex at all."

Mark Twain might exaggerate the peculiar and arbitrary features of grammatical gender, but his passage does show the complexity of grammatical gender. The grammatical gender makes German quite difficult for a speaker whose first language does not have a grammatical gender system for nouns or for a learner whose first language has a very different grammatical gender system. It is difficult in the sense that all the nouns seem to be assigned genders arbitrarily.

Given the difficulty of grammatical gender, it is extremely important for a learner to choose an effective way to conceive and to remember the grammatical genders in German. The more efficient way you choose, the faster you can speak the language properly. To effectively learn the grammatical gender of a noun, you need to focus on some quality of that noun's referent such that you may pick it out as masculine or feminine. For example, the noun "Sonne" (sun) in German is a feminine noun. You can remember this by paying attention to the feminine features of the sun—for instance, its giving light and life to everything. Without the sun, nothing can live. So the sun is like a mother who gives birth to her child. On the other hand, the word "Mond" (moon) in German is a masculine noun. You can remember the grammatical gender of the moon by paying attention to some

\(^{11}\) See Mark Twain (1880, pp. 607-608). From online resource: http://usa.usembassy.de/classroom/Mark%20Twain/Mark%20Twain%20Awful%20Broschuere.pdf.
masculine qualities of a male moon God—such as the powerfulness of Máni. It is worth mentioning that there is no unique way to conceive or memorize the grammatical genders. You can come up with an effective way to conceive and memorize them. However, the point is that you have to constantly and consciously think about the genders of the objects and match them with the proper pronoun, alter the adjectives and the verbs.

One moral of the grammatical gender case is that through the process of consciously and constantly paying attention to the certain qualities of an object; you possess the relevant epistemic capacities to represent objects (or facts) and communicate with others speakers in the way that language requires you. That is, the need to specify an object as masculine or feminine may lead you to attend selectively to that object's masculine or feminine qualities. The representations and communications you have in the new language might be different from those in your first language. We have already seen the differences in our case of grammatical gender.

Moreover, you will understand things in a way that coordinates and matches with the requirements of the language. That is, your understanding of things will be oriented by those requirements. Here, I am not advocating any strong sense of Whorfianism, which is that our thinking is determined by or depends on the language we use. However, there is a sensible way to understand the non-linguistic effects of memorizing the grammatical genders of objects by picking out their salient qualities. If you are a native-English-speaking adult and unfamiliar with grammatical genders of nouns, then one of the most effective ways to grasp the noun gender is to attend the salient features of those objects selectively and then group them with respects to those features. It is reasonable to think that your attention to objects will be oriented by the grammatical gender system (even though the system itself might be semantically arbitrary). The key is that you are guided by the grammatical gender information
in the language and organize the information in a way that helps you memorize. With your immersion of the language and the accumulation of these special attentions, you can gain the distinctive epistemic capacities to represent and understand the world in a gender-specific way.

3.3 Case Three: Gaining Distinctive Epistemic Capacities from Learning Chinese

I have shown that a monolingual English speaker’s experience of becoming fluent in Guugu Yimithirr can be epistemically transformative. Similarly, a monolingual English speaker’s experience of becoming fluent in German can be epistemically transformative. Both experiences can be epistemically transformative in the sense that fluent speakers in either of these cases gain epistemic capacities to represent and understand the world in a different way. Moreover, these epistemically transformative experiences, such as the Guugu Yimithirr case, can lead to personal transformation (I will develop an account that being fluent in a new language case be a personally transformative experience in the next section). Therefore, becoming fluent in a distinctive new language can be an epistemically and personally transformative experience.

How about a monolingual English speaker’ experience of becoming fluent in Mandarin Chinese? As we discussed before, there are many obvious differences between these two languages. Arguably, an English monolingual can have various epistemic transformations when she achieves fluency in Mandarin (In the next section, I will develop an account of some of the new experiences and concepts an English monolingual can get only after she is fluent in the language.) Here, I want to draw on some empirical evidence from cognitive psychology to show that a monolingual English native speaker can gain a particular epistemic capacity when she becomes fluent in Mandarin. The particular epistemic capacity is a distinct way of representing the direction of time and motion in time.
In the literature of cognitive psychology, there has been work to show to cross-linguistic differences in how the direction of time is conceived between speakers of different languages. Psychologists like L. Boroditskys have been improving experimental methods and designing new experiments to show that Mandarin speakers, English speakers and Mandarin-English (ME) bilinguals conceive the direction of time differently.

“When native English and native mandarin speakers are asked to spatially arrange temporal sequences show in pictures, Mandarin speakers arranged the pictures in vertical arranges 30% of the time, whereas English speakers never did so. In the 3D version of this task, English and Mandarin speakers are asked to arrange time by pointing the 3D space around them. Mandarin speakers tested in Mandarin arrange time on the vertical axis 43.6% of the time whereas English speakers did so only 2.5% of the time. Further, the studies found that more proficient the participants were in Mandarin; the more likely they were to arrange time vertically. Mandarin-English bilinguals who were tested in Mandarin were more likely to arrange time vertically when they were tested in Mandarin as opposed in English…Several studies have used a non-linguistic implicit space-time association task to measure how English and Mandarin speakers spatialize time (L. Boroditsky et al 2010; O.Fuhrman, 2011; C.N. Macrae et al., 2010) The findings are consistent with other work showing that experience with speaking Mandarin; and processing vertical time metaphors, in particular, helps create and maintain Mandarin speaker representations of time on the vertical axis.” (L. Boroditsky, 2011, p. 335)

Interestingly, the finding about Mandarin-English bilinguals suggests that learning Mandarin can allow an English speaker to gain a particular epistemic capacity to represent and speak about time vertically. Moreover, further research shows that there are cross-linguistic differences in how the motion of time is conceived between the three groups of speakers.

“Lai and Boroditsky (2011) measured the relative cognitive salience of ego-moving and time-moving conceptualizations in three groups with different histories of linguistic experience with time metaphors: English monolinguals, Mandarin monolinguals, and ME bilinguals. The results reveal that English and Mandarin monolinguals tend to take different perspectives on time, with mandarin speakers more likely to take time-moving perspectives than English speakers. For Mandarin-English bilinguals, when they understand time metaphors in Mandarin, they are less likely to adopt the time-moving perspective than are Mandarin monolinguals” (L. Boroditsky, 2011, p. 335)

One might argue that the empirical researchers might be somewhat inclusive. They do not really confirm that a monolinguual English speaker’s gaining distinct epistemic
capacities in representing and understanding the direction and motion of time is caused by the language itself. Maybe there are other factors that cause the new representation and understanding of time. Here, I do not deny the possibility that other factors also contribute to an ME bilingual’s epistemic transformation in representing and understanding time. Nor do I want to suggest that language is the only factor that causes the transformation. What I want to suggest, based on these findings, is that being fluent in Mandarin does play an active role in helping an English speaker gain these particular epistemic capacities to represent and understand the world in a new way. Even if becoming fluent just caused the epistemic transformation through allowing these other factors to cause the change, becoming fluent still brings about the epistemic transformation.

4. Knowing by Gaining New Experiences and Concepts

In this section, I will start by presenting one of Paul’s cases, the experience of having a child (2014, pp. 71-95) and then compare that experience with the experience of being fluent in a new language. These two experiences, albeit radically different in details, share some important structural similarities. After showing the similarities, I will argue that the experience of being fluent in a new language can also be epistemically transformative in the following way: such an experience allows us to gain new experiences and concepts that are only fully represented and understood in the new language.

According to Paul (2014, pp. 77-81), the experience of having a child is unique. Such an experience is unique partly because physically producing a child of one’s own is unlike any other human experience.

“As a mother, in a normal pregnancy, you grow the child inside yourself and produce the baby as part of the birth process. As a father, you contribute your genetic material and watch the child grow inside your partner. When a newborn is produced, both parents experience dramatic hormonal changes and enter other new physiological states, all of which help to create the physical realizers for the intensely emotional phenomenology associated with the birth. These experiences contribute to
the forming and strengthening the attachment relation [between the newborn and you.” (2014, pp. 77-78)

The experience of having a child includes gestating, producing, becoming attached to that child, recovering, breastfeeding, and other hormonal and biological changes. This phenomenologically dramatic change makes the experience unlike any other type of human experience. Another cause of the uniqueness of the experience is the nature of the child you happen to produce.

“The distinctive traits of any particular child, including your own, plus the epistemic fact that you know that this is your child, can influence the nature and intensity of your felt attachment…the particular properties of your future child, her disposition and inclinations, her health and physical abilities, and her cognitive and emotional makeup will have a huge effect on your life as a parent.” (2014, pp. 79-80)

The experience of physically producing an infant, its immediate aftermath and the extensive experience of raising the child from infancy to childhood, make having a child a unique kind of experience.

More importantly, as a unique kind of experience, having a child is epistemically transformative. Such an experience involves significant epistemic transformations. One epistemic transformation involved is that a prospective parent does not know what it will be like to have a child before having her first child: she knows what the experience is like only after she has the child. Paul argues that before a person has had a child, she is in an epistemic situation like that of ordinary Mary (that is, not Mary-as-neuroscientist) before she leaves her black-and-white room.

“When Mary chooses to leave her room to see color for the first time, she undergoes an epistemically transformative experience: she learns something she could not have known before leaving her room. What she learns, when she leaves her room and sees red for the first time, is something she could only learn from experience—what it is like to see red.” (2014, p. 76)

Just like Mary, who does not know what it is like to see color before she leaves her black-and-white room, the prospective parent, until she has her child does not know what it is like
to have a child of her very own. She learns something she could not have known before having her child. Besides the epistemic transformation from not knowing to knowing what it will be like to have a child in a general sense, the epistemic transformation from having a child also arises from not knowing what it will be like to have that particular child. The experience of caring for the child generates a special, strong bond between you and the particular child. (Note: Paul would make a similar claim for a child that is adopted.) What it is like to stand in this relationship is something you could not have known before parenting this particular child. The characteristics of the child and her well-being become something that affects you directly and significantly. You could not have known what it would be like to have the lived experience of loving, being loved by, and raising this particular child.

Paul (2014, p. 81) argues that for most people, having a child is not just an epistemically transformative experience, but also a personally transformative experience. The epistemic transformations involved in the experience of having a child can be strong enough to generate personal transformations. Specifically, “your core preferences can be changed. The way you live your life can be changed. What and whom you care about can be changed.” The following two paragraphs portray the potential personal transformations.

“...because it is also epistemically transformative to have a child, you don’t know how many of your core preferences will evolve. Once you have a child, will you care less about your career or your education? Will your professional work still define your identity? Will you value your child’s welfare over your own? Will you love your cat just as much? Will you love your partner more? Will you love your partner less? Who knows? It depends on what it’s like for you to have your child. So when you face the choice of whether you should become a parent, you cannot know what it will be like when you become a parent, nor can you know what it will be like to experience and value the things that you will care about as a parent, or ultimately, know what your preferences, at least in any detailed way, will be. Most of your current preferences about your own future may even fade away, trumped by newly formed preferences about your child’s future.” (Paul, 2014, pp.81-82)

Hence, for most people, having a child is not only epistemically transformative but also personally transformative.
Now we turn to the comparison between the experience of having a child and the experience of being fluent in a new language. At first glance, these two experiences are very different. First, the experience of having a child involves immediate, sharp transformations while the experience of being fluent in a new language fluently involves slow, mild changes that occur over time. Second, the experience of having a child involves the experience of producing a new physical being, a child while the experience of fluently speaking a language does not involve such an experience. Third, the experience of having a child involves dramatic hormonal and biological changes while the experience of being fluent in a new language fluently does not have those changes.

There are more differences than the ones I just listed. Despite the differences, having a child and being fluent in a new language share some important structural similarities. One similarity is that both experiences can be cognitively demanding and emotionally invested.

It is worth mentioning that the similarity I am developing here does not suggest that the two experiences have the same contents. Nor do I suggest that the experiences have the same emotions or character. In fact, their contents, emotions, and characters do not have to be the same. All I want to say is that the two experiences have some unique feature in common. The feature is that they are both cognitively demanding and emotionally invested. If an experience is cognitively demanding this means that the experience involves intense cognitive tasks in attention, memory, and decision-making. If an experience is emotionally invested, this means that the experience affects an experiencer’s emotions and causes changes of emotions.

Consider the Parenthood case first. A good parent needs to learn a lot. As a mother, before giving birth, you need to pay attention to your body, observe and understand its changes. You have to know how to take care of yourself. You also need to know what you
should and should not eat, drink, and wear. As a good father, you work with your partner on a unique project. You also need to know how your partner's body will change, how to help her with the pregnancy reactions, and how to take care of her. After giving birth, you as a mother need to learn a lot about how to take care of the newborn baby and how to recover physically and emotionally. As a father, you also need to learn how to help your partner recover and take care of the baby. In parallel, as a language learner, you have to learn a lot at different stages. At the very beginning, you need to immerse, listen, imitate, and understand the unique patterns of sounds. After being able to recognize and understand those sounds, you need to produce them as accurately as possible and then work on the stress and intonation. After practicing the basic phonetics, you need to spend much time in listening, reading carefully to build up your vocabularies and grammar. You then need to learn how to participate in social, formal and informal interactions.

Besides being cognitively demanding, having a child and being fluent in a new language can be emotionally invested. Parenthood can take your emotions all over the place, from the extreme highs to the extreme lows. As a parent, you experience all kinds of emotions, such as excitement, joy, confidence, frustration and exhaustion, etc. In parallel, when you are trying to achieve and maintain a level of fluency in the language, you can be on a (small) emotional roller coaster. Sometimes you experience the excitement of learning new expressions. Sometimes you experience the joy of being able to understand a conversation. However, sometimes you experience the frustration of forgetting some words, trying to talk around but failing to do so. Sometimes you experience the discouragement of making confusions and miscommunication. For instance, when you’re dealing with native speakers and trying to communicate in their language, they are not always going to be patient and understanding. So it is easy to become discouraged. Sometimes you experience the
exhaustion and irritation of putting much effort but getting very little in return. For example, when you move to a new country, you spend several hours a week studying and practicing the language. You only go to the grocery store and get completely demoralized when the cashier cannot understand you. Then you become irritated that you cannot get the gist of news broadcasts or television shows.

The structural similarity between the experience of having a child and being fluent in a new language helps us to see how being fluent in a new language can be a unique kind of epistemically transformative experience. To further argue for the epistemic transformativeness of such an experience, I have argued that such an experience allows us to (1) gain new experiences and concepts that are only fully represented and understood in the new language, and (2) establish new connections with other native speakers. I will develop that argument further here.

First, the experience of being fluent in a new language allows you to gain new experiences and grasp ideas that are only fully expressed in that language. Take Chinese character calligraphy as an example. Suppose you are a native English speaker and want to learn Mandarin Chinese. You start learning this language by learning its pinyin and characters. To learn pinyin, you learn the initials, finals, and tones. To learn characters, you start by learning its eight basic strokes, which are made out of characters. As you study the characters further, you find that Chinese characters are written in different styles, especially in calligraphy. The different styles of Chinese characters’ calligraphy are regarded as one of the most important parts of its cultural heritage. To understand and appreciate the style of characters in calligraphy, you need to know the history and culture behind those characters. Otherwise, the characters in calligraphy might as well just be characters in different fonts. To understand the history and culture, you need to be fluent in the language such that you can
either directly read the relevant books that explain the history and culture, or inquire with people who are familiar with the relevant history and culture. The following passage about the strokes and characters in calligraphy nicely illustrate the connection between being fluent in Chinese, practicing the characters in calligraphy and being able to appreciate the calligraphy.

The names of the eight strokes are unproblematic: 点 dot, 横 horizontal, 竖 vertical, 提 lift, 钩 hook, 折 bend, 撇 left sweep, 捺 right sweep. The names of the movements, or components, however, which were first classified by Wang Xizhi in the fourth century, are not universally agreed by translators: 侧、勒、努、趯、策、掠、啄、磔. Qu (2004: 9) renders these terms as ‘shove’, ‘rein in’, ‘incise’, ‘kick’, ‘whip’, ‘sweep’, ‘peck’ and ‘slash’, most of which sound rather violent. Chiang Yee, in spite of his long stay in America and his fluent, expert English, prefers not to translate them at all, but use transliteration:  tse, le, nu, yo, ts’e, liao [sic], cho, and chieh [sic] (1938/1973: 151). Nowadays, we would use pinyin:  ce, lei, nu, yue, ce, lue, zhuo and zhe. The great advantage of using transliteration would be that calligraphy enthusiasts of different language backgrounds would have common calligraphy terms, but the transliterated terms in themselves do not convey much meaning to the non-Chinese speaker or learner. It is hard to believe that on this occasion Chiang was lost for words: it is more likely that he felt that one could only understand these terms through practice and through feeling the impetus of the brush in the hand.”

In this example, the strokes in different styles of calligraphy are represented by different verbs. Using different verbs in the first and second group of strokes means that these strokes have different meanings. The different meanings are expressed or visualized in different styles of calligraphy. This is how calligraphy works. Moreover, the meanings of the strokes in different styles of calligraphy cannot be fully translated in English. That is why the modern Chinese Calligrapher Chiang Yee uses transliteration—a way to faithfully translate one script to another—to translate the strokes defined by Wang Xizhi. For non-native Chinese speakers, what is difficult is to understand is the calligraphy terms. These terms do represent the style of the calligraphy but do not directly convey the meanings of the strokes. To fully

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12 Wang Xizhi (303-361AD) was the foremost among the calligraphers of the Eastern Jin period, and is revered today as the Sage of Calligraphy.
understand the meaning of the terms and appreciate the style of the calligraphy, you have to be fluent in the language, understand the history and culture of the strokes, the characters, and practice the calligraphy. Without your fluency in the language, you cannot fully understand the meaning of the strokes, which depends on the history and the culture behind the characters. Without practicing the calligraphy, you cannot fully understand and appreciate the distinctive nature of the strokes in a particular style of calligraphy. As a non-native Chinese learner, you can get full access to the meaning and appreciate the calligraphy only by fluency in the language, including a deep understanding of the strokes, the characters, and your experience of practicing the calligraphy.

Besides calligraphy, Chinese classical poetry is another art form that shows that some ideas can only be fully expressed in the language. To see how the ideas can only be expressed in the native language, we first consider two lines from a famous Chinese poem, *Journey to the Peach Blossom Spring*, by the poet Wang Wei, and three translations of the two lines.13

(3) 惊闻俗客争来集，竞引还家问都邑。

I. In sweet surprise, the dwellers hastened all.  
To hail and meet an earthly guest,  
And each and all invited him to home,  
Of news from old homelands in quest.  

(Loh in Xu, Loh and Wu 1987/1992: 65)

II. Amazed to hear of the world’s intruder  
All vied to see him  
And take him home and ask him  
About his country and place  

(Robinson 1973: 35)

III. Amazed to hear of a stranger from the world, they throng to see him,  
Compete in hospitality and ask about his hometown.  

(Innes Herdan 1972: 240

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13 Wang Wei (699-759 AD) was one of most famous poets and painters of the Tang Dynasty.
Commentators think that these three versions of the translation are subject to different kinds of problems. For instance,

“[The first] translation has a number of features that reduce its appeal to the purist and to the lay reader. The addition of ‘sweet’ to ‘surprise’ gives a cloying feel where there is none in the source text, which is spare and direct. Some of the lexis is inappropriately used: in English, ‘dwellers’ is most often prefixed, as for example in ‘cave dwellers’; ‘earthly’ implies a contrast with aliens from other worlds, whereas the utopians in the poem are obviously of Chinese” (Pellatt, Liu & Chen, 2013, pp. 107-108)

For the second translation,

“Robinson’s version should be admired for its determined use of monosyllables, which helps to preserve the concision of the source text, but the contrast in register between the first two lines and the second and third is bathetic in tone. It is not easy to see why Robinson has staggered the lines, as this layout does not reflect rhyme, rhythm or content in any meaningful way.” (Pellatt, Liu & Chen, 2013, pp. 108)

For the third translation,

“Herdan keeps close to the meaning of the source text and makes no attempt at rhyme or rhythm. Hers is a prose version, set out in lines as if it were blank verse. Of the three versions, it is probably the most readable and accessible: there are no uncomfortable grammatical inversions, the layout and punctuation are conventional, and the lexis is varied and evocative without seeming odd. While these translations all give the reader a rough idea of the content of the poem, Herdan’s is the most readable, and none of them encourage sighing, chanting, treading and stamping.” (Pellatt, Liu & Chen, 2013, pp. 108)

I think that the commentators nicely point out many problems in each of the translation. Here, what I want to emphasize is the elements that have been missed by all these three translations. I then explain why the missing elements are inevitable. The discussion of the missing elements will give us insight into why some ideas of the classical poetry can only be fully expressed in the native language.

First, what have been missing in the translations above are the rhythm and the rhyme of the original lines. As a matter of fact, the two lines are in rhythm. This means that they have particular tone patterns. In classical poetry, the four tones are categorized as level and oblique tones. In these two lines above, the pattern in which level and oblique tones occur in
the first line is the inverse of that of the second line. None of the translations captures the tone patterns. Moreover, the two lines are in rhyme. That means that the last syllable of each line has the same final. It is worth mentioning that Wang Wei intentionally uses a rhythmic and rhyming art form—poem—to capture the vivid feature of the scenario. He adapted a famous fable by another poet Tao Yuanming in the fourth century and created another piece in the form of poetry.\textsuperscript{14} What is special about Wang Wei’s piece partly lies in the rhythm and the rhyme of the original lines. So without the rhythm and the rhyme, the original, vivid feature of the scenario is inevitably lost.

Second, another important element that has been missing in the translations is the information encapsulated in the verbs of the two lines. The verbs, including “惊”, “争”, “集”, “竞”, and “问” carry the most important and the most subtle emotions and characters of the people. For example, the verb “惊” precisely describes how surprised the people were when they found a stranger showing up in their village. The verb “竞” vividly captures people’s subtle body languages and facial expressions when they tried to invite the stranger to their home. The verb “问” fully illustrates their acute nostalgia, and their honest and hospitable character. In the original poetry, each of these verbs vividly captures people’s rich emotions and distinctive characters. Moreover, these verbs intertwine and generate a consistent and cohesive description of the scenario. As we can see, none of the translations capture the emotions and characters of the people like the way those verbs do.

From this example, we can see that the elements, including the rhythm and the rhyme of the original poetry, and people’s emotions and characters captured in the poetry are inevitably lost in the translations. One explanation is that those elements can only be

\textsuperscript{14} Tao Yuanming (365-427AD), as known as Tao Qian, was one of most famous poets of the late Eastern Han Dynasty.
fully expressed in the original language of Chinese. Consider the rhythm and rhyme. It seems very hard to capture the exact rhythm and rhyme that belong to the lines. First, the rhythm and rhyme are mostly expressed in tones. However, English is atonal. As a result, an English translation cannot express the same rhythm and rhyme as the original lines do. Second, even though it is possible to create some rhythm in translation and put the words in rhyme, the new rhythm, and the rhyme are not the original ones. In fact, according to many commentators (Pellatt and Liu, 2010, p. 155), the created rhythm and the rhyme in translation do not keep or enhance the musical feature of the poetry. Rather, they make the translation awkward and inaccessible. The translations above do not capture people’s emotions and characters either. The reason is not that English words are not as expressively powerful as Chinese characters. Rather, the characters in classical poetry are very special. They have unique, rich meanings and very are concise in form at the same time. Such distinctive features of a character usually cannot be expressed and maintained in its translation. For instance, very often, just a character or a single syllable in classical poetry precisely encapsulates the essential information of the whole setting, such as people’s emotion and dynamics. It is impossible to translate fully and maintain that distinctive feature of the character in English or even in Modern Chinese. We usually end up using more words to elaborate the information contained in the single character.

Most importantly, we should keep in mind that the words we use do not have the same rhythm, capture the same rich and subtle meanings of the original characters. What makes those characters special and difficult to translate into another language is that some important ideas can only be expressed by the original characters and can only be fully appreciated with a deep understanding of the language, the history, and the culture. Such

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15 In literate communities, the issues about how to translate Chinese classical poetry into English are especially controversial. Many scholars have brought their different opinions to the task of translation.
ideas could be aesthetic, cultural, or historical. From the example of calligraphy and poetry, we can clearly see that these ideas are closely attached to the characters themselves and can only be expressed by the characters. To fully understand these ideas, we need to understand them in the original language. For a non-native Chinese learner, she can get full access to these ideas only through grasping a deep understanding of the language, and the history and the culture as part of her fluent in the language.

The examples of Chinese calligraphy and classical poetry show that a language learner can establish a new connection with ideas that can only be fully represented and understood in the language she is fluent in. In order to establish the connection between Chinese poetry and culture, I’ve argued that a reader needs to be thoroughly immersed in the language and culture, including—being fluent in the language and having a deep understanding of the history and culture of the language. In the next section, I argue that the experience of being fluent in a new language can be a personally transformative experience.

5. **Being Fluent in a New Language as a Personally Transformative Experience**

In this section, I argue that becoming fluent in a new language can be a personally transformative experience. The personal transformation starts with your immersion in your studies. You experience some important changes about yourself: You learn to leave your comfort zone. You take the risk to learn something that requires you putting a lot of effort but gets little in return in the short term. You start from expressing yourself in the most mundane situations to the most intellectually demanding situations. You constantly immerse yourself in the unfamiliar accents, sound patterns, vocabularies, and grammars and digest them bit by bit. You experience failures, frustrations, and exhaustions, but are still motivated and seek every opportunity to improve. You experience what it is like to represent and understand the world in a different way. You open up the possibility to represent and
understand the world in a different way. You also establish new connections with people via
the language you are speaking. You become a person who can embrace differences, tolerate
imperfections, grow through failures, and gain confidence.

Through your immersion in your studies, you deepen your understanding of the
language and the culture. Your world view, your personality, and preferences can gradually
change. First of all, being fluent in a new language is like making a key for yourself. You can
use this key to open the door of a different world and then shape a different world view.

Remember the example at the beginning of the paper. You are a monolingual
English speaker. You grew up in a western culture. You are taught that you can plan things
ahead, build toward some goals, and climb a ladder to a dream end. You think that you can
live a good life by planning, predicting, controlling things that will deeply affect you. After
you become more fluent in a foreign language, Chinese, and get to know more about
Chinese people and culture, your world view can gradually change. You learn from ancient
Chinese thinkers, for instance, Confucius and Mencius, by reading their texts and discussing
their ideas with your Chinese colleagues. Those thinkers teach you to believe that windfalls
and tragedies happen no matter what you have planned or intended. Life is full of
contingencies. Some of these events, regardless of whether they are good or bad, happen
outside your control. Through your immersion in those thinkers’ thoughts, you realize that
life is indeed unpredictable in some sense. For example, your teachers help you get through a
personal crisis that you never thought you’d face. You see your older friends pick up new
hobbies after dedicating themselves to their research for decades. You see a talented friend
who has fought for her dream for many years but cannot find a job. You see a dear friend
die suddenly, leaving behind desperate, grieving parents. You question whether you can
really plan, predict or control things that affect you deeply.
Besides changing your world view, being fluent in a new language can gradually change your personality. You can transform from a shy, weak person into a confident, resilient individual. When you become more and more fluent in a new language, you have learned to face with numerous mistakes and deal with them on a daily basis. You also have learned to be patient with your progress and stay passionate. You also have learned how to keep your confidence growing through the little progress you make every day. More importantly, you can learn how to handle being marginalized, being blamed for your inability to acculturate in a new community. These personal changes in the experience of being fluent in a language are like the personal changes in the experience of being a successful academic. You grow through mistakes, stay passionate, and become confident.

With the changes of your sense of self, your world view, and your personality, you might change some of your preference as well. Here, preference should be broadly understood as what you desire, what you care about, and what matters to you.

Suppose you grew up in a culture that instilled in you the ideas of “normal,” “great,” and “evil.” You might never really question these ideas. You might think that they are the truths. Every race and culture on early should share these ideas. You might think that people who speak totally different languages and have different conceptions of “normal,” “great,” and “evil” might be described as “strange,” “inferior”, and “irrational.” Suppose you grew up in a monolingual English community. You’ve never learned Arabic or known very little about Arabic/Islamic culture. You then learn a little bit of Arabic and Arabic culture through mainstream media. Then how would you understand the language of Arabic? You might think that the language is so “strange” that you cannot even identify different words from the continuous lines. How would you understand the family and social rules that Arabic/Islamic women need to obey—for instance wearing a black veil and a black dress to
cover almost their whole bodies? You might probably think that demanding that women
dress like that in public is meant to prevent women’s rights and freedom to show their
bodies. It is unfair. How would you understand the conflict between your country and some
Arabic countries? You might think that people living in those countries create these conflicts.
Those people are evil, terrorists or ready to be terrorists. Would you care how Arabic people
think of these conflicts? Would you take the trouble to understand Arabic women’s dressing
code by learning their language and culture? Before you learn Arabic and immerse yourself in
Arabic culture, you might not fully understand these issues from their perspective or care
about how Arabic people think about these issues. However, when you become fluent in the
language and understand the culture, you can start not to take some ideas instilled in you for
granted, start to understand controversial issues from a different perspective, care about
what other people think and seek communication. Because of your fluency in the language
and your understanding of the culture, you can even gain job opportunities to work with
people who grew up in a completely different culture and have an unconventional life path.

The upshot of these examples is that just like an English monolingual’s experience
becoming fluent in Chinese, the experience of being fluent in another dramatically new
language can lead to a personally transformative experience. Such an experience involves
tremendous epistemic transformations that can lead you to a personal transformation in your
sense of self, worldview, personality, and preference.

Last, I want to come back to the Guugu Yimithirr and the grammatical gender cases
and explore how the epistemic transformations in both cases lead to personal
transformations.

First, the case of Guugu Yimithirr shows us that the language we are using plays an
active role in affecting our representation and understanding of objects, ourselves, and our
Suppose you are a native English speaker. You want to learn to speak Guugu Yimithirr fluently, or another Guugu Yimithirr style aboriginal language in Australia, or Mandarin Chinese in North China fluently. Before you learn such a language, you might rarely use absolute spatial terms both in the large-scale and small-scale descriptions of locations. Instead, you rely on your electronic device (e.g. GPS) all the time (you can’t imagine your life without an electronic device, can you?) Now under the pressure of achieving fluency in the language, which extensively uses absolute spatial terms, you need to change the way you represent properties of objects, yourself, and your relation to the world. For instance, when you verbally describe the spatial location of two objects, you need to change your representation from “how objects are positioned relative to you” to “how the objects are located relative to absolute cardinal points”. Furthermore, such changes require you to understand the basic absolute directions and then apply your understanding to objects in the world. That is, to make the changes in representation happen, you need to at least know what the absolute directions are and understand how to apply them in a specific situation. With your practice of the language, you will change the way you represent and understand spatial features of objects yourself, and your relation to the world. Moreover, it is worth noticing that these changes are not trivial but rather difficult to make and radical. For a speaker of a language which does not use absolute spatial terms in the small-scale description, these changes do not come easy. The representation and understanding in Guugu Yimithirr are radically different from those in English. One might think that the extensive use of absolute spatial terms in Guugu Yimithirr (or another language in a similar style) is too unnatural or demanding for English speakers. They have to put in a lot of effort

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16 Again, this moral is not to deny the possibility that other factors—such as environmental factors—also contribute the changes in a learner’s representation and understanding. What I want to emphasize is the role of language in motivating and pushing the changes
to make these changes happen. Furthermore, the extensive use of the absolute spatial terms in communication makes the changes even more difficult and more radical.

With the changes in the ways you represent and understand the world, and the way you communicate with others, your opinions about the language can also be changed. Through your immersion in the language, you might stop judging the language as unnatural or unusual, and learn to appreciate the diversity of different languages in representing and understanding the world. You might realize that every language in the world has its own character and cognitive burden on its learners. Some languages, like Guugu Yimithirr, force you to use absolute spatial terms extensively in daily life. Most importantly, when you decide to learn a critically endangered language like Guugu Yimithirr and immerse yourself in the language, you are not just learning the language, but the culture behind the language and the people who speak that language. Through your immersion in the language and the culture, you will not take some ways of thinking and speaking for granted. Your personal transformation starts with your caring about how other people think. You then take the initiative to become a member of a completely new community. You start to reflect the culture you grew up with, set aside some stereotypes (like the ones in the Arabic case), and live your life in a new way. The same goes with the grammatical gender case. Through your immersion in German, you might stop complaining the strangeness of the language but instead, appreciate and understand its rigorousness. More importantly, you might see the same rigorous spirit throughout German culture and German speakers’ attitude towards their work. When you immerse yourself in the language, you are not just getting the fluency in the language but also learning a new culture, a new way of thinking, behaving, and living your life.

6. Conclusion
In this paper, I have argued that the experience of becoming fluent in a dramatically new language can be transformative through exploring the way that becoming fluent in Chinese can be transformative for an English speaker. Such an experience can be epistemically transformative in the following ways. First, having the experience of being fluent in a dramatically new language gives us the understanding of what it is like to fluently speak the new language. Descriptions or testimony cannot replace our subjective experience. Second, the experience of being fluent in a dramatically new language can give us distinctive epistemic capacities to represent and understand the world. Third, the experience of being fluent in a dramatically new language can allow us to gain new experiences and grasp ideas that are only represented and understood in the new language. Finally, I have argued that the experience of being fluent in a dramatically new language can be personally transformative. The epistemic transformation of becoming fluent in the dramatically new language can scale up into a personal transformation.
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