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LANGUAGE AS A CATALYST FOR TRANSFORMATION: EXPLORING THE IMPACTS  
OF LANGUAGE ON THE HUMAN EXPERIENCE

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## ABSTRACT

Language is the main form of human communication, and currently it is estimated that nearly 7000 languages exist worldwide. Beyond the words and the grammatical structures, a language is a system of communication that allows an individual to navigate the human experience, and offers a unique history, culture, and perspective on life. That is why, when an individual opens the door to learning a new language, they are also opening a door to the possibility of seeing life through a different set of eyes. Learning a language means learning a new way of thinking, and individuals who embark on this journey become subject to a transformative experience on many different levels.

This thesis explores how individuals are transformed by the power of language on a cognitive, personal, and a communal level. Composed of a creative writing piece, a literary analysis, and a discussion of the scientific research behind language learning, this thesis delves into the impacts of language on the human experience and examines the diverse ways language learning can transform individuals and societies. I provide a particular perspective on the myriad of ways in which learning new languages can shape the life of an individual or a community. As such, it encourages serious reflection on language learning as not only the addition of a particular skill, but also as an experience that can alter an individual's perspective of the world in which they live. I argue that language, rather than being a human aspect that divides, can also serve to help us better understand one another, and, in the process, become a motor for unity.

As the reader embarks on this journey, this thesis will help uncover many different and profound ways in which language affects us today and will show how it can act as a powerful catalyst for personal and societal transformation.

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## Introduction

Language is a fundamental aspect of the human experience. It is a multifaceted ability that allows us not only to communicate with each other, but also to express ourselves and learn more about the life that surrounds us. On the surface, it may seem easy to perceive language simply as a vehicle for communication and knowledge. Viewed from this perspective, it would be simple to overlook the important and varied dimensions of language, and to remain with a limited perception of the world. However, language can be approached from a different perspective, one that demonstrates how language goes beyond words—it can also encompass identity, emotion, culture, and tradition. By learning how to reshape the way we perceive language, we can welcome the opportunity to expand our perspective, and ultimately, we become able to gain from everything that languages have to offer.

Language acquisition is a main way to expand one's view of the world. The significance of learning a new language as a transformative experience is evident in the way that it can change a person. When a new language is learned, a new way to think, communicate, and behave is unlocked. It opens a door to new words, structures, and phrases, but also allows a person to immerse themselves in a multiple cultures and experience life through a different linguistic lens. In this thesis, I argue that learning languages is a transformative experience on many levels. Biologically speaking, research shows that language acquisition can sharpen cognitive function, enhance mental flexibility, and may help increase competency in certain skills. However, beyond the physical changes that learning a new language system may have on the brain, it can also transform one's feelings and emotions, promote introspection, and encourage personal growth.

Additionally, we can also take a step back and perceive language as a communal experience — one that serves as a bridge between cultures and promotes a sense of global interconnectedness.

When I chose this topic as the focus of my honors thesis, I did so to provide a new perspective on the matter. This is something I feel very passionate about, and I wanted to find a creative way to share it with others. As a continual language learner myself, I have experienced many transformations as a result of the knowledge and perspectives that my three languages—Spanish, English and French—have given me. I learned these languages at different stages of my life and through different contexts, and even though I know each to different levels of fluency, each one of them is a part of me, and, in their own ways, they have all played a role in shaping me into the person I am today. In order to investigate how language learning has transformed me, I chose to do a project that challenged me creatively in French, which is the latest language I acquired. This encouraged me to think differently and to dig deeper inside my own perspective, so I could learn more about the way in which I view the world through different languages. For instance, during the writing process, I challenged myself to complete various writing exercises that consisted of writing about simple activities in all three languages, and analyzed the differences in the essence of the texts even if they were all about the same topic. In addition to these exercises, I also read fiction and completed creative writing workshops in French to nourish my abilities and fully activate the language in my brain. These exercises revealed the extent to which I think differently depending on the language I am thinking in, and they ultimately helped me prepare to embark on this project.

The thesis is structured as follows. First, I present a short fictional story in Chapter one, written in French. The story deals with a girl who wakes up one day to realize she has been given

a new super power: the ability to speak all of the languages in the world. It offers an idea of what could happen if this occurred to someone, and how that would impact not only them but everyone in their surroundings. Chapter two provides a literary analysis of the short story, in an attempt to provide interpretation and meaning of the work, and to demonstrate the transformational experience of learning and speaking multiple languages. Lastly, Chapter three takes on a more scientific approach, and discusses current research on the impacts of language learning and bilingualism on a person. It is my hope that this thesis allows the reader to engage with my experience and my perspective of language, encouraging them to reshape and expand their own view of the world.



## Chapter 1

### Préface

Si vous pouviez avoir un super pouvoir, lequel serait-il ? Ceci est une question que j'adore poser aux autres quand je veux mieux les connaître. Bien sûr, je peux leur demander leur prénom, d'où ils viennent, ou d'autres choses superficielles. Mais pour moi, j'adore poser cette question parce que c'est une manière créative de savoir ce qu'ils pensent, leurs fantasmes, leurs rêves... Et même si la réponse est courte, comme « j'aimerais voler » ou « j'aimerais être invisible », je leur en demande toujours la raison. Et c'est la raison derrière la réponse que je voudrais vraiment savoir.

Pour moi, si je pouvais avoir un super pouvoir, je choiserais d'avoir la capacité de parler toutes les langues du monde. Pouvez-vous imaginer ça ? Je crois qu'il serait incroyable. Imaginez que vous pouviez voyager n'importe où dans le monde et que vous pourriez communiquer avec tout le monde sans problème. Mais ce n'est pas seulement la communication qui m'intéresse. C'est la complexité avec laquelle on penserait ; c'est la manière de laquelle ce pouvoir affecterait nos pensées et nos idées ; c'est l'histoire qu'on pourrait apprendre d'une culture...

Cette histoire aborde la question de ce qui se passerait s'il y avait une personne qui avait le super pouvoir de parler toutes les langues du monde. Même si le conte est fictif, cette petite histoire peut nous enseigner l'importance d'avoir une perspective ouverte, d'avoir de l'empathie, et finalement de savoir que les obstacles que nous pensons être ceux qui nous divisent sont, en réalité, ceux qui peuvent nous unir.

## Le Super Pouvoir du Multilinguisme

Aujourd'hui, je me suis réveillée avec une sensation bizarre. Normalement, quand je me réveille, je prends mon temps pour me préparer mentalement et pour commencer ma journée. Mais pas aujourd'hui. Dès que j'ouvre les yeux, il me semble que ma tête vole à mille kilomètres par heure. Je me sens comme si mon cerveau avait été frappé par une vague de connaissance, mais je n'arrive pas à l'identifier exactement. Je ne sais pas pourquoi, mais tout d'un coup j'ai une sensation qu'aujourd'hui, ma vie va changer d'une manière inattendue.

Comme d'habitude, je me prépare pour aller à l'école. C'est la dernière journée des cours et je suis prête à commencer les vacances, mais j'ai hâte d'y aller quand même. Ce matin, la vie pour le reste du monde est la même. En attendant le train, je note toutes sortes de gens autour de moi. Il y a des hommes d'affaires qui ont l'air d'avoir une expression sérieuse tout le temps, des femmes ayant de jeunes enfants et qui semblent fatiguées mais contentes, et des étudiants, comme moi, qui auraient préféré rester au lit mais qui vont à l'école malgré ça.

Le train est plein ce matin. Derrière moi, il y a deux amies et elles sont en train de parler d'une fête qu'elles préparent pour célébrer la fin de l'année scolaire. Une des filles demande à l'autre comment elle aimerait décorer la maison.

— Alors Sara, tu veux des ballons ou des guirlandes ?

— Mmm, je ne sais pas. Peut-être les deux ? dit Sara.

— Ok. De quelle couleur ? Est-ce que tu veux que les deux soient de la même couleur, ou tu veux qu'ils soient différents ? Et aussi, quant à la nourriture...

— *Basta ya, amiga*,<sup>1</sup> interrompe Sara, il est trop tôt pour penser à ces choses. Je te promets qu'après les cours on peut se rejoindre et terminer de planifier la fête.

— D'accord, mais la *fiesta*<sup>2</sup> est demain donc tu ferais bien de m'aider...

Écouter cette conversation ce n'était pas mon intention, mais personne ne parlait dans le train, donc il était facile pour tout le monde d'entendre leur conversation. Aussi, je n'avais rien à faire, donc dans un sens je l'ai fait inconsciemment. La fille qui planifiait la fête, dont je ne connaissais pas le prénom, m'a fait sourire parce que je pouvais sentir son enthousiasme pour l'évènement. Mais en même temps, je comprenais que la fille, Sara, ne voulait pas planifier une fête dans le train à 7h du matin. J'ai remarqué que certaines personnes regardaient les filles d'une manière agacée ou dérangée, peut-être parce la conversation interrompait le silence quand tout ce qu'ils voulaient faire c'était d'atteindre leur destination en toute tranquillité ...

Après quelques minutes, le train est arrivé à mon arrêt et je suis descendue. Lors de ma courte promenade à l'école, j'ai continué à penser à la conversation parce que j'avais ressenti un truc différent. Je n'avais pas seulement compris leur conversation, mais c'était comme s'il y avait un fil invisible qui liait l'émotion de leurs pensées aux miennes. J'avais ressenti ce qu'elles ont ressenti. J'ai pu percevoir l'intention derrière leurs mots. Je ne sais pas pourquoi, mais je me sentais comme si j'avais pu appartenir à leur conversation, même si je ne les connaissais pas. Et en ce moment-là j'ai remarqué une chose. Les filles du train ne parlaient pas en français. *Elles parlaient en espagnol.*

J'ai arrêté de marcher. Ce n'était pas possible. Je ne parlais que français. Je ne sais pas comment ou pourquoi j'avais compris une conversation en espagnol, parce que je ne l'avais

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<sup>1</sup> English translation: Stop it now, my friend.

<sup>2</sup> Word for *party* in Spanish.

jamais appris. Je croyais que tout cela était le fruit de mon imagination. Pour me tester, j'ai prononcé quelques mots en espagnol, en pensant que j'allais être ridicule, mais à mon grand étonnement je les ai prononcé parfaitement et sans effort. J'ai parlé en espagnol comme si elle était ma langue maternelle. J'étais absolument étonnée. Un truc dans ma tête me disait que je pouvais essayer n'importe quelle langue que je voulais, donc c'est exactement ce que j'ai fait. J'ai commencé à expérimenter avec plusieurs langues—l'anglais, l'allemand, le russe, le chinois, le japonais, etc. ; peu importait la langue, j'étais capable d'en parler et comprendre plusieurs langues. Du jour au lendemain, je suis devenue polyglotte.

« Je dois être folle », je me suis dit. Il est impossible que je me sois devenue polyglotte pendant la nuit. Hier, je ne parlais qu'une langue. Aujourd'hui, on dirait que je peux parler toutes les langues du monde. Quelle folie! Une partie de moi voulait penser que j'étais en train de rêver, car des choses comme ça n'arrivent à personne. Mais l'autre partie de moi, la partie qui était étonnée et aussi qui sentait trop d'enthousiasme, voulait penser que c'était vrai et que j'avais un don multilingue.

Parmi toutes mes pensées et découvertes, j'ai perdu la notion du temps. J'avais que deux minutes pour aller en classe et l'école était encore un peu loin, donc j'ai couru aussi vite que je pouvais pour y arriver à l'heure.

La classe avait déjà commencé quand je suis arrivée, mais heureusement le professeur ne semblait pas fâché de mon petit retard. J'ai trouvé une place à côté de ma meilleure amie, Lou, et immédiatement elle a commencé à me poser des questions. Je n'avais pas l'habitude d'arriver en retard.

— Eh Clara, ça va ? Lou a chuchoté. Pourquoi tu es en retard ?

— Lou, tu ne me croiras pas.

— Quoi? Tout va bien?

— Oui, mais je ne sais pas comment t'expliquer, dis-je.

— M'expliquer quoi? dit Lou, visiblement confuse.

— Je ne sais pas comment ou pourquoi, mais je peux parler toutes les langues du monde...

Lou a commencé à rire aux éclats, attirant l'attention de tout le monde. Le professeur s'est retourné tout de suite, avec l'air énervé. Lou—clairement gênée—s'est excusée et le professeur a continué la leçon. Quelques instants après, elle s'est tournée vers moi et a commencé à chuchoter encore une fois :

— C'est une blague, hein? C'est impossible, ma chérie.

— Je sais que ça semble une folie, mais je te promets que c'est vrai, j'ai dit.

— Tu pourrais me le prouver?

Je voulais lui montrer mon nouveau talent, mais je ne voulais pas continuer à chuchoter pendant la classe. Alors j'ai sorti un petit morceau de papier, sur lequel j'ai commencé à écrire une phrase en grec. Lou était française, comme moi, mais ses parents venaient de Grèce donc elle parlait cette langue aussi. Cependant, elle parlait en français toujours avec moi parce qu'elle savait que c'était la seule langue que je parlais. Quand j'ai terminé d'écrire, je lui ai passé la note discrètement. J'ai observé sa réaction, et comme je l'avais imaginé, elle semblait étonnée mais un peu réticente, et après elle n'a rien dit. Elle m'a seulement souri et son regard m'a fait savoir qu'on allait continuer la conversation après l'école.

Pendant le reste de la journée à l'école, ce n'était pas possible de me concentrer parce que je sentais qu'il y avait plusieurs voix différentes dans ma tête, toutes essayant de parler à la fois. La sensation était bizarre mais, d'une certaine façon, je l'aimais.

Après les cours, Lou et moi, nous sommes allées à notre café préféré pour continuer notre conversation. Au début, elle ne disait rien mais elle me regardait d'une manière curieuse. Enfin, je comprenais que c'était parce que ce que je lui avais dit n'était pas ordinaire. Je pense qu'elle ne savait pas quoi dire, donc j'ai décidé de briser le silence :

— Φίλος<sup>3</sup>, je suis aussi confuse que toi. Je ne suis pas sûre pourquoi cela m'est arrivé.

— T'es vraiment incroyable, toi. Comment est-ce possible? Je sais que tu ne peux pas parler grec...

— Je ne sais pas! Ce matin je me suis réveillée et j'avais une sensation étrange dans ma tête, comme si j'avais accédé à une quantité énorme de connaissances linguistiques. J'ai réalisé tout quand j'ai compris une conversation entière en espagnol entre deux amies dans le train, et je ne parle pas espagnol!

Elle m'a observée vraiment étonnée des mots qui sortaient de ma bouche. J'étais en train de parler en grec avec elle, et aucune de nous ne pouvions le croire.

J'ai continué à lui montrer toutes les autres langues que je pouvais parler. Je lui ai dit des choses en portugais, en italien, en arabe, en suédois, et dans toutes les langues qu'on pouvait imaginer.

— Absolument incroyable, dit-elle. Alors, tu sais parler et écrire – t'as déjà essayé de lire?

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<sup>3</sup> Word for *friend* in Greek.

— Non pas encore. Tout cela est également nouveau et étrange pour moi que pour toi. Et je n'ai pas encore eu trop de temps à explorer tout ce que je peux faire, je réponds.

— Eh bien, la bonne nouvelle est qu'on est toutes finies avec l'école, alors on a beaucoup de temps pour le découvrir ! Allons-y, suis-moi.

— On va où? je lui demande.

— À la bibliothèque. On va voir quelles autres habilités tu as avec ce don.

Et puis nous sommes allées à la bibliothèque, pour en savoir plus sur ce talent que j'ai développé du jour au lendemain.

...

J'ai passé le reste de la journée, et bien des semaines suivantes, à la bibliothèque, en train de lire, d'apprendre, et de découvrir des choses nouvelles en différentes langues. J'ai lu des livres dans des langues anciennes et des romans écrits dans leur langue d'origine. J'ai regardé des films internationaux sans sous-titres et j'ai écouté des œuvres musicales comme des opéras et des morceaux folkloriques dans une variété de langues. Je n'étais pas seulement capable de les comprendre, mais aussi de ressentir l'émotion derrière les mots. En quelque sorte, je me sentais comme si j'étais hors de moi et qu'un esprit étrange avait envahi ma connaissance, mais ce n'était pas du tout mauvais. C'était comme si l'esprit voulait me montrer la vie d'une perspective différente, où l'on pouvait apprécier le caractère unique et la beauté humaine peu importe la langue, et en même temps constater que chaque langue a sa propre histoire, culture, et individualité.

Au fil des semaines, j'ai continué à apprécier mon nouveau talent et à le partager avec d'autres personnes. J'ai montré mes pouvoirs à ma famille et à mes amies, qui l'avait partagé

avec leurs familles et leurs amis aussi. Il n'a pas fallu longtemps avant que mon nouveau talent ne fût connu par toute la ville, et qu'il ne devienne le sujet principal de plusieurs conversations. Tout le monde me connaissait comme « la fille polyglotte », et beaucoup de gens voulaient me rencontrer pour leur enseigner ce que je pouvais faire. Des professeurs, des historiens, des diplomates—et même le maire de la ville—m'ont contacté d'une manière ou d'une autre pour confirmer que mes capacités n'étaient pas seulement une rumeur. Sans effort, mon « super-pouvoir » était grandement acclamé, et toute le monde savait qui j'étais.

Malgré tout ce que j'ai pu faire avec mes capacités et toute la reconnaissance que j'ai reçue, je me posais toujours la même question : pourquoi cela m'est-il arrivé? Pourquoi moi? Avant d'avoir ce don, je me sentais une fille ordinaire. J'aimais aller à l'école, passer du temps avec ma famille et mes amis, pratiquer du sport, et vivre une vie normale. Quant aux langues étrangères, bien sûr que je pensais qu'elles étaient intéressantes, mais pas assez pour consacrer ma vie à les apprendre. Depuis mon enfance, j'étais une personne structurée et organisée. J'aimais toujours avoir un plan à suivre, si c'était un plan de ma journée ou un plan d'étude. Je n'étais jamais en retard. J'avais une seule manière de vivre, une perspective fixe, et je croyais que ça me rendait une personne productive et réussie. Et même si cette façon de vivre avait ses avantages, elle avait aussi ses désavantages. Par exemple, à cause de ça, très souvent je me sentais stressée si les choses ne se passaient pas comme prévu. Également, bien qu'il soit difficile à admettre, j'avais du mal à changer d'avis sur certaines idées. Je croyais que ça voulait dire que j'étais passionnée sur mon point de vue, mais en y réfléchissant, peut-être que c'était une indication de que j'étais une personne un peu fermée.

Alors peut-être que j'ai reçu ce don-là pour me montrer qu'il existe une autre manière de vie. Dès que j'ai commencé à parler toutes les langues du monde, je me suis sentie comme s'il y



avait une révolution dans ma tête. Quand je parle chaque langue, c'est comme si je deviens une personne différente, avec ses propres idées et pensées — avec sa propre histoire. Bien que je reste la même personne, on peut dire que ma personnalité change. Je sais que les langues ne sont pas vraiment associées avec les traits de caractère de quelqu'un, mais je peux admettre que c'est plus facile de me ressentir certaines émotions en fonction de la langue dans laquelle je pense. En conséquence, parler plusieurs langues m'a donné la capacité de penser de manières différentes et d'avoir nouveaux points de vue. J'ai appris à apprécier la complexité et en même temps la simplicité de la communication. Chaque langue m'a montré son histoire, sa culture, et son origine. Elles m'ont montré leurs propres caractéristiques, idées, et singularités. Penser dans une langue différente me permet d'envisager quelque chose sous un angle différent, qui finalement peut m'aider à élargir ma perspective du monde. Mais aussi, j'ai appris que même si chaque langue est distincte, elles ont toutes le même objectif: décrire le monde qui nous entoure et nous aider à nous communiquer et à nous connaître mieux comme individus. Peut-être ne saurai-je jamais avec certitude pourquoi j'ai été choisie, mais la raison importe peu. La seule chose que je sais, c'est que je me sens chanceuse d'avoir ce pouvoir, et je sais que je vais l'utiliser pour diffuser aux autres la même leçon qu'il m'a enseignée.

...

Les semaines devinrent des mois, et je profitais de chaque jour pour tirer le maximum de mon super pouvoir. A part d'étudier et de découvrir tout ce que je pouvais, j'avais aussi l'occasion de participer dans d'autres activités exceptionnelles. Par exemple, j'ai participé au Festival International de la Culture, un événement organisé par ma ville, où des gens de plus de vingt pays différents se rassemblent et partagent leur cuisine, leur art, leur musique, et leur vie. Le festival était très grand et reconnu mondialement, similaire à d'autres festivals tels que le

Carnaval au Brésil, le Jour des morts au Mexique, ou l'Oktoberfest en Allemagne. C'était un jour pour s'amuser, danser, manger, et simplement pour apprendre d'autres cultures. J'avais visité le festival plusieurs fois depuis mon enfance, mais cette année ma participation a été spéciale car je fus invitée par les organisateurs pour faire un discours sur mon expérience comme polyglotte et sur tout ce que j'avais appris grâce à mon talent. Le jour du festival, je me rappelle que je me sentais un peu nerveuse mais j'avais hâte en même temps de partager mon expérience. Avant, j'étais plutôt timide et je n'aimais pas l'idée de parler devant des milliers des personnes. Mais ce jour-là, j'avais changé et évolué en tant que personne, grâce à toutes les voix dans ma tête qui m'inspirent et me motivent à faire des choses qui me faisaient peur.

Le Festival International de la Culture fut l'un des nombreuses choses que j'ai faites au cours de l'été. J'ai aussi fait des choses comme visiter des logements des réfugiés pour aider à surmonter les barrières linguistiques; faire du bénévolat pour des événements internationaux pour établir et enrichir des affaires internationales; et bien sûr, voyager dans plusieurs pays pour me plonger dans leur culture, ayant maintenant la capacité de communiquer avec beaucoup de gens différents.

Tout ce que j'ai vécu m'a fait réaliser qu'au-delà de connaître plusieurs langues, ce don faisait tomber les barrières qui nous divisent, promouvait la compréhension interculturelle, et encourageait l'harmonie dans un monde qui est tout divisé.

...

Un jour, j'ai reçu un appel du maire de ma ville, dans lequel elle m'a dit que je devais venir à son bureau pour discuter d'une affaire importante. Elle avait l'air sérieux, donc j'y suis allée aussi vite que je pouvais. Quand je suis arrivée sur le site de la réunion, j'ai noté qu'il y avait un

groupe d'environ 10 individus, dont certains que j'avais déjà rencontrés et certains que je n'avais jamais vus. Parmi le groupe que je reconnaissais était un historien qui travaillait au musée d'histoire de ma ville, deux professeurs de langue de l'université, et le maire. Tout le monde discutait entre eux, lorsqu'ils étaient rassemblés autour d'une table, qui avait un objet bizarre au milieu.

A mon arrivée, la conversation s'est arrêtée et le maire m'a accueillie.

— Clara, merci d'être venue, dit le maire, avec un sourire à la bouche. Je voulais vous présenter au Conseil d'Archéologie et d'Histoire.

— Enchantée, je dis, en serrant la main de tous les membres.

— Je crois que vous connaissez déjà certains d'entre eux, mais permettez-moi de vous présenter le reste.

Le maire a procédé de présenter chaque membre du groupe. J'ai appris que ceux que je ne connaissais pas appartenaient à l'Association National d'Anthropologie et d'Archéologie Mondiale, et qu'ils étaient venus de diverses parties du monde seulement pour cette réunion. Tout le monde m'observait avec curiosité et enthousiasme, comme s'ils avaient un secret qu'ils voulaient partager avec moi. J'étais un peu perplexe, mais j'étais également intriguée par le mystère de ce rendez-vous.

— Aujourd'hui, nous nous sommes réunis parce qu'il y a eu une découverte extrêmement rare et impressionnante, a dit le maire, alors qu'il se dirigeait au milieu de la table pour signaler l'objet bizarre.

L'objet était un morceau de pierre de taille moyen, de couleur gris foncé et d'une texture lisse. Sur la surface, il semblait avoir du texte écrit en symboles.

— Cet objet a été découvert la semaine dernière par une équipe d'archéologues qui faisaient de la recherche en l'Afrique de l'Est, dit une femme qui appartenait à l'Association. On a essayé de déchiffrer le texte sur la pierre, mais il semble que c'est une langue absolument inconnue...

— Nous avons consulté un grand nombre de personnes pour nous aider à lire et comprendre ce texte, mais sans résultat, ajoute un homme qui au même moment examinait l'artefact.

— Clara, avec votre talent, nous avons pensé que peut-être que vous pourriez nous aider à déchiffrer ce qui est écrit sur cet objet, dit le maire.

J'acquiesçais, mais je ne répondais rien. A ce moment-là, je ressentais beaucoup de choses à la fois. J'étais intriguée pour savoir si je pouvais le déchiffrer, mais je craignais de ne pas être capable. Dans le cas où je réussirai, je me sentais nerveuse quand même. C'était une affaire importante, et j'étais la seule personne qui était capable de le comprendre.

La femme de l'Association saisit l'objet sur la table, et elle se dirige vers moi pour me donner la pierre. Mon cœur se précipitait, mais je me sentais prête à analyser ce texte. L'objet se trouvait sur une caisse transparente, et la femme me l'a donné délicatement. J'ouvre la caisse et je prends la pierre entre les mains, pour pouvoir l'analyser avec détail. Soudainement, au même moment où mes doigts ont touché la pierre, je suis entrée dans un état de transe.

Dans un instant, j'ai commencé à regarder beaucoup d'images dans ma tête. C'était comme si la pierre voulait me raconter une histoire. Les images me montraient l'histoire de l'humanité, de l'évolution, de la beauté de l'art, de la culture, et de la diversité. En même temps, je voyais le conflit, la guerre et la douleur. Je sentais tous les types d'émotions en ce moment, et quand je m'y attendais le moins, une voix a commencé à parler :

«Les humains sont une espèce dont l'existence est très importante pour la Terre. Au fil des ans, les humains ont développé la langue pour établir la communication entre eux et tout ce qui les entoure. En bien ou en mal, ils se sont divisés entre eux-mêmes, et ils ont oublié l'importance de l'unité et de la paix. Clara, tu as été choisie pour diffuser ce message et rappeler aux humains qu'il est important de ne pas être divisés. La langue est un outil très efficace pour montrer des perspectives différentes, et il est temps de le montrer au monde. Tu es prête, et tu sauras quoi faire.»

Puis, je retourne à la réunion avec le Conseil. Tout le monde me regarde avec confusion, admiration, et même un peu de peur. Personne ne dit rien. Je reste assise, en essayant de comprendre ce que je venais de traverser. Je me sentais différente, comme si toutes les voix dans ma tête avaient toutes disparues. D'une certaine manière, je savais que mon super pouvoir n'était plus avec moi, mais il n'avait pas non plus disparu complètement, car il restait dans la pierre.

Après quelques minutes, j'ai décidé de parler :

— Au moment où j'ai fait contact avec cet objet, j'ai reçu un message. Je ne peux pas vous dire exactement ce que dit le texte parce que c'est impossible de lui donner un sens. C'est un objet magique et spécial, et la seule manière que vous pourrez savoir le message c'est si je vous le montre.

Je me lève de la chaise et j'indique au maire de s'asseoir. Intriguée, elle s'assoit et attends que je lui explique ce que je vais faire.

— La pierre va vous communiquer le message au moment où vous le touchez, dis-je. La seule chose que vous avez à faire c'est d'avoir un esprit ouvert et de vous permettre d'observer les choses d'une perspective que vous n'avez jamais imaginée. Le reste se fera tout seule.

Avec un peu d'hésitation, le maire prend une grande respiration et touche la pierre. Elle avait les yeux fermés, mais je pouvais observer ses sentiments et les expressions qui traversaient son visage. Je savais exactement ce qu'elle était en train de voir et d'éprouver. Quand elle a terminé, elle a ouvert les yeux et m'a regardée avec admiration. Dans les moments de sa propre expérience avec la pierre, je savais qu'elle a senti tout ce que j'avais ressenti et vécu ayant le super pouvoir multilinguistique. Après le maire, chaque membre du Conseil a eu l'occasion de recevoir le message de la pierre et d'expérimenter de sa magie. Tout le monde, chacun avec ses propres origines et perspectives, a senti pendant un moment la sensation de connaître toutes les langues du monde et d'apprécier les perspectives diverses que chacune peut donner. C'était un évènement vraiment incroyable.

Finalement, le Conseil a pris la décision de partager la découverte de la pierre avec le reste du monde. Ils savaient que ça serait une chose révolutionnaire, mais il était estimé comme essentiel pour l'humanité. Au fil des années après la découverte, des milliards de personnes voyageaient à l'endroit où la pierre était conservée, afin de la toucher et d'avoir leur propre moment de clarté et pouvoir. Avec le temps, de plus en plus de gens au monde avaient l'opportunité de vivre ce que j'ai vécu quand j'avais mon super pouvoir.

Quant à moi, ce soir-là j'ai laissé mon super pouvoir dans la pierre. Au fond, je savais que tôt ou tard, ce pouvoir irait au-delà de moi. Au moment où j'ai reçu le message de la pierre, je savais qu'il était temps de laisser aller de mon don et de le partager avec le reste du monde. Il était le moment de montrer à tout le monde que malgré nos différences, on doit rester unis et accueillir des perspectives différentes. C'est seulement ainsi que nous pourrions résoudre nos conflits et créer un monde de paix.

## Chapter 2

Language is a form of communication that allows human beings to express themselves verbally and exchange information. It is a way in which we describe the life around us and a way to express how we engage with the world. But a language is not merely a tool for communication; a language can be like a window into the perspective, culture, and history of those who speak it. Beyond its primary goal in facilitating human interaction, languages can open many doors into realms that could otherwise remain closed forever. A language can mean identity, power, self-expression, emotion, education, passion, relationships—it can mean multiple different things to a person, as it is a multifaceted tool that enriches many aspects of our lives.

Literature, as claimed by American literary critic Jonathan Culler, is both a special *kind* of language and a special *use* of language (Culler 55). It is a broad term that encompasses creative and intellectual works, which serve a variety of purposes such as entertaining, informing, challenging, and inspiring readers in unique ways. Literature comes in many shapes and sizes, but regardless of the way in which it may be created, it is an excellent medium to express emotions and ideas, and ultimately to explore the human experience through written words. But what is literature without meaning and interpretation? This is an important question that is posed by Culler in his book *Literary Theory: A Very Short Introduction*, and it is the overarching question that guides the following literary analysis. In this thesis, I explore the impacts on a person of learning languages, and the way I chose to do this is through literature. The purpose of this chapter is to analyze the short story presented in Chapter 1, and to provide it with meaning and interpretation.

Although there exist many polyglots and individuals with fantastic linguistic abilities in the world, I dare to say it would be impossible to learn how to speak every single language, as there are roughly 7000 in the world (Anderson). Nonetheless, the idea can be played with, and it can lead us to ask the question: what would *really* happen if someone learned to speak each and every language on Earth? This may be a question with no specific answer, which leaves it up to the imagination of whoever wishes to ponder it. The short story presented in Chapter 1 plays with this idea, and, through its narrative and structure, it tells us a possibility—from one perspective—of what it would be like if someone could, in fact, speak every language in the world. The story conveys the overall message that knowing different languages is a transformative experience, for both the individual and anyone in their surroundings. It expresses the idea that a language goes beyond words and sounds, as it can give us new perspectives, ideas, emotions, and ultimately allow us to connect more profoundly with each other and with ourselves. In the short story, this is achieved in three main ways: first, through the use of first person, which transforms the perception of language from an individual to a communal experience. Second, through the use of receptive and active verbs, which demonstrate the physical and metaphorical changes caused by language. And third, through the creation of an “anti-Tower” of Babel, which proves that in spite of the divisions and barriers imposed by language, they can also serve to unite humanity.

The story begins with a girl, Clara, who wakes up one day and realizes she can speak every language in the world. She discovers this fact when she is able to fully comprehend a conversation she overhears on the train – a conversation being carried out in a language she did not know before. Amazed by her new capabilities, Clara embarks on a journey of discovery, appreciation, and self-realization. She undergoes a personal transformation and develops a



deeper connection with the world around her as a result of the gift she was granted overnight.

Although the piece is completely fictional, it addresses many questions regarding the impacts of multilingualism and provides one of many ideas of what could be achieved if something of this nature this were to occur.

As stated previously, the short story conveys that knowing languages is a transformative experience for both the speaker and anyone in their surroundings. It shows that multilingualism can expand the mind's horizons, can transform a person's world view, and can encourage self-growth. Through the use of first person as the mode of narration in the story, the reader is given the opportunity to establish a sense of intimacy and immediacy with Clara, allowing them to experience the story through her point of view. In other words, it brings attention to the *focalization* of the story, a concept introduced by French literary theorist Gérard Genette in his work *Narrative Discourse: An Essay in Method*. The concept of *focalization* refers to the idea of the narrative information given to the reader in relation to the experience of the narrator and is defined as the "focus of narration" (Genette 189). So, in Genette's terms, the use of first person in the short story *focalizes* the story through Clara's consciousness, which opens up a new perspective: the idea that language is not just an individual but also a communal experience.

In his essay, Genette also focuses on the importance of *voice*, which helps us answer the question of who the narrator is, and in turn determine who will be guiding the reader through the story (Genette 186). Although the entire short story is written in first-person, we do experience a change in voice between the preface and the beginning of the story. The voice of the pronoun "je" changes between these two sections, which raises the question of who is narrating. In the preface, the "je" does not belong to Clara, but to the author, who begins the narrative by directly addressing the reader with a question: "Si vous pouviez avoir un super pouvoir, lequel serait-il?"

Ceci est une question que j’adore poser aux autres quand je veux mieux les connaître” (Ruiz Aguirre 4). This serves as a “hook” into the story, as it is asking the reader to dig into their own minds and reflect upon this question as they delve into the story. By becoming more engaged, the reader welcomes the experience they are about to go on and will ultimately give more attention to the narrator. At this point, the reader does not know who will narrate the story, but at the end of the preface, the author gives a hint about the change in voice that is about to occur:

Cette histoire aborde la question de ce qui se passerait s’il y avait *une personne* qui avait le super pouvoir de parler toutes les langues du monde. Même si le conte est fictif, cette petite histoire peut *nous* enseigner l’importance d’avoir une perspective ouverte, d’avoir de l’empathie, et finalement de réaliser que les obstacles que *nous* pensons sont ceux qui nous divisent, en réalité, peuvent *nous* unir. (4, emphasis added)

In this excerpt, the reader is told that *une personne* will be experiencing the superpower of multilingualism, and it can be inferred that the story will follow that person. Even if it is an individual experience, through the repeated use of “nous” the author invites the reader to be a part of the process and to open up their mind to the lessons they may learn as well by going through this experience, contributing to the communal perception.

When the story begins, the reader does not know many details about the narrator yet. The information given is very limited, and it is the hope that more will be revealed as the story goes on. However, the reader does get an insight into the true nature of the narrator’s feelings right away, as conveyed by the first sentence, “Aujourd’hui, je me suis réveillée avec une sensation bizarre” (5). In this moment, the voice of “je” has changed from that of the preface, and it can be

inferred that the narrator is now the person the author referenced earlier. The statement pulls the reader in immediately and sets a relatable tone for the section that follows, which deals with Clara realizing that something in her mind was off even though she could not quite put her finger on it. Throughout the first two introductory paragraphs of this section, the use of reflexive verbs such as “je me réveille,” “je me sentais,” “je me prépare” is common. Again, this sets up Clara as an independent character, while simultaneously demonstrating relatability as her actions are similar to what a person normally does in the morning. Overall, the initial part of the story is successful at engaging the reader and establishing the personal connection that allows the experience to exist beyond the narrator. As the story progresses, the reader is now able to empathize with Clara on a deeper level and feel as though their mind is welcome to participate in the story as well.

In another instance, we understand how the use of first person has a strong effect on the idea of language as a transformative experience. Having lived with her new superpower for a while, Clara experiences a moment of introspection, and, to some extent, insecurity. After realizing her newly acquired capabilities and allowing herself to explore as much as she could, she begins to question why this has happened to her, “Pourquoi cela m’est-il arrivé? Pourquoi moi?” (11). Clara does not deny that she feels grateful for the way in which her abilities have transformed her, but she does exhibit some self-doubt and draws on some insecurities that arise within her from being different. Once again, the fact that the reader gets the opportunity to walk along with Clara through this introspective stage, increases her relatability and connection with the reader. She reflects on how she has lived thus far with a structured and rigid personality; however, the acquisition of languages has significantly altered her life and expanded her

perspective. This reinforces the perception of her emotions as communal rather than strictly personal.

Clara's introspection occurs over the course of two paragraphs: the first of these paragraphs derives from her questioning and her self-conscious personality assessment; the second derives from the ways in which her multilingual skills have allowed her to evolve. The transformative nature of language is evident in this section once again, and we can observe it through the use of two different verb tenses: the *imparfait* and the *présent*. In the first paragraph, the *imparfait* is used to indicate how she used to be a certain way, prior to her gift:

Avant d'avoir ce don, je me *sentais* une fille ordinaire. J'*aimais* aller à l'école, passer du temps avec ma famille et mes amis, pratiquer du sport, et vivre une vie normale... Depuis mon enfance, j'*étais* une personne structurée et organisée. J'*aimais* toujours avoir un plan à suivre, si c'était un plan de ma journée ou un plan d'étude. Je n'*étais* jamais en retard. J'*avais* une seule manière de vivre, une perspective fixe, et je *croyais* que ça me *rendait* une personne productive et réussie. (11, emphasis added)

As I previously mentioned, the use of the *imparfait* implies that Clara *used* to be that way, but she has transformed into a different person. This shift is very evidently perceived when she drastically changes the verb tense to the *présent*:

Quand je *parle* chaque langue, c'est comme si je *deviens* une personne différente, avec ses propres idées et pensées; avec sa propre histoire. Bien que je *reste* la même personne, on peut dire que ma personnalité *change*. Je *sais* que les langues ne sont pas vraiment associées avec les traits de

caractère de quelqu'un, mais je peux admettre que c'est plus facile de me sentir de certaines manières en fonction de la langue dans laquelle je *pense*.

(12, emphasis added)

This shift in verb tense indicates that she is this way *now* and goes along with her shift in personality. When she speaks a different language, she transforms into a different person, with a different point of view and a different way to approach life. Through her narration and inner monologue, the reader is able to follow her thoughts and appreciate the direct connection that has been established with her. It is possible to both relate to her at this stage, and simply to empathize with what she is going through as she learns how to adapt to a new lifestyle in which she is different from everyone else. Regardless of how the reader chooses to interpret this part of Clara's story, at this point they have been fully immersed in her experience. Her first-person narration, while accurately describing her individual experience with language, has transformed it into communal space—one in which the reader resides and is able to belong—in their own way—in Clara's experience.

Thus far, I have explored how the perception of language has transformed through the use of first-person as the mode of narration, which is driven by the connection that the narrator created with the reader. This was accomplished through a shift in voice and in verbal tenses, as well as through personal introspection. Now, I will pay closer attention to verb usage throughout the story—particularly the use of receptive and active verbs, and how these reflect the physical and metaphorical changes elicited by language.

In Genette's discussion of narrative discourse, he refers to the grammatical meaning of the voice of a verb, defined by French linguist Vendryès, as "the mode of action of the verb

considered for its relations to the subject” (Genette 213). This allows us to consider the differences in the voice of active and receptive verbs, which demonstrate the physical and metaphorical impacts of the verb on both the narrator and the reader, and ties back to the transformative experience that knowing different languages can be. In this analysis, I will particularly focus on the verbs “sentir” and “ressentir”, as they both pertain to *feeling* or *perceiving*, but with a different voice.

On one hand, when one uses *sentir*, the voice expresses a more physical action, such as perceiving physical sensations with any of the five senses. The verb can also be used to express emotions, but these have to be directly related to a physical sensation. For instance, *sentir* could be used to reflect the feeling of anger or sadness, as both of these emotions have physical states as well. On the other hand, the verb *ressentir*, which derives from *sentir*, has a more nuanced and profound emotional voice. *Ressentir* is tied with emotional impacts, thoughts, and reflection. It is used to convey the idea of experiencing something on a deeper level.

Throughout the text, Clara employs the use of both *sentir* and *ressentir* to express the sensations and emotions she experiences as she adapts to her new consciousness. Below are two examples of the different usage of the verb:

La fille qui planifiait la fête, dont je ne connaissais pas le prénom, m’a fait sourire parce que je pouvais *sentir* son enthousiasme pour l’évènement.  
(Ruiz Aguirre 6, emphasis added)

Je n’avais pas seulement compris leur conversation, mais c’était comme s’il y avait un fil invisible qui liait l’émotion de leurs pensées aux miennes.  
J’avais *ressenti* ce qu’elles ont *ressenti*. (Ruiz Aguirre 6, emphasis added)

This part of the story refers to when Clara is realizing she felt something different in the conversation she overheard on the train, which later she comes to realize was not in her native language. The first statement uses the verb *sentir* to express the sensation that she felt in the moment she was listening to the conversation, which is tied to a physical change in her mood. Without noticing it, she shared the feeling of enthusiasm and excitement with the girl, simply by hearing her talk to a friend. The second statement, which uses the verb *ressentir*, shows that the conversation actually went beyond the physical sensation and transformed her emotions in a more metaphorical manner. As stated by Clara, it was as though her mind and emotions were linked with the other two girls through an invisible string, which caused her to feel the emotional impact of their conversation. Clara was able to perceive and feel what the two girls were perceiving and feeling. Upon reflection of this personal sensation, she returns to the use of *sentir* to come back to the physical world, “J’ai pu percevoir l’intention derrière leurs mots. Je ne sais pas pourquoi, mais je me *sentais* comme si j’avais pu appartenir à leur conversation, même si je ne les connaissais pas” (6, emphasis added). Here, she ties her emotion back to the conversation and to the fact that she felt as though she could have participated in it, even if they were all complete strangers to each other—strangers who did not even speak the same language.

Another instance in which the two verbs are used along with one another is in the following excerpt, when Clara is examining the knowledge that she has gained with her skills and expressing how that makes her feel:

Je n’étais pas seulement capable de les comprendre, mais aussi de *ressentir* l’émotion derrière les mots. En quelque sorte, je me *sentais* comme si j’étais hors de moi et qu’un esprit étrange avait envahi ma connaissance... (10, emphasis added)

In this instance, *ressentir* is used before *sentir*, which is the opposite of what was previously observed. First, Clara expresses that with her new language skills, she has become able to understand the meaning of language beyond the definition of the words. She is able to perceive and connect with emotion, and to see how a language is capable of evoking feelings. Then, she uses *sentir* to describe a sensation that overcomes her mind with her gift. Even if the expression is metaphorical, she employs the use of this verb to paint a more vivid physical picture of what she is experiencing.

Overall, the verbs *sentir* and *ressentir* are used in two reflective and introspective moments of Clara's journey, and they are used in conjunction with each other to represent both the physical and metaphorical senses of language. More specifically, the reader is able to appreciate how Clara's mind is expanding and transforming due to the acquisition of all of the languages in the world, and how this is changing her views of the world.

The third and final way in which the story demonstrates the idea that language is transformative deviates from the personal perspective and the narrator-reader relationship that have been the focus up to this point, and it takes on a much broader concept: the relationship of humans with each other. Beyond the transformative effects that language can have on a single person, these effects are also seen on a much larger scale. One can claim that the different human languages that exist around the world have helped us evolve into different cultures and provided us with great diversity. And while this is true, it cannot be denied that it has also raised some barriers and has caused us to become a divided population. The story challenges the idea that differences in languages act only as dividers, and instead argues that in fact they can serve as unifiers. It challenges the biblical story of The Tower of Babel, which ends in rupture, and thus creates the concept of an "anti-Tower of Babel."



The narrative of The Tower of Babel appears in the Book of Genesis (11:1–9) of the *Bible*, and it is believed to be the origin of all human languages (Encyclopedia Britannica). According to the story, Noah’s descendants—the Babylonians—were overcome by pride and greed, and decided to make a name for themselves by not following God’s orders and building a tower so tall that could reach heaven. To punish the people for disrespecting his orders, God disrupts their work by dividing their single language into multiple different ones so no one would understand each other, and they would become unable to continue their work. As a result, the people stopped the construction of the tower and scattered across the Earth. This myth often serves as a way to justify our differences in language, and maybe even to argue that this is the reason we are divided. It is not my intention to disprove this argument, as I do recognize that all of the different human languages have allowed us to be unique and different. Instead, I argue that while it is important to acknowledge differences, rather than seeing them as dividing factors we should learn to celebrate and use them to help us become more united.

Coming back to Clara’s story, it can be argued that her gift led to the creation of an “anti-Tower of Babel,” and it was granted to her so she would teach humanity how to become united once again. Throughout the story, Clara expresses how it was not only her, but the whole world who was fascinated by her multilingual abilities, as shown below:

Au fil des semaines, j’ai continué à apprécier mon nouveau talent et à le partager avec d’autres personnes. J’ai montré mes pouvoirs à ma famille et à mes amies, qui l’avait partagé avec leurs familles et amis aussi. Il n’a pas fallu longtemps avant que mon nouveau talent ne fût connu par toute la ville, et qu’il ne devienne le sujet principal de plusieurs conversations. Tout le monde me connaissait comme « la fille polyglotte », et beaucoup de gens

voulaient me rencontrer pour leur enseigner ce que je pouvais faire. (Ruiz

Aguirre 10-11)

This excerpt creates a feeling of excitement surrounding Clara's skills and may lead the reader to ponder what humanity would act like if this were to happen to someone. The reader gets the sense of how her gift is being well received and how it is encouraging people to come together. For instance, consider the example of the culture festival that Clara participates in, "j'ai participé à le Festival International de la Culture, un événement organisé par ma ville, où des gens de plus de vingt pays différents se rassemblent et partagent leur cuisine, leur art, leur musique, et leur vie" (12). Here, we see that not everyone allows themselves to be divided by language, as they are able to overcome the barriers and celebrate their differences instead. Through examples such as this once, we begin to see how language is able to transform humans and encourage them to connect more profoundly with one another.

The effects of the "anti-Tower of Babel" continue to be present up until the end of the story and are directly related to the discovery of the stone that Clara is asked to decipher. The connection created between Clara and the stone in the moment of contact is a pivotal moment in the story because she becomes fully aware of the purpose of her super power: to facilitate the transition into a unified state after only knowing how to be divided. Opposite to the Tower of Babel, which caused people to separate into groups, the stone—which is the physical representation of the "anti-Tower" of Babel—becomes the thing that begins to unite humans once again, by allowing them to physically experience Clara's multilingual abilities and open up their perspectives:

Au fil des années après la découverte, des milliards de personnes voyageaient à l'endroit où la pierre était conservée, afin de le toucher et d'avoir leur propre moment de clarté et pouvoir. Avec le temps, de plus en plus de gens au monde avaient l'opportunité de vivre ce que j'ai vécu ayant mon super pouvoir. (17)

In this paragraph, we learn that people are able to experience Clara's gift by touching the stone and personally experiencing what it would be like to speak all of the languages in the world. Although people are not forced by anyone to touch the stone, millions of people choose to partake in this experience due to the transformative effect that language appears to have on others. Over time, as more individuals join this shared experience, the impact of the transformative effects of language becomes stronger and it drives the uniting force that languages can exert on humanity.

As written by Jonathan Culler, "literature is language in which the various elements and components of the text are brought into a complex relation" (Culler 29). Through the narrative and the structure of the short story, the overall message of the transformative nature of language and the unique experience that learning one can create for a person is conveyed. The story is a demonstration of how languages have the ability to transcend and transform people. From an individual standpoint, a language can open a door into new perspectives and ways of thinking and can ultimately lead a person to learn valuable lessons about others and about oneself. From a communal standpoint, languages are a way in which humans can differentiate and be unique, but at the same time they can also help us become more united. Languages serve many purposes in the human experience, and it through stories like this one, the reader is given an opportunity to open up their minds to the possibilities of how languages can influence their lives.

To revisit Culler's question of meaning and interpretation in literature, it is important to note that everything discussed in this chapter deals with the meaning and interpretation that I assigned to my own work. I, as the author of the short story, had a different insight about the piece, and therefore a unique perspective on how to interpret it—even if my intention was to focus on the text itself and analyze it as if I had not written it. Therefore, even if what I claim in this essay provides meaning to the work, it does not mean it is the sole way to interpret it. As described in the famous article "The Intentional Fallacy," by literary theorists W. K. Wimsatt and M. C. Beardsley, the author's intentions should not be considered when analyzing a piece of literature. According to them, "intention has obvious affinities for the author's attitude toward his work, the way he felt, what made him write," which in a way shows subjectivity and therefore should not be used as the ultimate source of meaning (Wimsatt & Beardsley 469). If the short story was analyzed by different people, they may uncover different meanings and interpretations to what I presented in this chapter, and in turn, determine new lessons that can be learned from a story—and a message—such as the one expressed in this piece of literature.

### Chapter 3

The exact number of languages spoken in the world is not known, but it is estimated there are approximately 7000. Whether or not this number is correct, it is a fact that the number of languages exceeds the number of countries, and ultimately this gives rise to bi- and multilingualism. Half of the world's population—if not more—is at least bilingual, and this characteristic is clearly found across all age groups, all levels of society, and the majority of the countries (Grosjean & Li 6). Bi- and multilingual individuals are able to navigate the world through different languages, and even if each one may be used for different purposes, this ability makes them subject to the transformative experience of language. On the surface, a language may only seem like a form of communication and a way to interact with those around you, but once you dig deeper, you will find that it goes beyond that. A language is like a piece of your identity; it is something unique that, in a way, defines who you are and molds the way you view the world. As I mentioned in the previous chapter, a language is like a window into the perspective, the culture, and the history of those who speak it, and once we become able to perceive language in that way, our brains may become more receptive to all the things a language can teach us.

In this thesis, I have argued thus far that the ability to speak different languages can be a transformative experience for a person. I have done this by presenting a short story along with a literary analysis, both of which convey my perspective of the impacts of learning and speaking different languages. In this chapter, I will be taking a different approach to language, as I will discuss current research and findings that demonstrate the same idea but through a more linguistic/scientific lens. First, I will discuss the neurological impacts that languages have on the brain, particularly with a focus on neuroplasticity and language learning. Next, I will discuss

how languages may increase cognitive function, which can ultimately improve a person's problem solving skills and increase creativity. And lastly, I will discuss how languages affect the way we view the world and how we express ourselves and discuss the phenomenon of code-switching as an asset to bilingualism.

### **Neuroplasticity and Language Learning**

The human brain is a complex organ that is responsible for controlling most of the activities in the body. It processes and integrates information and is in charge of instructing our organs to fulfill their respective functions. Normally, the brain stops growing in size during early adolescence, but it may not be considered as fully developed until a person's mid-to-late 20s. Regardless of the stage of development of the brain, it remains a highly moldable organ throughout a person's lifetime, and its ability to restructure itself to change its activity in response to intrinsic or extrinsic stimuli is a process known as *neuroplasticity* (Puderbaugh). For a long time, there has been a common misconception that neuroplasticity peaks during childhood, as it is a time in a person's life in which the individual is highly receptive to the environment and is dedicated to learning how to live. However, due to advances in research and medicine, it has been proven that although age may attenuate a person's ability to acquire a skill, the brain has lifelong plasticity nonetheless, and it can be induced through different tasks (Pauwels). Neuroplasticity has been examined in various different domains, as the brain constantly learns new things and changes in response to adaptation.

In recent years, language learning has become an important domain that examines neuroplasticity and how the brain changes as a function of a person's experience with a second

language. This is the main focus of a review done by Ping Li et al., which aimed to identify the processes and mechanisms that drive anatomical changes in the brain. In the review, the researchers evaluated several studies that demonstrated how the bilingual experience affected the human brain and concluded with a theoretical perspective of neuroplasticity in language and bilingualism.<sup>4</sup> A main study that was discussed in the review was by Mechelli et al., as it was one of the pioneering studies that first examined the composition of the brain amongst different groups of bilinguals. In this study, the subjects consisted of bilingual (English and Italian) and monolingual (English only) participants. The bilinguals were split into two categories: early bilinguals (acquired Italian as a second language before the age of 5) and late bilinguals (acquired Italian as a second language between the ages of 10 and 15). All bilinguals practiced their second language regularly for at least five years. The brains of the subjects were analyzed using an objective technique known as “voxel-based morphometry”, and the analyses revealed that being bilingual increases gray matter (GM) density in the left inferior parietal cortex of the brain.<sup>5,6</sup> The researchers also studied the relationship between GM density, second language proficiency and age of acquisition. Ultimately, it was concluded that GM density and proficiency were positively correlated, meaning the more proficient the individuals were in their second language, the higher the GM density in their brains. Conversely, the GM density was found to be negatively correlated to the age of acquisition, meaning the density decreased as the age of acquisition increased. Since this study was published, there have been several other studies that

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<sup>4</sup> The authors note that in the study, they use “bilingualism” or “second language” as generic terms that are inclusive to situations in which two or more languages are employed (Li et al. 303).

<sup>5</sup> Gray matter is a type of tissue from the central nervous system that is composed of neuronal cell bodies, axon terminals, dendrites, and nerve synapses. It is responsible for processing information and enables individuals to control movement, memory, and emotions (Mercadante & Tadi).

<sup>6</sup> The left inferior parietal cortex is a region of the brain associated with lower level processes such as spatial attention, as well as higher level processes such as language and modes of social exchange (Numssen et al. 1).

have reinforced the findings, which overall demonstrates that bilinguals have a higher GM density than monolinguals, indicating that the acquisition of a second language plays an important role on the neuroplasticity of the human brain.

Aside from GM density, the Ping et al review also discusses studies that demonstrate that white matter (WM) integrity is another important metric when evaluating neuroplasticity as a function of bilingualism.<sup>7</sup> An important study by Mohades et al. examined the impacts of bilingualism in elementary school children on their WM integrity. In this study, children from the ages of 8-11, subdivided into monolinguals and bilinguals (both simultaneous and sequential), were scanned to assess their WM pathways.<sup>8</sup> It was found that simultaneous bilingual children had higher fractional anisotropy (FA) values, which indicate higher WM integrity, than sequential bilinguals and monolinguals. This study is believed to be one of the first to provide evidence of bilingualism-related adaptation of WM microstructure in the human brain (Mohades et al 72).

The Li et al. review goes on to discuss several other studies that reveal the different anatomical changes in the brain caused by bilingualism at different ages, levels of second language proficiency, age of acquisition, and several other factors. Overall, the review concludes with the theoretical perspective that the success of neuroplasticity as a function of bilingualism is dependent on the *timing* (age of acquisition of second language), the *nature* (how language is learned), and the *extent* (performance/proficiency level) of the input to which the tissue is exposed to (Li et al. 318). The research presented above is only a small portion of all current

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<sup>7</sup> White matter is a type of tissue from the central nervous system composed of bundles of nerve fibers and is responsible for connecting and communicating distant parts of the brain. It lies beneath the gray matter in the brain (Sharma et al.).

<sup>8</sup> Simultaneous bilingualism occurs when a child is exposed to more than one language from birth. Sequential bilingualism occurs when a child learns an additional language later in life (usually after the age of three).



neurological research connected to bilingualism. Nevertheless, even this short review of the research demonstrates how the brain is physically impacted by learning and speaking a different language. Beyond personally transforming a person, it actually causes a physical transformation as well.

### **Cognitive Function and Creativity**

According to the neurological research, learning a new language is a skill that has the ability to physically alter your brain. The scientific evidence suggests that the observed increased GM density and WM integrity are an indication of positive factors related to brain health and cognitive function. A higher GM density suggests a higher number of synapses, which may make an individual more competent in various cognitive processes and better at information processing. Similarly, higher WM integrity reflects highly effective communication between brain regions, thus making the individual better at tackling complex tasks. Assuming that all of this occurs in a bilingual individual, it begs the question: how do these anatomical changes translate into a person's experience with language?

One of the main impacts of the bilingual brain's is an improved cognitive function, as argued by several researchers. Extensive studies have analyzed the abilities of bilingual individuals in terms of communication, problem-solving skills, and other cognitive processes, such as creativity. In a study performed by the Department of Psychology at the University of Illinois, the relationship between bilingualism and a person's capability of solving a problem creatively was assessed by asking the participants to complete a series of insight and non-insight

problems.<sup>9,10</sup> The hypothesis was that “bilingualism may impart a cognitive profile conducive to solving insight problems” (Cushen and Wiley 459). The participants in this study consisted of undergraduate students and were subdivided into monolingual and bilingual groups. The monolingual participants were native English speakers, while the bilingual group consisted of two subgroups: foreign-born bilinguals who became fluent in English at or after the age of 7 (late bilinguals), and U.S. born bilinguals who acquired fluency in English and another language by the age of 6 (early bilinguals). The results of the study demonstrated that monolinguals performed better at the non-insight problems, while both bilingual groups performed better at the insight problems. In the end, the researchers concluded that monolinguals and bilinguals exhibit different performance patterns when solving insight and non-insight problems: bilinguals (particularly early bilinguals) thrive in situations in which cognitive flexibility is required, and monolinguals thrive in situations in which it is not (461). Studies such as this one propose an interesting approach to assessing the influence of bilingualism on an individual’s experience, and while there is not a single correct way to demonstrate this idea, we can benefit from such approaches because they can show us a side of the coin that we had never seen before.

Bilingualism is a very important human characteristic that exists within the experience of an individual with language. Aside from bilingualism, it is also important to bring attention the impacts of foreign language learning, which is a related concept but can be argued to deserve its own line of study (Ghonsooly and Showqi 161). In a different study, still on the concept of creativity, Ghonsooly and Showqi focus on the influence of foreign language learning on an

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<sup>9</sup> An insight problem is one that tends to be approached initially in inappropriate ways, leading to failure and arrival at an impasse. Ultimately, this type of problem asks the individual to draw on their creativity to reach a moment of “insight” and successfully find a solution (Cushen and Wiley 458).

<sup>10</sup> A non-insight problem is one that is more technical, such as a math problem.

individual's creativity, assessed through their divergent thinking skills. The study consisted of evaluating and comparing the performance of advanced learners of English as a foreign language and of non-English monolinguals using the Torrance Test of Creative Thinking.<sup>11</sup> Demographic factors such as age, gender, background, and socio-economic status were strictly controlled in the participant pool so that they would have everything in common with the exception of their experiences of learning a foreign language. The results revealed that those who learned English as a foreign language and had a high proficiency showed “remarkable superiority” in their divergent thinking abilities compared to their monolingual counterparts (163). This study demonstrates yet a different approach to the impacts of language on a person and how they translate to their human experience, which allows us to reflect upon the connection of language learning to creativity—two concepts that are not necessarily commonly associated. Creativity is a challenging process because it requires cognitive flexibility, and that is not always an easy skill to manage. However, language is an intrinsic human ability, and it is genetically guaranteed that a person will be able to communicate regardless of whether or not they end up learning more than one language.<sup>12</sup> But, with the help of language learning—whether in the form of bilingualism or foreign language learning—our brains become intrinsically capable of thinking in a different way, which facilitates, and, according to the studies discussed above, help improve our creativity.

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<sup>11</sup> The Torrance Test of Creative Thinking is a test of creativity that assesses the following four areas of divergent thinking: fluency, originality, elaboration, and flexibility (Ghonsooly and Showqi 163).

<sup>12</sup> This applies to all humans – even those who cannot speak an oral language learn to communicate in some way.

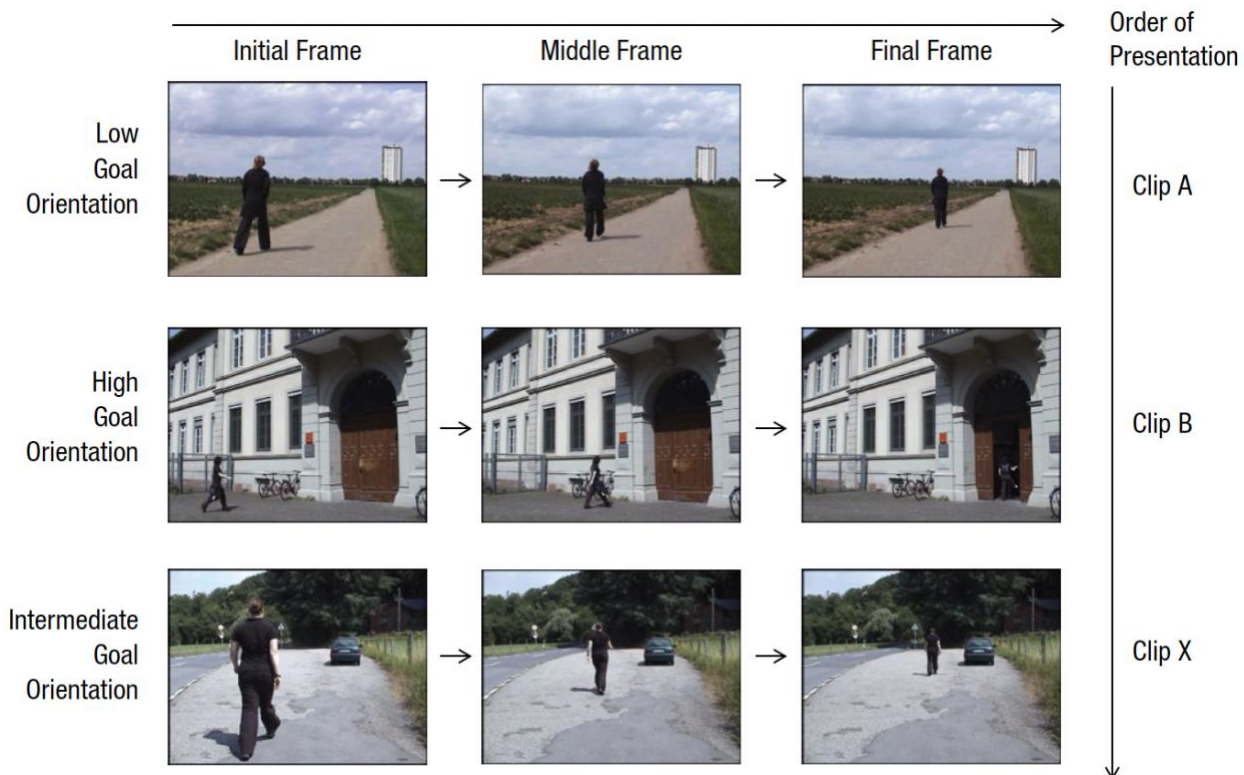
## Perspective, Expression and Code-Switching

A question I often get asked as a bilingual individual is: what language do you usually think in? People may ask me that question thinking it has a straightforward answer, but in reality, it is not, because my answer heavily depends on the situation, the context, and the environment. For instance, within an academic context I tend to think more in English, as that is the language that is prevalent in my studies, but within a personal context, my language of choice may depend on the people that surround me and/or the situation. I change my language based on what I feel best fits at that moment in time, and what will give me the better perspective.

Perspective, or one's view of the world, can be dictated by several factors, and language is a key player in this process. Through language, we describe how we perceive the world around us, and whether we realize it or not, it influences our perspectives in many ways. When bilingualism comes into play, a different system enters the mind, giving you direct access to a different way to look at things. This does not mean that different languages fully shape one's ideals and beliefs, but they certainly have an influence on how one may come to think the way they do. This is because language systems bind us to the structures and constraints in which they operate, such as their grammatical rules or the way in which words are organized semantically to make sense of things. A research study, published in the *Journal of Psychological Science*, illustrated this idea by demonstrating that German-English bilinguals categorize motion events differently according to their language of operation (Athanasopoulos et al. 518). The participants in the study consisted of a group of monolinguals (native English or German speakers only), and a group of bilinguals (native German speakers with English as their second language). The monolinguals were divided into two groups (one for German speakers and one for English

speakers) and the bilinguals were randomly allocated to either of these groups. The evaluations were performed entirely in either German or English, based on the group. During the experiment, the participants were asked to watch a series of short clips, which depicted different degrees of goal-oriented motion events (high, intermediate, and low). For example, one clip with low degree of goal orientation may have consisted of a person walking on a long road, with no particular indication of an ultimate arrival location. In contrast, a clip with a high goal of orientation may have consisted of a person walking towards a building, indicating that at the end of the clip, the person would enter the building. See Figure 1 for an example of the clips. After watching the clips, the participants were asked to indicate whether the clip with an intermediate goal-oriented motion, which was relatively ambiguous, was more similar to a clip with either the high or low degree of goal orientation. The results revealed that German speakers often matched the ambiguous scene with the high degree of goal orientation, while English speakers matched it with the clips of low degree of goal orientation. Additionally, bilinguals in a German-speaking testing context were more likely to select the high goal-oriented clips as opposed to the bilinguals in the English-speaking testing context (522). These results are a way to demonstrate that a language, depending on its structure and the grammatical rules that it uses to bind its speakers, has a direct influence on how they perceive motion events. From the results of the study, we see that when presented an ambiguous action, German speakers focus more on the end goal, while English speakers focus more on the action itself, with lower interest in the end goal. Additionally, the study shows how, in a bilingual brain, the perception of the actions is influenced by the language of operation in the moment of thinking. All in all, studies such as this one are a way to demonstrate how different languages, thanks to their structures, might influence the way we perceive things. Based on the context an individual might find themselves in, their

perceptions might change as well, and it all plays a role in the transformative nature of knowing different languages.



**Figure 1.** Example of clips with different degrees of orientation. Reproduced from Athanasopoulos et al.

While bilingualism and language learning may have many benefits, some may argue that it can also be overwhelming for the speaker. As I previously mentioned, having access to more than one language means that there are different systems of communication simultaneously interacting in the brain, which may lead to confusion and raise the concern that the person might not be able to use either language properly due to the knowledge in both. A common phenomenon that arises as a result of bilingualism is known as *code-switching*, and it refers to when a bilingual person allows both of their languages to be active in their thinking and speech processes. In his book *Bilingual: Life and Reality*, French linguist François Grosjean defines the

phenomenon as “the alternate use of two languages” during speech (Grosjean 51). When a person code-switches, they use a base language, then completely shift to another language for a word or phrase, and finally they revert back to the original language. An example of code-switching, as explained by Grosjean, is as follows:

A French family is watching some ice fishermen on Walden Pond in the dead of the winter. The young son, Marc, shows real interest in the equipment being used and the fish that are brought up. The mother, who often brings in English when she is speaking French, is getting very cold and says to the husband: “Va chercher Marc *and bribe him* avec un chocolat chaud *with cream on top*. (51)

In the example, the mother uses French as the base language, but switches to English for certain words in the sentence. The switch to English does not mean that she does not know how to say “and bribe him” or “with cream on top” in French, but rather that in the moment she was speaking, it might have felt easier to express that specific part of her idea in English. This is a main reason why bilinguals code-switch: there are certain concepts or notions that may simply be better explained in another language (53). However, as Grosjean argues, code-switching may also arise from the need to fill a linguistic need for a word or expression. Here is a personal example to illustrate this idea. I am bilingual in English and Spanish, and I have lived in both Mexico and the U.S. throughout my life. When I go to Mexico for holidays and to visit family, a common topic of discussion is my experience as a university student in the U.S. When I talk about this, oftentimes I resort to code-switching because I struggle finding the words to describe certain notions about the American college experience. This is not because these notions are impossible to explain in Spanish, but rather because it requires more words and/or sentences fully express the idea, and even then, some of its essence might get lost in translation.

The idea of code-switching is a very interesting topic of discussion because it can be heavily criticized by monolinguals and even by some bilinguals, which argue that if a person is going to speak one language, they should do it right and only speak one language at a time. Over the years, code-switching has been given pejorative names such as Spanglish or Franglais (52) and has sparked negative reactions that could ultimately discourage individuals to learn a different language. However, code-switching should be considered more as an asset of bilingualism because it provides an individual with additional ways to express him or herself and can facilitate more effective communication. Although code-switching can only be used in certain contexts (i.e., amongst bilingual individuals), it nourishes the presence of different language systems in a person, and it is a direct indication that different languages hold different perspectives.

## **Conclusion**

The research and discussion throughout this chapter focused on language learning as a transformative experience on a person from a scientific/linguistic perspective. First, the neurological impacts of language learning were discussed, and after the review of some case studies, it was concluded that bilingualism appears to be a factor that can increase the gray matter density and white matter integrity of brain tissue. In order to optimize neural plasticity as a function of language, one must consider the timing, the nature, and the extent of exposure of that language to a person. As a result of these anatomical changes, a person may exhibit improved cognitive processes. Second, the impacts of these anatomical changes were discussed, such as how skills like problem solving improve in bilingual individuals, and how they can also



promote other processes such as creativity. And third, the idea that learning different languages bind their speakers to their structure and rules in order to perceive the world was also discussed, along with the phenomenon of code-switching. All of these points are just a small part of the argument of why languages are transformative, even if it changes an individual on a microscopic level. Language learning, bi- and multilingualism, and communication in general are a phenomenal human characteristics and capabilities that allow us to coexist as humans in the same environment and share the way we perceive everything that surrounds us. Languages enrich the human experience on so many levels—whether biological, personal, or communal, and it is important to shed light on the transformation that they can cause within an individual.

## Conclusion

In my experience, learning different languages has been more than transformative. I was born and raised in Mexico, and until the age of thirteen, I primarily spoke Spanish. My exposure to English began in kindergarten, but it was minimal until I reached elementary school, where I began performing more advanced tasks such as speaking, reading, and writing; that is when I truly started learning the language. In the beginning, this was just one more subject in school—one that I enjoyed but that did not really stick with me once I went home for the day. It was not until I started becoming more proficient and noticing the benefits of understanding English that something changed within me and encouraged me to learn more. For example, I began to understand the lyrics to popular songs in English, which gave me the ability to connect better with music. Similarly, I became interested in watching certain movies in their original English audio rather than the Spanish dubbed version, because I started to appreciate the importance of the voices and emotions of the actors. By the time I moved to the United States when I was thirteen, I was proficient enough in the language to attend school and to be able to learn. Of course, this experience came with its challenges, as this was the first time that I was learning subjects such as math, science, and history in English. Nevertheless, it challenged my brain in incredible ways and showed me that even if a foreign language seems like a tough barrier to break down, it is not impenetrable.

When I started high school, I introduced French into my language learning journey, because after proving to myself that I could learn a second language and noticing how it changed me, I became inspired to learn more. Additionally, French had always been language that intrigued me — whenever I heard it or spoke it, I felt a special sensation of beauty and elegance,

and it was a feeling that I enjoyed and wanted to explore further. Over the past few years, I have focused on mastering my French and immersing myself in all that it has to offer. In that time, I have not only learned how to speak and express myself in the language, but I have also learned incredible things about Francophone history and culture. By incorporating French into my language repertoire, I unlocked a new lens through which I can now view the world, and it has been an extremely educational and fulfilling experience in my life. Overall, knowing these three languages has shaped my brain and my life in unique ways, and I owe many of my successes to what I have gained from them.

The diversity of languages around the world is very important to acknowledge, because each one of them holds a unique value and comes with its own story. As previously mentioned, a language has the ability to show you new ways to communicate and think, while simultaneously teaching you more about its culture and the history of its origin. For instance, when I learn French, I am not focused only on learning how to speak it, but also on learning why it is spoken that way and the motivations behind the language. Why are things structured in the way they are? What value does this hold for French-speaking people? How does the language vary among the different Francophone countries around the world, and why? These are just a few of the many questions that have ignited within me during my French language learning journey, and I ask myself these questions because they give me a deeper understanding of all that exist beyond the words and structures of the language. But while differences are important to acknowledge, it is important to not allow them to act as dividers, as it has been the case throughout history. Because language is such a crucial part of human identity, strong feelings can arise from it, and that may create conflicts among different people. By changing the way in which we perceive language, we may be able to use it as unifiers to encourage cultural and global connections.

As it has been established thus far, language is a versatile skill that has the potential to encourage transformation. Not only does it cause physical changes on your brain, but it can also change the ways in which you think and how you interact with the world around you. Knowing how languages change you may also be beneficial in other areas that, at a first glance, may not seem directly related. For example, let's consider how I have applied language learning to my field, and how I use my trilingual abilities to my benefit. My academic major is Biomedical Engineering, and after graduation I wish to pursue a career within the pharmaceutical industry. Aside from my passion for languages, I am also very passionate about biology, physiology, cellular processes, and the mechanisms of the human body. Although engineering and language learning may not seem directly related, both of these disciplines have interacted positively in my experience, allowing me to benefit from them and be able to optimize my learning in all areas. For instance, as an engineer, I focus on identifying problems and finding ways to approach them to find the best solution. Sometimes, to solve a hard problem, the approach needs to be restructured and viewed from a different perspective, which may uncover things that were not considered before. The mental flexibility that learning languages has enabled in my brain has facilitated this process, allowing me to improve my problem solving skills and approach difficult situations from multiple angles. Another way in which language learning has positively impacted my engineering career is by giving me access to different language systems, and thus a wider access to linguistic resources. For example, sometimes I employ the use of my three languages to help my brain understand and remember things better if I am working on memorizing something. The repetition of a word or concept—but in three different languages—greatly enhances my ability to learn it. Additionally, due to the unique structures and words of different languages, learning the same concept from different points of view may also enable me to draw on previous

knowledge and make further connections. These are some examples of how learning languages has benefitted me in my career as an engineer, but I truly believe it can apply to other fields as well. The information presented in this thesis can reshape the way in which an individual perceives language, and going forward, this research might be used to prove how language learning can positively interact with a variety of fields.

Everything I have discussed and presented in this thesis relates to my personal experience with language, and how I have been transformed by its power. I have mainly focused on the positive impacts of language learning and how it can transform someone's life for the better, but it is important to consider that there are always two sides of the coin. The human experience is different for everyone, and the way that language has impacted me may not be the same on someone else. Learning languages, for instance, might be an overwhelming experience to some, as having access to different ways of thinking might induce a mental overload. Perceptions about everything in life vary from person to person — the experience of language included. With this thesis, however, I simply share my own perspective, and I believe that the journey of learning a language is a transformative experience, on many levels and in many ways, and even if becoming bi- or multilingual is not a solution to life problems, it has the possibility to enhance the human experience.

The power of language learning is an ability we all possess, we just need to learn how to activate it. Learning how to see beyond the words and truly delving into the many facets of language may seem like a difficult task, but it is highly educational, transformative, and most importantly, worth it. Sometimes, learning a language may seem daunting because it challenges you in ways you may not even be aware you could be challenged, but overcoming that barrier is the key to expanding your horizons and kickstart a journey of change.

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- Investigated the root cause of a failure in a transducer using a DOE and provided a solution to reduce the scrap cost.
- Implemented a new epoxy dispensing method to address an assurance of supply issue while prioritizing process ergonomics.
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- Facilitated online daily management meetings every week for the engineering team.

**The Eberly College of Science**

University Park, PA

Learning Assistant

January 2021 – May 2022

- Facilitated student mastery of anatomy and physiology course materials.
- Held weekly office hours and led review sessions to assist in student learning and success in the course.

### LEADERSHIP

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**Protein Purification for the People Capstone Project**

University Park, PA

Team Leader

January – May 2023

- Built a functional prototype of an automated protein purification device with increased sensing capabilities compared to a previous prototype with a team of six engineering students of different disciplines.
- Designed and constructed a conductivity sensor for the detection of a change in buffers during the column chromatography process.
- Crafted weekly status reports detailing the team's accomplishments, setbacks, and upcoming tasks to send to the sponsor prior to our meetings.

**Penn State Women in Engineering Program Orientation**

University Park, PA

Mentor

August 2021 – May 2022

- Led a team of 10 first-year engineering women during a 4-day virtual orientation and throughout the academic year to facilitate success.
- Modeled positive academic outcomes and career development for first-year students to optimize retention of engineering women.
- Engaged in engineering service, outreach, and targeted career development.

**Penn State Biomedical Engineering Society**

University Park, PA

Secretary

August 2021 – May 2022

- Served as a bridge between the Department of Biomedical Engineering and the student body.
- Maintained effective communication within the Executive Board and the members of the organization.

### ADDITIONAL INFORMATION

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Involvement: **Scholar Ambassador**, Schreyer Honors College; **Member**, Phi Sigma Rho Engineering Sorority.

Software: MATLAB, Minitab

Languages: Fluent in Spanish and French