

An introduction to language adoption as innovation adoption

University of Lapland
Faculty of Art and Design
EMACIM / Audiovisual Media Culture
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Luiz de Mello

Faculty of Art and Design

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Luiz Adriano de Mello Ferreira

EMACIM / Audiovisual Media Culture

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Summary

This research investigates the issues of language revitalization and endangerment through the lenses of the theory of diffusion of innovations proposed by Everett Rogers. In particular, it investigates how the characteristics of innovation (defined in the aforementioned theory) relate to these two issues. This research is primarily a cross-disciplinary theoretical review of the literature, re-evaluating, and contrasting evidences and conclusions on the matters of language endangerment and revitalization with this theory.

Adoption of a language as a whole could be said to be fundamentally a concept, an idea. And as such, it is one that can be perceived anew, both on an individual and a social level. This description perfectly fits the definition of innovation given by the theory of diffusion of innovation (i.e. an idea that is perceived as new), which explains the main mechanisms that regulate the success and failure of innovations. And if language adoption issues, such as language endangerment and revitalization, are instances of innovation adoption, this makes the theory an ideal tool to analyse these issues. Yet, there seems to have been no previous attempt at such analyses. This was what originally motivated the development of this research.

This investigation led me to the conclusion that many ideas currently used through classic literature both to explain endangerment and suggest paths to revitalization might be incomplete or even counterproductive, as well it revealed a great need for more multidisciplinary research to match the multiple faces of these issues.

Keywords: theory of diffusion of innovations, multidisciplinary, endangered languages, language revitalization, language adoption

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1 Introduction

This research investigates the issues of language revitalization and endangerment through the lenses of the theory of diffusion of innovations proposed by Everett Rogers. In particular, it investigates how the characteristics of innovation (defined in the aforementioned theory) relate to these two issues. This research is primarily a cross-disciplinary theoretical review of the literature, re-evaluating, and contrasting evidences and conclusions on the matters of language endangerment and revitalization with this theory.

One way to think about adoption of a language, both in terms of using it in multiple aspects of life as well as passing it on to future generations, is as a concept, as an idea. And as such, it is one that can be perceived anew, both an individual level and a social level. For an individual example, someone might have the idea of learning a foreign language such as English for the purpose of improving chances of finding better jobs, but fall in love with an English speaking culture or literature and learning the language for cultural satisfaction becomes his or her new idea of adopting said language. And this would greatly change the way this individual approaches the learning and adoption of the language. On social level, we can consider the formation of a new country where the vast majority of the citizens speak the same language and collectively also hold more economic power. Speakers of other languages in this new nation could initially feel pressured to learn the new language just for its economical and perhaps political power. After a while, as the society becomes better integrated and interpersonal revelations, such as family ties, become more interconnected, the general reason to learn the majority's language might shift to form a sense of belonging to the now wider society, to not lose ties with relatives, and other social issues.

As it will be explored, this fits perfectly the definition of innovation given by the theory of diffusion of innovation (i.e. an idea that, for a reason or another, is perceived as new), which explains the main mechanisms of how and why innovations are or are not successfully adopted, and is frequently and successfully put into practice in several fields, such as information technology. And if language adoption issues, such as

language endangerment and revitalization, are indeed instances of innovation adoption, this makes the theory an ideal tool to analyse these issues. It would help us better understand how and why language endangerment happens, how to avoid it, and hopefully how to reverse it and revitalize endangered languages. Yet, there seems to have been no previous attempt at such analyses. This was what originally motivated the development of this research.

This investigation led me to the conclusion that many ideas currently used through classic literature both to explain endangerment and suggest paths to revitalization might be incomplete or even counterproductive, as well it revealed a great need for more multidisciplinary research to match the multiple faces of these issues.

1.1 Language endangerment as an Arctic matter

Considering that this thesis was written and published in the Arctic, I believe it is important to point out how this problem is also a local issue. While the analysis and considerations raised in this work are intended to be applicable also elsewhere, it is worth noticing that this is the product of a single author and therefore inherent perspective limitations are to be expected. At the same time, by being able to identify the context in which this work was written and which could have influenced the point of view, other authors focusing on different regions or with different backgrounds will be more capable of interpreting, judging and expanding on this work, as well as contrast its point of view with their own.

As seen in the previous subsection, economic development and growth, and globalization are key factors in the process of language endangerment. This makes the Arctic region a breeding ground for this problem. Alaska (USA), Finland, Greenland (Denmark), Iceland, Norway, Russia and Sweden; most Arctic countries are usually considered economically developed and Russia is well known case of a distinct developing economy. It is no surprise then that the region is significantly affected by this problem. According to Moseley (2010), in Russia alone there are more than 120 languages at different levels of endangerment. In Canada and Alaska/USA, there are

more than 90. In Scandinavia altogether, more than 10. And in Finland, we have Inari Saami, North Saami, Skolt Saami, Karelian, and Olonestsian/Livvi-Karelian, at the very least. Except for Iceland (understandably, given its demographics, location, size and history), every Arctic country faces the threat of language extinction within its territory, making this, without a doubt, a very Arctic matter.

1.2 General terminology used in this research

To avoid confusion and maximize clarity, it is important to define a two general terms that are used throughout this research.

“Adoption”, when referring to a language, it is meant to be taken in a very broad sense, and is used almost synonymously with language revitalization when applied to a population instead of an individual (or, more specifically, the process of revitalizing a language). It includes learning a language or improving one’s domain over it, using the language both in formal and informal situations in a regular manner, being able to communicate orally and by writing in said language, using the language not only out of need but also personal desire, seeing inherent value in it, and being willing (and hopefully glad) to pass it on to future generations such as to one’s own children. Ideally all of these elements will be present, but in this research the term also accepts partial fulfilment. For example, if one sees value in a language and want to ensure one’s children can learn it as one of their first languages, that is considered as a form of adopting the language even though the individual themselves do not speak the language well and frequently, or even at all.

“Revitalization” technically means the same (i.e. getting an endangered language out of endangerment), but in this context it usually means the process by which a language achieves that status of not endangered any more from a state of endangerment. As a process, it includes all the elements that “adoption” does (although applied mostly to a population, while adoption may be equally applied to a population or individuals), and also the idea of achieving a state where the language is either growing in population between generations or at least maintaining a stable number, and that all happens due to

understandable and sustainable processes (i.e. it is not a temporary rush due to the success of one particular campaign, but a general result, a positive trend).

Similarly to revitalization and adoption, “language” is sometimes used as a shorthand for the idea of its adoption and of its revitalization as defined above. Usually when referring to traits associated with innovations. For example, if in later chapters I refer to the relative advantage (a characteristic of innovations, explained throughout this work) of a language, but that is just a compact way to refer to the relative advantage that the very idea (be it in general or through specific plans) of revitalizing or adopting an endangered language has, not the language itself. This is due to the fact that only the socio-economic context and the use of a language is truly relevant for this research (i.e. the grammar and other language specific features are not actually important), and in this context a language becomes essentially synonymous with its practical use (or lack of it), not the entirety of what a language means, thus it is just much more convenient to refer to it as “language” instead of specifying the same thing every time it is mentioned, it should be assumed from the context.

These terms and definitions derive from the general literature on the topic, as well the communication needs of this research. They do not have general theoretical value, they are used solely to simplify the process of writing and reading this research. They are by no means an attempt at unified nomenclature outside of the scope of this research.

2 Research questions & Framework

This research and how it was developed is largely influenced by its goals, research questions, and the unfortunate lack of existing works on a similar topic. This research is primarily a theoretical review, by the definitions provided by the University of Southern California (2017). The primary objective is to help establish that language adoption, particularly issues of language endangerment and revitalization, should be studied (and perhaps primarily) as instances of innovation adoption, a practice that so far has not been strongly used if it has been done at all. To better align this description with USC's definition, the objective is "to help establish a lack of appropriate theories or reveal that current theories are inadequate for explaining new or emerging research problems" (University of Southern California, 2017). I would not say that the current theories are entirely inadequate in this case; lacking might be a better description since their primary fault would be failing to acknowledge and approach these matters as a matter of innovation adoption, thus ignoring vast amounts of knowledge and tools for research and development. It is essentially a matter of contrasting what is known about the two issues and comparing to what the theory says to see if the theory predicts matches what is known and if it helps us to further understanding.

This leads us directly into this research's problem or question. At a higher level, the problem could be defined as: is language adoption a kind of innovation adoption? That question has a trivial answer, which is not very interesting by itself, which is a simple matter of adopting established definitions and comparing them. But it can also be answered in a less trivial manner, that is to actually attempt to apply a theory (or theories) common used to the study of innovation adoption to such issues, and observe how well it performs, with the addition benefit of observing if it suggests anything new. Essentially, this work provides the trivial answer and attempts to demonstrate the non trivial answer. For this end, I will employ the Theory of Diffusion of Innovations formulated by Everett, which is commonly employed in fields in which the concept of innovation is very relevant, both in research and in practical applications. In this regard, the theory of diffusion of innovations is both the framework (rather than a methodology), a source of information (because it itself provides plenty of evidence to prove its claims) and a subject of analysis. In short, it is a very robust resource and

rather suited for the goals of this research. Attempting to weave two fields together is already complex enough as it is, so it is rather convenient that each of them is already proven and well supported. The goal here is not to prove the basic concepts individually, but that the theory can be a powerful tool to analyse this particular type of issue – and that is done by actually attempting to apply the theory to these issues, reinterpreting what is already known through this lens and see what can be learned from doing so. In an even more specific level, the fundamental problem I investigate in this work is: how the characteristics of innovations and the segments of a population regarding innovation adoption (two key elements of the theory) are manifested in these issues and how they can be explained through this perspective? As mentioned, the characteristics of innovation are a fundamental aspect of the theory. So, if this can make sense of what can be observed in an adequate manner and add some unique insight, it would logically support the hypothesis that language issues are a matter of innovation adoption, in addition to being a starting point of reference for how to approach these issues as an instance of innovation adoption.

3 Language endangerment & Revitalization

Before attempting to apply the theory of diffusion of innovations to language adoption issues, such as language endangerment and revitalization, it is necessary to lay down the premises of the problems themselves. Thus, this is both a small summary of the issues of language revitalization and endangerment as well as a short review of some of the existing literature on the issues in general. This will be done in the following sections by breaking the issues down into smaller pieces for ease of understanding and clarity. The goal of this review is not to be an in-depth analysis of the issue of endangered languages itself, that has already been done by the works mentioned here and other works on the topic, but introduce the issues and the specific literature, as well as make a general summary of the common arguments and important findings on these topics.

3.1 What are endangered languages?

"Language endangerment is a serious concern to which linguists and language planners have turned their attention in the last several decades. For a variety of reasons, speakers of many smaller, less dominant languages stop using their heritage language and begin using another. Parents may begin to use only that second language with their children and gradually the intergenerational transmission of the heritage language is reduced and may even cease. As a consequence there may be no speakers who use the language as their first or primary language and eventually the language may no longer be used at all. A language may become dormant or extinct, existing perhaps only in recordings or written records and transcriptions. Languages which have not been adequately documented disappear altogether." - Simons & Fennig (2016)

It is not such a simple task to define an endangered language in an objective and precise way. Many scholars have tackled this problem, as reported by Moseley (2010) and investigated by Kraus (2007), both of which conclude that it is not a binary question between endangered and non-endangered, but rather a gradient ranging from about to become extinct to safe and there are many in-between levels, and each author presents a different scale to judge the degrees in which a language might be endangered. The objective of this work, however, is not to delve deep into the specifics of such classifications, which authors like the aforementioned have already dedicated time to do. For this work, it is sufficient to understand that many scholars have identified this

problem already and, in spite of differences of approach, they do conclude and agree it is a fact and that it has significant impact.

Austin & Sallabank (2011) affirm that “[i]t is generally agreed by linguists that today there are about 7,000 languages spoken across the world; and that at least half of these may no longer continue to exist after a few more generations as they are not being learnt by children as first languages.” The main cause of this phenomena, according to Amano et al. (2014), seems to be “the dominating effect of a single socioeconomic factor, GDP per capita, on speaker growth rate [which] suggests that economic growth and globalization (...) are primary drivers of recent language speaker declines (mainly since the 1970s onwards), for instance, via associated political and educational developments and globalized socioeconomic dynamics.”

It is this situation, a great many number of languages at risk of disappearing not due to natural and voluntary motions of their speaking communities but due to external pressures, that this thesis seeks to address. And, given the information available to us as summarized by the previous paragraphs, it is clear to me that a solution to this problem, at least one that is neither destructive nor authoritarian, must either address economic matters directly or circumvent them. However, addressing economic matters direct is a problem. When we consider the mechanisms behind this phenomenon described by Amano et al., which I fully agree with, it stands to reason that, if these communities were already had an economic situation that allowed them to minimize or even ignore the external pressure, chances are that their languages would not be at risk. But since that they are at risk, it can logically be concluded that merely addressing such economic matters head-on might not a viable option to remediate the issue. We would need to explore other venues, perhaps alternatives that make economic matters less impactful and, as consequence, easier to combat. It is this direction that we will explore in later chapters when we take a look at the theory of diffusion of innovations applied to language revitalization.

3.2 Challenges faced by endangered languages and existing ideas on revitalization

When we consider the matter of revitalizing endangered languages, understanding the challenges ahead of them is a big step. In his book *Language Death*, Crystal (2000) prescribes a few elements that could help a language to be revitalized, which we could read as challenges that endangered languages have to overcome to get out of endangerment. Crystal says that an endangered language will progress if its speakers:

- increase their prestige within the dominant community.
- increase their wealth relative to the dominant community.
- increase their legitimate power in the eyes of the dominant community.
- have a strong presence in the education system.
- can write their language down.
- can make use of electronic technology.

Other authors also have similar, yet different readings of the situation. One such author is Fishman (2001, pp. 466), who proposes a list of steps or stages to revitalize a language. Unlike Crystal, that does not exactly portray a hierarchy or order between his points, even suggesting they are parallel efforts, Fishman's list is to be taken more linearly. His steps are as follows, paraphrased for the sake of clarity:

1. Acquisition of the language by adults, who are in practice acting as language apprentices (this would be recommended where most of the remaining speakers of the language are elderly and socially isolated from other speakers of the language).
2. Create a socially integrated population of active speakers (or users) of the language (at this stage it is suggest to that it is better to concentrate mainly on the spoken language rather than the written language).
3. In localities where there are a reasonable number of people habitually using the language, encourage the informal use of the language among people of all age groups and within families and bolster its daily use through the establishment of local neighbourhood institutions in which

the language is encouraged, protected and (in certain contexts at least) used exclusively.

4. In areas where oral competence in the language has been achieved in all age groups encourage literacy in the language but in a way that does not depend upon assistance from (or goodwill of) the state education system.
5. Where the state permits it, and where numbers warrant, encourage the use of the language in compulsory state education.
6. Where the above stages have been achieved and consolidated, encourage the use of the language in the workplace (lower worksphere).
7. Where the above stages have been achieved and consolidated encourage the use of the language in local government services and mass media.
8. Where the above stages have been achieved and consolidated encourage use of the language in higher education, government, etc.

Fishman (2001, pp. 250) refers to the first 4 stages (in Fishman's original writing they are stages 8 through 5 as list, in his original wording, is ordered from final to early stages) as "the minimum needed to guarantee the natural intergenerational transmission of a language and ensure the RLS [reversing language shift] process." Which is interesting since those steps are rather focused on the community of speakers themselves. While I disagree with Fishman's proposed solution (not at all levels, but I find it limited for reasons that will become more clear on the course of this research), I do believe there is something to be learned from conclusions. But above all, I find it compelling that those four steps focus so much in the community of speakers in a way that I would say agrees with two particular points from Crystal's list, namely prestige within and without the community, which I see as just two sides of a coin. I believe this common (or apparent common) ground between both analyses is indicative that this aspect might hold special importance to the process of revitalization of a language.

What I gather from these and other works, specifically their sources and their initial analysis, is a slightly different conclusion. I reinterpret their findings as there being only one major element that can help reverse language endangerment: the perceived value of the language, both by its internal speakers and those who surround them. I will go in further depth on this point in the chapter regarding characteristics of innovations, but for now, suffice to say this perceived value is to be taken in general (i.e. not just economic

value, though including). It is a general opinion based on the opinion of the people involved (affected community and dominant cultures around it), which itself derives from the synergetic relationship of a large range of factors, including those mentioned by Crystal and Fishman as previously listed, and even others not considered by them. As such, it is not an attempt at trying to define some absolute objective measure of “value” that can be externally measured. It is subjective and relative to the people in question. And it is hardly static—it is volatile just like any trend or the opinion of masses over time, because that perceived value is not much different, if at all, from those. I believe this is the key to revitalizing a language, more than any other aspects—other aspects are only relevant to their capacity of improving this perception of the language.

I do, however, recognize the importance of economic issues, as pointed by the previously mentioned works the economic aspects do have a major impact. A community’s access and competence with modern “tools” (also in general, ranging from education, literary options, digital technologies, legal status, social services available, and so on) is also very important. However, notice that while they are very impactful on their own, it is rather logical to conclude that they directly affect the perceived value of a language, from which we can further conclude the credit goes to this general perception, not to the isolate element itself. And of course, this is relative to the culture itself—different cultures will respond more positively to some factors than others. For example, consider the availability of certain social services in an endangered language, and assume that these services are valued by the speakers of said language. Would the existence of this service and the governmental support not make the language be seen as more valuable since its speakers can interact with their government in meaningful ways without having to resort to a second language, and also to the communities around it who can see that this language was important enough to warrant this status by the government? Of course, in practice it is very hard to quantify that response properly, but I believe that in this simplified mental experiment it is self evident that the impact would be positive in this scenario and in any scenario like it. For yet another example, imagine that the services available in the target language are not important to the culture of the speakers. Assuming no other changes, perhaps those who belong to the dominant culture could still have the positive impact in their general opinion of the language, but it would do little for its speakers since it is enabling them to have access to something

they do not care about, that is, something that has little value to them. In either case, we see that the isolated factors by themselves do not change much, its their synergetic interactions with all other factors and the final result of that ecosystem of factors; the perceived value.

The most important difference between this view (even if highly summarized, my views will of course be expanded throughout this thesis) and the view of authors such as the aforementioned Crystal and Fishman is that they list it as series of apparently individual, related but distinct, elements, each of which could be worked on in isolation even if one can work on them in parallel. As mentioned, I do not agree with that perspective as I see it as different facets of the same element. And this has another benefit, which is a different perspective and approach to the problem. We no longer try to “just” try to make a population have access and competence in using digital technologies and independently try to improve their economic situation. While we would still try to do those things too, we look at it differently. It poses a question whether or not we could overachieve in an area that is easier to improve to compensate for difficulties developing other aspects to still achieve the main goal, which is to reach some level of stability for the language moving forward in time. This is the perspective that gave origin to this thesis.

3.3 A small critic on common arguments in the literature

For this purpose, I will focus primarily on the previously mentioned work of Fishman (2001) as his work demonstrates many of the elements I would like to revisit, critic, disagree with and reinterpret. However, these arguments are not present just on his work but in many works, which makes them points worth discussing in separate.

3.3.1 An aversion for the “virtual”

Fishman (2001, pp. 458) claims that there is a need for real community (i.e. primarily or purely in the flesh communication, to put it simply), rather than their “virtual pale shadow”, which is clearly pejorative. It also seems to be a matter of one or the other for Fishman. But we live in a world where technology is an integral part of our lives and how we communicate with one another; trying to ignore this simple reality, regardless of one personal opinion about it, is simply a recipe for failure.

It is an anachronistic view that there is a virtual and a real world when it comes to human interaction and communication (or at least a highly academic and theoretical distinction that is often not that meaningful in a practical way regarding the daily interactions of the speakers of a language). This virtual he speaks of exists not in parallel, but as an integrated part of the “tangible” world in what we call “modern life”. Modern people make little to no distinction between the “two” – it is all just different elements of the very same interconnected life to us, not distinct “realities”. Turkle (2011, pp. 23) phrases it in a very interesting way: “We have learned to take things at interface value”. And, of course, all the rest of Turkle’s work supports this affirmation as well. This is specially true in more developed countries, such as the Arctic countries – countries where the “digital” has reached pretty much everyone already, as anyone living in Finland can attest.

Virtual interactions are not just a temporary trend or the hobby of small (sub)groups of people in our societies today as it might once have been in the 90’s or early 2000’s. Today, in the 21st century, it is an integral part of modern life in the 21st century, as much as face-to-face interactions. In places like the United States, 71% of the people have smart phones, with the number going as high as 86% among so called millennials (The *Mobile Millennials: Over 85% of Generation Y Owns Smartphones*, 2014) who are a significant slice of the population today. It would also stand to reason to consider numbers to be similar in other developed countries and some developing countries, and that does not account for people’s daily use of other pieces of digital technology beside the one they carry at their pocket almost all of the time. And if real modern speakers and potential speakers/users of a language use the so called “virtual” in their daily lives as a

regular and often integral part of it, rather than some sort of optional novelty, then any solution to the issues of an endangered language has to account for and adapt to actual communicative behaviours of real people instead of trying to convince them of some hypothetical solution that would require them to significantly change their life styles (this will be expanded on later in the chapter dedicated to characteristics of innovations). It has to start first with the speakers, the real people, their existing habits and lifestyles, and build from there. The discussion of whether or not there is a need for having a society that relies or uses less of the “virtual pale shadow” belongs somewhere else. That is a discussion about a hypothetical medium or even long term future which might not even arrive and it does not sound wise to make it a priority for a language which immediate concern is surviving the present and the near future.

Fishman (2001, pp. 459) writes further. “Gemeinschaft (the intimate community whose members are related to one another via bonds of kinship, affection and communality of interest and purpose) is the real secret weapon of RLS [Reversing Language Shift].” He seems to imply that such features are inherent to physical communities only, which could not be further from the truth. There can be very poorly connected physical, face to face, communities as well as virtually. And both forms of communication can also be used to strongly connect groups of people too—specially when both are present, symbiotically, as is the role of the “virtual” in our lives today. In fact, one could easily argue that most virtual communities are initially assembled together by a communality of interest and purpose, which often times can lead to affection and a sense of kinship by the mere fact that anyone joining said communities does so out of their own desire, not due to imposed arbitrary random elements such as “the people who happen to live in the area as I do”. One clear example that is contrary to this notion that kinship does not happen in the “virtual” is the case of constructed languages, where people often times come together and develop a sense of kinship because of their shared passion for said languages. An excellent living example would be the history and development of Esperanto and the fact it is today a widespread language with millions of speakers, even a few natives—a topic that could be a thesis on its own.

I find this strong preference for one type of interaction or another illogical for yet another reason. If the key reasons for language shift and subsequent language loss are

globalized socioeconomic dynamics, then it seems irrational to undervalue virtual interactions as those play a very important role in this globalization phenomena—can one imagine a truly economically and culturally globalized version of our planet without something like the internet and virtual interactions to the same extent it has reached today? I do not believe it would be possible to reach the levels of integration we have today without it. It is public knowledge that those factors have gained strength with the expansion of communication forms via digital communication and interactions. Of course, other technological advances are also responsible for it, such as the huge improvement in transportation of goods and people in the last century, as well as policies, they all helped the phenomenon to intensify—but not in isolation, they worked together in a symbiotic relationship. If anything, putting the virtual as a second class way to use a language will only further ensure the language's inability to function and be used in a modern society and environment, an ability that any so called dominant language easily demonstrates. But at the same time, technology is just a tool and if it is useful for so called dominant cultures and languages to stay relevant and alive in the modern globalized arena, there seems to be no good reason why endangered languages should not make use of the same powerful tool to their own benefit. It would only give more reasons for younger generations to consider using another language that fully embraces this partially digital world that they themselves have embraced.

My acceptance of the digital is not really a revolutionary or new idea. Among other things, it is influenced by authors such as Pietikäinen (2008) who, when talking about the use of the “virtual”, of media, says: “Minority language media are often considered to be an important element in revitalisation of endangered languages. As a visible and widely used part of contemporary life, minority language media are seen to have the potential to expand domains of endangered languages, to increase awareness of them and to enhance the means and motivation to use these languages.” And she proceeds to show the positive impacts of the use of media in her article, and concludes that “Sami-language media are a public proof that indigenous languages are good and vital enough to be used in new, contemporary contexts: native languages are also modern languages, not solely languages of grandparents, rituals and tradition.”

Her article also points a few other things that reinforce the idea that using media should be extended, not relegated to second class. In the situation she was investigating, namely the Sami in Nordic countries, she notes that there is not enough supply of old printed media as a consequence of lack of resources. No daily newspaper and TV programs are also limited (even if growing at the moment of her analysis). But at the same time, as Internet access in Finland is widespread, many Sami organisations and groups took to the internet and the internet offered a viable space for communication. She does protest to it to a certain extent, however. She believes it also leads to hybridisation and she seems to hold the position that hybridisation is bad in itself. While I would argue that hybridisation is not necessarily bad (no language or culture, dominant or endangered, has developed without cultural and linguistic cross-pollination, it is a natural process that may or may not be good, depending on why, how and who it is affecting—what we need to worry about are imposed changes, by actual force or pressure, not genuinely voluntary movements), but nonetheless she makes a very compelling case for the benefits of the virtual and her data from real scenarios is itself very compelling, in spite of my partial disagreement with her conclusions.

3.3.2 Preserving a language's past is not the same as keeping it alive

In much of the literature and many initiatives regarding language revitalization are concerned with recording a language's past (oral traditions, classic literary works, old grammar, vocabulary and phonology, etc.) and its current structure (grammar, vocabulary, phonology). And there is little distinction made between said recording and revitalization. While related, and both important for their own reasons, they are not exactly the same thing.

It important to emphasize that preserving oral traditions, old stories and knowledge, as well as recording the grammar and the vocabulary of a language is very important, both culturally and for diverse academic reasons at the very least. But at the same time, language revitalization is composed of more than just that, and not everything related to recording a language is relevant to keeping it alive. Let us make a mental exercise. Take

any major language that is certainly safe. Does the average speaker consciously remembers a large amount of classic literature, music, and master's its present and past grammars, past phonologies, as well as has a deep understanding of a language's vocabulary and their origins? The answer to that question is unsurprisingly "no", as that high degree of knowledge is even not expected of any singular linguist, who are trained specialists, and certainly not expected or demanded of the average person. But yet, it this same general population who keeps their languages alive.

The point I am trying to convey here is that recording and preserving a language's past as a whole is an activity for specialists, not the general population itself whose interests and needs of a language are more dynamic and inclusive. As important as it is, it is only but a fraction of the process that keeps a language alive. But yet, we see a disproportional amount of both academic efforts and practical efforts dedicated to preserving and recording, and little more if anything else. I have no doubt that, at least on the academic aspect, it is caused by a high interest of linguists in this issue (therefore they focus on what they are experts of, and those are the things they are themselves interested too) combined with a smaller presence of other fields investigating this issue with different interests and considerations. Furthermore, I believe that mistaking the part for the whole in this case can escalate and lead to counterproductive thinking and actions. That is because a living language is constantly adapting and evolving, and by its very nature preserving and recording a language is much easier when it is changing as little as possible, preferably not at all—but only a dead language would be frozen in time as such, any living healthy language has active speakers and new generations who needs their language to reflect the constantly evolving sociocultural reality they are immersed in.

An example of that problem escalating to an extreme degree into an academic direction would be Professor Emeritus Buckeye (2007), for whom the real issue in losing a language is academic linguistic knowledge being incomplete and not much else. Although this is an example from a personal blog, but one where he shares information and his academic opinion and analysis as a trained linguist, it does illustrate the types of discourse, which leads to potential action, that can emerge when we ignore this distinction or focus on the (current and past) linguistic aspects of a language

obsessively. He hypothesize an example that if all the speakers of “click” languages were to die suddenly, then “then we linguists would not know of them and our phonological theories would be incomplete”, and apparently that is his only concern. He does not believe that the loss of the language would not impact the culture, identity or any other relevant aspect of the affected people at all, in spite of all the evidence that it does presented in the works here mentioned and many others. Sadly, he is not the only academic to hold such dismissive views on the problem (and perhaps also dismissive of reality itself) either formally or informally. As detached from the reality as his writing is, it does illustrated well the issue.

A more practical example of mistaking preserving the past with actually revitalizing a language (i.e. a failure to acknowledge and accommodate for the fact that a language being used daily will naturally mutate and change as it develops, and that even before it does change languages are seldom used colloquially in the same way they are used formally) is the situation of the Irish language. Shah (2014), writes about what he considers a failing attempt at revitalizing the Irish language, in spite of all the governmental support it has. The reason it seems to be a general attitude towards the language. One particular passage illustrates the issue rather well. According to him, “there is very little scholarly, technological, or technical material written in the language. Most Irish publication today seems to consist mostly of poetry and traditional stories. This is consistent with the fact that, for many people, unfortunately including many governmental officials, Irish is viewed as a tongue for formal or ceremonial purposes only (that is, for inscriptions on monuments) rather than a language for everyday use. This gives rise to widespread linguistic tokenism. For example, road signs in Ireland are bilingual Irish/English, yet there has been no real attempt to push for the language to be used in other realms outside of the gaeltacht [a region where the vernacular language is Irish].” Why would the population itself see so little value on their historical language, even modern speakers of it would prefer to read the English translations instead? To me, the answer is clear, it is this promotion of the formal and classic forms of the language, and its almost exclusive use in historical, traditional and ceremonial contexts which are no longer part of most people’s lives. Things would likely be different if the efforts were also spread in promoting new developments: new original literature, music, up to date technical documents, and other amenities relevant

to the modern lives of the population rather than to the interests of a select few and to the life of people's long dead ancestors.

3.3.3 Compartmentalisation

The last issue to be commented on is this notion that certain aspects of life should be “compartmentalised”, to put certain processes in a bubble to preserve them. Some sort of “orthogonal” development. This too seems to be another symptom of desiring too much to preserve a language as it was and is while forgetting that a living language is also constantly developing with and around the social context it exists in, which means that to keep a language alive, more than preserving the past, we must ensure the preservation of its constant development which invariably includes changes.

Once again we go to Fishman (2001, pp. 459) who also argues that language shift reversal should be orthogonal to globalization, and that “[m]odern humanity desperately needs to restrict or compartmentalise-off certain of its most human processes from contamination by globalisation.” A view I also disagree, if anything from a practical perspective. Whether or not the idea has merits philosophically, morally or in any other sense, it is just not very practical. We need to ask what that idea is actually suggesting. A person, and any kind of assortment of individuals, who lives in a globalised world is also a part of it—it affects, and to some extent defines, the identity, habits, lifestyle, and other very personal aspects of the individual or individuals. If it was not the case, then said individual (or group) would already be living mostly in a bubble outside of the global society, and logically we can conclude that glottalization's influence would be minimal on their lives and their language could not be endangered by being “contaminated” by something the people involved has no contact with (though it could be endangered by other reasons). Asking masses of people to take part in this compartmentalisation of human processes really means asking masses of people to change their current personal lifestyles, habits, and maybe even parts of their identity. It should not require deep investigation to conclude this is not an idea likely to succeed in practice (this is explored in further detail in the chapter about characteristics of

innovations), specially when said change is not the goal itself but merely a stepping stone for yet another change.

3.3.4 A short counter example—Amoc and Inari Sami

One interesting real scenario that illustrates and lends credibility to my previous critic of some of my previous critics in this subsection, working as a counter examples to those points I criticised, is the case of the artist Amoc and his rap songs in Inari Sami. Ridanpää and Pasanen (2009, pp. 222) summarise the case rather well:

“Mikkâl’s [Amoc’s] father taught his three children to speak Inari Sami, but because there were no other young people who spoke it and interest in the Sami heritage was at a relatively low ebb among his contemporaries, Mikkâl found his hobbies in the world of Anglo-American popular culture. He became interested in rap music and started making up his own songs in English, but soon realised that Inari Sami would fit in perfectly well with the flow and beat of rap. The use of Inari Sami in rap music was an innovative move, and together with his father he invented some new words for the language because there had been basically no vocabulary for the themes common in popular culture. The Finnish branch of the Brussels-based organisation Young European Federalists chose Amoc as its Young European of the Year in 2007, on the grounds of his success in promoting tolerance and internationalism and his ability to integrate the identity of an indigenous people into global popular culture.”

With just this small snippet, we can already see several elements that both empower the language. And before anything else is said, let us take note not just of the degree of positive impact he has had, but also how critical are the areas that said impact affected—becoming popular with young Inari Sami is very important as they are the ones to carry on the language’s torch and eventually pass it on to their own children and the next generation, figuratively speaking. But more than just marvelling at his accomplishments, we can also pry in the details of how he managed to do it all, and how it contradicts the arguments present in classic literature discussed so far in this subsection.

Clearly, being from Finland and growing up in the 80’s and 90’s, it is certain that Amoc’s contact with Anglo-American popular culture (a staple of globalisation) could

not have been anything but heavily assisted by the “virtual”, as well as the development, promotion and diffusion of his music. Furthermore, Amoc went beyond just trying to “save” (by preserving) his language and remembering the old—he improved it, he developed it, he brought it closer to be up to date with the modern world of which he and many of his contemporary Sami are also part of, making it a language as viable as Finnish or English to describe the modern lives of these people. He did it by both creating new words that the language lacked to express modern life as well as using it in a way that has never been traditionally used (i.e. he accepted, promoted and enacted the natural evolution of his language to reflect the present reality, not just the past). And while those things might not be traditional to “pure” historical Inari Sami culture and language (i.e. its past, not necessarily its present or future), are more than familiar to many of his peers and is in fact part of their identities. Trying to save his traditional language by focusing on the reality of the present and how it will develop into the future; I would say there is some poetry in this. Furthermore, he is hardly compartmentalizing. Rather, he borrows elements which he likes from other cultures, adapted them and used them to develop his own (as all cultures, populations and individuals naturally do). This led to him being known not just among Inari Sami youngsters, but also nationally and even internationally, raising awareness of his language, and improving its prestige both to young Inari Sami and outsiders (i.e. the perceived value). Finally, he did it not by compartmentalizing-off his music, by rejecting the modern state of globalization, but by working around and with this feature of modern life, and he certainly did not go for a monolinguistic approach but by a plurality of languages.

I find it relevant to disclose that it I speak about this subject with some degree of personal knowledge and experience. I have never met Amoc himself, but I personally know a few Sami, and I have met and interacted with even more than those I know personally, including other Sami rappers like Ailu Vaile, as well as people who interact with them on a daily basis such as co-workers (I was one myself). And their life styles, their personalities, their environment in general does reflect my positions hold thus far. While I am fully aware that my individual anecdotal experiences might not be conclusive proof of my view and critic, it is nonetheless supporting evidence. And for this type of issue “proof” is often a compilation of agreeing evidences, not any

individual element by itself; this is not an exact science, after all. Furthermore, my experiences give me a very practical perspective rather than knowledge born primarily from external observation, which I find very valuable when researching such issues as it gives a sense of direction of what needs to be investigated.

4 An introduction to the theory of diffusion of innovations

4.1 Basic contextualization regarding language endangerment and revitalization

One way to understand issues of language adoption, in particular in the cases of endangerment and revitalization, is to consider that is more than merely using one language over in parallel to other languages. It is primarily the adoption of ideas. What does the language stand for to an individual and population, and everything associated with it. Furthermore, it involves convincing as many people to adopt said ideas and ideals, and as a consequence languages. This would happen both in regards to language endangerment (i.e. a set of ideas was adopted by a population, ideas that favoured the new dominant language and did not truly include their original language) or revitalization (i.e. an even newer set of ideas is presented to the population which accepts them, which just so happen to favour and include their original language). Fundamentally, this is not exactly a new idea or concept, but merely a simple rewording (or perhaps a reinterpretation) of the general concepts seen previously. And persuading people to adopt an idea or set of ideas that are seen as new is, also by definition, the adoption of an innovation. In other words, by definitions alone, it seems that language adoption in either case might be the result of the successful diffusion of an innovation. Thus, it only makes sense to investigate the use of theories and analytic tools that were developed to study how said diffusion actually happens and try to make sense of these issues.

In order to understand why this theory is suitable for investigation of these issues, it is first necessary to formally define what an innovation is. There are many definitions of innovation, not all in fully agreement with one another, after all. The one used in this research is the one given by Rogers (1983 pp.11) since as it is related to the theory of diffusion of innovations:

An innovation is an idea, practice, or object that is perceived as new by an individual or other unit of adoption. It matters little, so far as human behavior is concerned, whether or not an idea is "objectively" new as measured by the lapse of time since its first use or discovery. The perceived newness of the idea for the individual determines his or her reaction to it. If the idea seems new to the individual, it is an innovation.

At first glance, one could erroneously argue that adopting an endangered language and passing it on to the next generations cannot be seen as an innovation since those ideas are already known to the population, and they discarded it. The mistake in that assumption is in ignoring the fact that the all an idea need is to have a “perceived newness” to it. That is, a rebranded idea, or an idea that is presented differently from the forms the target audience is familiar with, can also be an innovation. I would even go as far as say that an idea presented anew in this way is in fact a new idea—in an abstract or general level it might seem as the same idea(s), but when we look at the details the entire package is not entirely the same. For example, if we revisit the example given on chapter 3 about the Irish language being seen (including by some of its promoters) as a formal or ceremonial language, the new presentation of the old idea (i.e. a new idea) could be the promotion of Irish not only as a language for formal or ceremonial situations, but also for everyday use, which includes casual face-to-face communication, modern technical documents or instructions, mass media, contemporary music and literature, and many forms of entertainment, and of a language that can add extra unique value to an Irish person’s life that being exclusively an English speaker cannot add to their lives.

Another way to understand innovations is as a change of behaviour (Koulopoulos, 2012). And perhaps one could say that description is even more fitting for the adoption of languages, be it when the adoption leads to endangerment, to revitalization or merely the adoption of a second language. When we consider language endangerment, there is no doubt that what is happening is a change of behaviour (at an individual level and at a collective level) as a response to external stimuli. With the change in conditions, many individuals started to change their behaviours in ways that incorporated a dominant language, and eventually replaced or de-emphasised an endangered language in their lives, then organisations and the social environment around them reacted to it and as a whole and a system also changed their behaviours in a similar way. For revitalization, we are not necessarily seeking to reverse that change in a strict sense, but to instigate a

new change in behaviour where individuals, thus organisations and society at large, again change their behaviours to ones that do incorporate the now endangered language. If we want to understand the phenomenon of endangerment and to revitalize languages, we need to focus on human behaviour.

The focus of the study of this theory is not innovations themselves, but the process by which innovations are adopted by members of a social system. In other words, their diffusion. Valente (1996, p. 70) defines diffusion of innovation as “the process by which a few members of a social system initially adopt an innovation, then over time more individuals adopt [it] until all (or most) members adopt the new idea.” Of course, the studying this process also enables us to understand why some ideas spread less successfully, or fail altogether. This makes the theory very fitting to understand the issues and challenges of language endangerment and revitalization since it is, fundamentally, these issues are entirely about the diffusion of ideas and changes of habits.

There are two primary ways in which this theory can help us understand the aforementioned issues. First, it helps us to understand how the idea of adopting a different language (i.e. the one that is or will eventually become dominant) in place of an older original language (i.e. the process that leads to a language becoming endangered and eventually dead) diffuses itself through a population. This is not just an explanation for the “how” endangerment happens, but from the perspective of revitalization it is also important since the new idea, revitalization, will clash with all the ideas and the changes brought by this very process—in order to surpass it or work around it, we need to understand it. Secondly, it helps us to better understand how language revitalization itself (in general or in a specific case) by telling us what kind of strategies are more or less likely to succeed, and to have a more clear direction about how to develop it.

In the specific context of this research, I investigate the application of the characteristics of innovations. This is a fundamental aspect of the theory, and a rather regular one. There is perhaps some variance in the literature, as observed by Greenhalgh et al. (2004), but ultimately they all seem to gravitate around Rogers’ earlier findings.

Greenhalgh et al., for example, also use a model that is essentially the same as Rogers. For most purposes, this is a model that is stable and solid, and most certainly adequate for the investigative and introductory purposes of this work. In any analysis of innovation adoption, be it to understand an adoption that already happened (e.g. language endangerment) or to promote the adoption of a new, or renewed, idea (e.g. language revitalization), it is fundamental to understand the characteristics of an innovation. Therefore, by trying to understand language endangerment and revitalization through this lens, it serves both to reinforce the premise of this work (language adoption is a type of innovation adoption) as well as an introduction to the analysis of such issues as a matter of innovation adoption.

4.2 A few other studies in innovation adoption that should be considered

The purpose of this section is two fold. First, it is to give the reader a better introduction and general understanding of the study of innovation adoption. These other studies might influence my later analysis by shaping indirectly as well (in the sense that they help shape my understanding and perspective on the topic), and are otherwise interesting to discuss in brief. They also support later suggestions on Second, though far more indirectly, to give more context and reasoning for the choice to focus on Rogers' work. The short answer is considerably simple. Much of the work on this field is either somewhat derivative, similar or in agreement with Rogers' work. Often times, certain additions could be logically deduced from Rogers original works, even though they are more refined for a specific field with certain points explicitly stated and emphasized to fit a specific field or topic. His work is seminal and yet still current, the basis for other research on the topic (or similar to the basic conclusions of other approaches), and also very comprehensive in regards to research work and the basic foundation. For the introductory nature of this work, it is a natural choice – it is a single primary source, both a source of information and of models or approaches to analyze innovation adoption.

The first, and perhaps most important work to mention is that of Moore (1991), and his expansion of the theory of diffusion of innovations. While his work is primarily concerned with high technology, I believe it is very fitting for language adoption issues as well on some level. Certainly, there seems to me there are some parallel events that would be worth investigating. The key concept he introduces in his work is called crossing the chasm. One fundamental aspect of the theory of diffusion of innovations is its projection (or analysis, depending on when it is done) over time, which is often talked in terms of a progression from subgroups of adopters regarding their speed to adopt, to put it simply and succinctly. There are five major groups of adopters in relation to when they adopt (if they do) a new idea: innovators, early adopters, early majority, late majority and laggards. The “chasm” essentially means to difficulties to make an idea spread from early adopters to the early majority. Or, in Moore’s words: “The chasm represents the gulf between two distinct marketplaces for technology products—the first, an early market dominated by early adopters and insiders who are quick to appreciate the nature and benefits of the new development, and the second a mainstream market representing “the rest of us,” people who want the benefits of new technology but who do not want to “experience” it in all its gory details.”

In this early stage, this seems to me to apply very well to both language endangerment and specially revitalization too. Take for example the previously mentioned case of Irish described by Shah (2014). By reading his study, it is clear that there is a lot of problems with peoples attitude, certainly by a very large number of common people – in short, of a majority of people. At the same time, a few interested parties with a lot of energy and willingness to put their resources are behind several revitalization plans and strategies. This seems incredibly similar to disconnect, the chasm, discussed by Moore. In particular he mentions several times the idea that there is a general perception that Irish is a “useless language”. This is similar to the situations Moore describes as typical in technological markets, and I believe something parallel happens with languages. That is, the innovators and some early adopters, who are more likely to be motivated by idealism and similar reasons, embrace it, but there is a failing to communicate things to the majority of people who are less likely to do things out of pure idealism. It is not to say that the majority require purely utilitarian or material reasons (e.g. employability), but it has to be more practical (e.g. a strong cultural value that has practical and frequent

use for the people, for example consider the continued use of some variant form of classic Latin as a liturgical and then academic language long after the fall of the Roman empire and in parallel to the then vulgar forms, which would eventually become the Romance languages of today). Reading Shah's study on the situation of Irish, it seems exactly like that. There is not much one can do with the language in practice, specially for younger generations (those who are yet to reach parenting age or who are at parenting age, which would be the focus of revitalization efforts since those are the people who are in a position, or will be, to pass it to the next generation, and influence their children to do so too). Not surprisingly, Shah's own suggestions is to invest heavily in mass media targeted at those audiences, which I do agree. That would be a way to cross that chasm, or at least part of the way to cross it. While it is but one case, from my readings on issues with other cases languages it does seem to be a trend and it is worth investigating.

One way to analyze Moore's concept of crossing the chasm is to consider how the characteristics of innovations will change and are changing (i.e. both preemptively and collecting constant feedback to adjust projections). That is, during the early stages, consider how they are primarily for innovators and early adopters (or for each group in separate) and what one expect they will be after they adopt the language, then re-evaluate again after some adoption has began and see how it compares to the needs and interests of the larger majorities, and what needs to be changed to make it easier for them to embrace. It is pointless to make everything ready for the majorities right from the start – they will not adopt before the innovators and early adopters either way, and those two groups' adoption of the idea of using the language is important. In the technology industry, and many others, adoption of innovation is often a transformative and cooperative process between a "source" and the audience. Consider the smartphone. Without all the uses the users made out of it, and continues to invent and develop things to do with it, there would be no real reason to use them over a regular phone (which would be far more battery efficient). But many of those uses did not come from the smartphone manufacturers themselves. Without pioneers (innovators and early adopters) who embraced it and started developing apps and new ways to use the devices, there is no smartphones (or smartphone culture) as we know it today. And so is language, or so it seems. Let us consider English, for example. Certainly, the commercial uses of it did

throughout history (both through the earlier British influence and then American) did a good job to spread it to certain groups who had an interest in international trades and cooperation. But without the vast amount of constant and current media aimed at the general populations made (both entertainment and non-entertainment) that is published and available in English, can one imagine it being the popular second language it is today among people of all walks of life (to a point I believe this requires no source to be claimed, it is just an observable reality)? I certainly do not think we would be where we are today.

Another interesting resource for the reader is also Rice (2009). In Rice's own wording, it is a brief overview and history of diffusion of innovation theory. And it could also be a short summary of it and much of the other writing, so it could be used both as a way to quickly glance at the full extent and reach of studies into this area, as a well as a quick "crash course" on the basics. Rice (2009, p. 492) also points out that studies in Communication campaigns are also related to and cross over with diffusion of innovations studies, a claim with which I completely agree. In Rice's conclusion, there is passage which I find particularly relevant to this research:

The diffusion of innovations theory is a complex and comprehensive interdisciplinary framework for understanding how new ideas diffuse (or not) through a social system. Central to the process is the role of mass and digital media, in combination with interpersonal communication and social networks, in reducing the potential adopter's uncertainty.

This is exactly how I see the theory as well, and a primary reason that made me wonder why it has not been applied to problems such as language endangerment and revitalization. Studies in this field are very complex, as Rice and many other authors point out, but also very important to understand ever changing human societies, specially in an era of globalization and the internet at our hands at all times. It certainly is no exact science, but there is much that is consistent and reliable not to use for such relevant issues.

5 Characteristics of innovations

In order to understand phenomena and to devise solutions for them, we need to be able to break it down into pieces, and to have tools that allow us to adapt to each different case. Not all innovations are born equal, and certainly neither is the situation of each individual endangered language, which also automatically implies that their revitalization will not be the same process, even if there are common general elements. In Rogers' (1983, pp 14) own words: "It should not be assumed, as sometimes has been done in the past, that all innovations are equivalent units of analysis. This is a gross oversimplification."

Continuing his analyses of the characteristics of innovations from there, Rogers points five main attributes or characteristics that mark innovations and strongly differentiate them: relative advantage, compatibility, complexity, trialability, and observability. Their understanding is compatible with much of what has been said about endangerment and it allows us to observe more than "this or that factor seems relevant", but understand why they are relevant, how they interact, and how they actually lead to language displacement. In a deeper level of analysis, we would even be able to make commentary on the rate in which it happens. And it also help us to understand which strategies could work to revitalize a given language, and which are likely to lead to failure. Language planners must analyse the current situation of their language and contrast any potential initiative against these characters, so that they can ensure that the initiatives they create, fund or support otherwise are likely to bring positive results and no negative results (for example, a failed attempt that damages the image of the language is worst than a waste of resources, it is counterproductive for the cause).

5.1 General motivation for adopting a language

In our way to understanding the characteristics of innovations applied to language endangerment and revitalization (or re-adoption), we must consider people's general reasons to adopt a language; that is their motivation for doing so. For this purpose, we will first take notice of the findings of Gardner (1982) and Lambert (1972) about second language learning, and what his source of inspiration, Mowrer (1950), had to say about first language acquisition as well. Motivation is very important to us, as it is one of the main drives of the adoption of an innovation, i.e. an idea, in the first place.

The aforementioned works that will be discussed here are primarily about motivation to learn a language, which might seem more restricted than adopting a language. It is true that language adoption (at least in the context of this research) is a broader concept, language acquisition in general (both of a so called mother tongue or later in life of a second language) is part of the language adoption process. Furthermore, given that the aforementioned authors see the process of "acquiring language" also in a broader way, including from those who have mediocre domain over it to those rather fluent in and knowledgeable about the language, we can further conclude that there is a sensible overlap between their definition of language acquisition and the notion of language adoption used in this research (which is to be taken in general, including learning, frequent use and transmitting it to the next generations, and more). Therefore, their findings are directly applicable to studies of language adoption in general even if they need to be moderated and complemented by other ideas at times.

Throughout their works, both Gardner and Lamber, among other authors, point out influential elements in a person's success in learning and using, thus also in adopting in some level, a second language. These include motivations that are more utilitarian in nature. That is, this type of motivation comes from one's ability to gain something of practical utility from learning and using a language (e.g. being able to progress in one's education, better job and career opportunities, and so on). In many cases, it is a primary reason. And it is no surprise, as it is often self evident and requires no particular individual connection, predisposition, skill or any other particular trait for one to

consider those advantages when learning a language—the very act of learning, thus knowing, a language is what brings these benefits.

There is, however, other reasons to acquire, thus adopt, a language. Lambert (1972, pp 290) gives a very good summary of his findings (and by extensions those of Lambert, Mowrer, and other authors), which lead us to understand that more clearly:

“One can very profitably view the learning of a second language in much the same way that Mowrer views the child’s learning of the first language. (...) First language learning is motivated by basic desires to communicate with, to become similar to, and to belong with valued people in one’s environment, first family members and then others in the linguistic community. (...) In similar fashion, several of us who have considered the matter carefully have come to believe that the successful learner of a second language also has to identify with members of another linguistic-cultural group and be willing to take on very subtle aspects of their behaviour, including their distinctive style of speech and their language.”

First, it is worth taking time to notice that this conclusion is almost a direct rewording and summary of the five characteristics of an innovation (it will become more clear as we go through each characteristic). This strongly corroborates the validity of the applicability of the theory to the issues of language endangerment and revitalization. But more than that, it also points out two interesting things. First, that the motivation to adopt a language does not need to be of a utilitarian nature. The motivation can be social, emotional, otherwise intrapersonal and so on. Secondly, that there is little difference in what could motivate a first language learner/adopter and a second language learner/adopter (they might be affected differently by each type of motivation, but the factors are the same ones). Target populations will be likely to be comprised of both, at least from a practical point of view (e.g. a person who might have had their first contact with the language as a child, but for a reason or another has grown up to be an adult without full domain over it, will function in practice much closer, if not exactly as, an actual second language learner and we might as well count said person as such). This understanding will be important in comprehending how each of the characteristics of innovations apply to languages in a more direct way, and gives us a starting direction.

5.2 Relative advantage

“Relative advantage is the degree to which an innovation is perceived as better than the idea it supersedes. The degree of relative advantage may be measured in economic terms, but social-prestige factors, convenience, and satisfaction are also often important components. It does not matter so much whether an innovation has a great deal of "objective" advantage. What does matter is whether an individual perceives the innovation as advantageous. The greater the perceived relative advantage of an innovation, the more rapid its rate of adoption is going to be.” – Rogers (1983, pp 15)

When we compare the socio-economic reasons for the current accelerated rate in which languages are becoming endangered pointed out by Amano et al. (2014) (as previously discussed) to this notion of relative advantage, it becomes increasingly easier to understand the phenomenon, and why handling it is so challenging. When a much smaller group (or much poorer, or both) finds itself living with a much larger group in a modern context, it is unquestionable that learning the language of this much larger (or richer, or both) group has automatic objective advantages, and they will be proportional to the size of the difference (i.e. a smaller discrepancy will likely lead to a slower and less impactful pressure, while overwhelming differences will likely lead to a much stronger pressure). There is no question that if one group has much more resources (either simply because they are more or richer in general), there will be more opportunities for education, career and jobs provided in that group’s language. The specifics will vary from case to case, but that general mechanic is very clear. We can also add what was discussed in the previous subsection regarding motivation to learn or adopt a language, which clearly lists similar practical benefits as a source of motivation (i.e. a perceived relative advantage). True, objective advantages are not relevant to children who will learn whatever language their parents present them with and possess neither the mental ability nor the experience and knowledge needed to see value in such utilitarian reasons, but it will be important to both their parents in deciding which language(s) they will pass on to their children, as well as to the children when they are growing up and later in their lives when they become parents themselves as adults and restart the circle.

With all of this in mind, given the circumstances and changes in the greater social environment (economical, political, and so on), we can deduce that the adoption of a dominant language was seen as an innovation by the affected population, and one with a significant perceived relative advantage, usually of the objective kind, or utilitarian advantage as I prefer to call it. In return, this has consequences for any attempt at language revitalization as well since the endangered language will be, in many ways, competing with a dominant language that has all of this utilitarian advantages solely by their combined larger numbers and wealth. That is why author's like Crystal (2000) consider that the situation of a language will improve if the relative level of wealth of the affected community is also increased. According to all of what we have seen so far, he is theoretically correct to conclude that, but in practice I believe that, in many of the most concerning cases, such an approach will be a fruitless effort regarding language revitalization once the economic gap has been reduced to a minimum (of course, the pursuit might be worth in itself for other purposes). It is a matter of maths. For example, the population of the Sami in Finland is estimated to be somewhere around 10 000, but certainly less than 10 000 (it depends on which criteria is being used to list someone as Sami), while the population of Finland as a whole is certainly above 5 million. Even if the average wealth and earnings per capita of the Sami were to be the same as the average ethnic Finn, as a group there is no way that their combined wealth and income can possibly compare to those of the dominant culture. To bring their collective wealth and income to a comparable level, we would be considering an increment of the per capita levels of hundreds of times by elementary maths alone. Plus, that would also mean that the wealth and income per capita would be completely imbalanced by several orders of magnitude, which in theory would likely create many social issues. Of course, that is irrelevant since the order of magnitude here is so high that even a fraction of it is an unrealistic goal. Similarly, any other language in a situation that faces a similar level of difference would have the same issues, while cases in which the difference is drastically smaller are also less likely to be severely endangered in the first place.

What that all means to language revitalization is that trying to fight fire with fire is an unrealistic tactic in most, if not all, significantly troubling cases when the utilitarian advantages of dominant languages are the biggest relative advantage they would have just by their numbers, even before we factor in elements such as governmental support

and recognition which is not always synonymous with success (such as the case of Irish, as seen in chapter three). That is, revitalization strategies for these languages must seek to associate other types of advantages with the target language and focus on those types of relative advantage, specially at first (eventually some degree of economic advantage may become relevant as the number of avid speakers grows and stabilizes). Fortunately, as we have seen so far, there are other types of advantages/motivation besides utilitarian ones. Another way to put it is that revitalization strategies must work around the clear edge in utilitarian relative advantages offer. These non utilitarian advantages/sources of motivation/value can be used to offset the impact of the socio-economic relative advantage. Of course, the exact execution of that plan depends on what the current situation between the two languages is in the first place.

These non utilitarian advantages/sources of motivation/value would be in a cultural and social level. That is, make the language very relevant to the modern identity of these people (specially younger and future generations), their entertainment, social life and other aspects of their lifestyles, and a very strong relative advantage can be built. These non utilitarian advantages are particularly interesting from a media point of view because of the strong presence of media (of all kinds) in those areas. Including areas which some popular classic authors seem to undervalue, such as fiction and entertainment. For example, Fishman's 8 step plan for language revitalization (which was examined in chapter three) and might not exclude such areas, but those steps clearly put far more value in formal contexts and conversation. Entertainment and other forms of use of a language are barely if ever mentioned. The same could be said of Crystal (also discussed in chapter three). Yet, entertainment, including fiction, is part of people's everyday lives, their culture, social lives and even identities (Spalding & Brown, 2007). Thus, it stands to reason an endangered language must be promoted as a language that plays a role in the population's mediatic entertainment (in the broadest sense of entertainment) and leisure activities, to ensure a full experience with the language, one that cements it as part of the populations modern living experience, practical culture (i.e. the culture one experience daily, not a historical one assigned to an individual by accident of birth), and self-identity. Make a language's media presence strong, modern (as to be relatable to everyone in a practical sense, specially the young), and above all sustainable (i.e. people have become to naturally keep producing material, which

constantly keeps it fresh and related to the present—as happens to any non endangered language) and people will likely become much more motivated about their ancestral language (i.e. there are unique and irreplaceable non utilitarian advantages to it) as well as it will automatically improve the language’s prestige within the community and to surrounding peoples.

To reinforce this point, we might want to consider Osterman’s (Osterman, 2016) brief investigation about why people still seek to learn Latin at the University of St. Thomas. Among other factors, he points out that it “authentically connects you with the ancient world. As students gain access to the writings of some of history’s greatest minds over the last 2,000-plus years (in their own writing, not through the filter of translation) it opens up all kinds of lesson.” We could say this is a rather academic reason, as are the other reasons listed. What we can gather from his investigation is that these people are still learning (classic) Latin, which is a dead language, because it held value to them regarding their non economic or utilitarian interests. If is effective for a dead language, I believe it stands to reason that it would also work for any living language. Also, notice that the target audience in this case was entirely composed of people with academic inclinations. This explains why their reasons are easily considered academic reasons too. But, because they are people with academic inclinations and activities, we can also conclude that these reasons are also related to the daily lives and individual interests (to the point one can even consider it leisure for many of them) of these people. This is the take away lesson from this study. A more normally distributed target audience will of course have a far more diverse types of individual interests and many will emerge with each passing year, with each new generation. So, to be successful in offering unique non utilitarian relative value to its population as a whole, we may conclude that a language must be able to satisfy at least some individual interests, present and future, of each member of the target population. And it must do so continuously, as the need for new material never ends.

When considering what can be done to improve the non utilitarian relative advantage of a language, we may want to consider questions such as does the language have a thriving presence and modern production of TV shows, books, music, etc.? Would people feel like their children would be missing something of irreplaceable value (in

particular non economic values) if they are not taught the language? Those are questions worth answering and worth investigating in deeper detail. And we need to be realistic and look at it from the points of view of the actual individuals. If a language is endangered, chances are the answer to those questions are probably on the negative side, with plenty of area to improve. And media will certainly be at the core of the answer to those questions. Endangered languages today need to work constantly to create a rich reservoir of cultural artefacts, which are brought to us by media of a kind or another. This would, however, not be a static reservoir that serves to fill museums reporting the past, but one that works as fertile soil for inspiration for future storytellers, artists, and philosophers and is thus continuously expanded and renewed by them—something from the present, to the present and the future. That way, what is created is not just a static reservoir, but a self-expanding one, constantly getting new material, constantly adapting to emerging desires and interests as well as continuing to sate old interests. It is this continuous flow which can keep people constantly invested in the language, constantly (and naturally) seeing unique and irreplaceable relative advantages to their language regardless if the language offers utilitarian advantages or not, and whiling to pass it on to the next generation. A reservoir and constant flow of a culture and language so living and appealing, so personally satisfying to explore, and perhaps so intriguing that members of that culture might feel proud of being associated with it and using it that they would not consider denying access to it to the next generations by not teaching them the language. Rather, they would be eager to incentivise them to learn and use it. The reason is simple, it is because the language at that point has managed to provide enough and intense enough relative advantages to most, if not all, of the target population that the combination of the intensity of all its relative advantages is at least on the same level as that of the dominant language, even though the type and intensity of said advantages are different individually.

5.3 Compatibility

“Compatibility is the degree to which an innovation is perceived as being consistent with the existing values, past experiences, and needs of potential adopters. An idea that is not compatible with the prevalent values and norms of a social system will not be adopted as rapidly as an innovation that is compatible. The adoption of an incompatible innovation

often requires the prior adoption of a new value system.” – Rogers (1983, pp 15)

Regarding language endangerment, this presents an interesting understanding of a mechanism that makes a population easily adopt a (soon to be) dominant language, and then struggle to keep its own and to revitalize it. I would argue that the very idea of adopting another group's language in addition to one's own is not, by itself, incompatible with the value systems of most groups. Not out of principle, unless there is some extreme hostility among the groups, but if it were common it would not be extreme so we can rule that out as a norm. At least as a group. However, the lack of significant natural differences in compatibility between a dominant and an endangered language (or any two languages) is a double edged sword. From the perspective of endangerment, it does not give the dominant language an advantage, but that also means it does nothing to constrict it. However, when we consider not just the mere act of adopting a language, but also everything that comes with it, the analysis change. Sticking too strongly to a smaller language in detriment of adopting the dominant language usually comes at the cost of having less access to the “larger society” (jobs, cultural products, social life and interactions, interaction's with regional or national government, and so on), be it at a truly globalized level or even just primarily regionally. Access to those things seems important to the value system of many individuals, after all globalization has been proven to be the key factor making some languages endangered as previously demonstrated (and it is basically a requirement for life in a modern society, for better or worse), so in that extended sense we can conclude that, in spite of historical and ethnic connections (which the individual may or may not value, and if they do value it there is a wide range of possibilities regarding the degree to which they value), the adoption of the dominant language is in fact generally compatible with the value system of many individuals, while the adoption or retention of the smaller language may or may not be compatible with each individual's value system. And this mechanism gives yet again an advantage to the dominant language, which further explains how it can be so successful in displacing other languages.

On the side of revitalization, we should focus on the fact that adoption of the endangered language (either personally or via one's children by letting and incentivising them to learn it) is not inherently incompatible (it might not be relevant to one's values,

but it is at least not normally in opposition to them). Specially if the approach to revitalization is through fully fluent bilingualism, because that does not require one to abandon or neglect the dominant language, which directly means reducing one's access to the aforementioned goods and benefits from our modern global society. If we can associate the language with other things individuals generally value (such as social bonding with their peers), we can even increase the compatibility of the language with their value system instead of merely just not opposing it.

Of course, these were generalizations. If we explore the subject in further detail on more personal terms, there are far many more personal connections that one individual can have that changes their value systems too. Even though they will be very distinct from individual to individual, they still yield generally predictable outcomes. Some individuals have love interests, develop friendships, they have a specific job or career that they are attached to and that depends on the language (i.e. the existence or absence of similar jobs or careers that is not language dependant is irrelevant to them at the moment), and they enjoy common activities such as hobbies with all sorts of individuals around them. And if many of the individuals around them happen to not be speakers of the smaller language but of the dominant language (which, as discussed previously, it is statistically far more likely unless some extreme segregationist rules are in place, but those are an entirely separate issue), we can further understand how the adoption of the dominant language becomes even more compatible with their individual value systems (after all, they do value those social relationships). That, in turn, further explains the mechanisms of language displacement. But it also further reinforces the need for bilingual approaches to revitalization. The alternative would be to try do de-emphasize the dominant language out of their lives. That implies we would be expecting people who are already immersed in a context where the dominant language is all around them and is tied to many of their values, including very personal values derived from very personal connections, to relegate the dominant language as a secondary aspect of their lives, or even lower, which would also mean expecting them to relegate all of the aforementioned very personal social connections and the values born out of them to such a level. Even at the level of mere common sense, we can confidently deduce that such a request is very incompatible with people's value systems by definition, and that it

has no probability of success when applied to most individuals who do not live in a social bubble.

5.4 Complexity

“Complexity is the degree to which an innovation is perceived as difficult to understand and use. Some innovations are readily understood by most members of a social system; others are more complicated and will be adopted more slowly.” – Rogers (1983, pp 15)

Adopting a language, in and of itself, is not a complex idea. The base concept is easy to grasp for everyone. But the actual adoption of a specific language can have its own levels of complexity. Specially when we consider the differences between individual adoption by people, and the adoption of the language by institutions such as private businesses and government branches. I also find it that the complexity of the adoption of a language is strongly connected to its trialability (which will be seen on the next section, so it is less important to expand on it now). Simply put, it seems that most if not all aspects that make the adoption of a language more or less complex also affects people’s ability to try adopting.

First, let us consider how the complexity of adopting a language helps to explain and understand the process of endangerment. For adults, of course, there is the barrier of learning the language (which may or may not be easy to do, given many variables, such as governmental support, availability of study materials, and so on). But there is one way to “cheat” all of that and effectively make the complexity near zero: children. As long as a language is the language of at least education, adopting a language via one’s own children has no complexity. All one needs to do is let the children learn it in school, as children, growing up speaking it natively or at least naturally. For institutions trying to adopt the dominant language, it is all a matter of replacing its staff with people able to speak it, and a dominant language, by the very nature of being dominant, is likely to lack no shortage of speakers and at least some of them will be willing to work for said institution. Theoretically, these mechanisms can also be used by an endangered language, but there are some caveats due to their low number of present fluent speakers.

There is one mental exercise that can illustrate well the idea of complexity of adopting an endangered language, as well as how interconnected it is to the trialability of the adoption of a language. Let us consider a bank that decides to provide the option to have cashier services in the target language. Do customers have to wait for a translator or for one of the few cashiers who speak the language and are normally more busy than the other ones, or can the customer just walk to any cashier and speak the target language and get served exactly the same way customers could if they spoke the dominant language (or if dedicated cashiers are busy no more than any of the others who do not speak the target language)? The first scenario only has practical use in a special cases (e.g. when there are monolingual speakers of the endangered language, so that is better than nothing at all, but notice that the poorer service will still count as motivation for those monolinguals to either learn the dominant language, or to get their children to learn and use it primarily over their own language), but in practice it is completely useless in scenarios where speakers of the target language are bilingual (they have no reason to chose to get served poorly or to go through a more complex process to get the exact same service), while the second scenario is preferred on both cases. It is clear even from this simple example that making people go out of their way, that is increasing the complexity (and also the trialability in this case), to adopt the language in any given scenario can demotivate them to do so.

The above example also reveals an interesting, but also problematic, relationship. In order to make it easier for the individuals to use the language in every context, thus be able to adopt it more extensively, it can make the process more complex for the institutions who try to serve said people. In the above example, the bank has to either train all of their cashiers to be able to speak the language properly, or only hire bilinguals for the job and relocate some of the others. Of course, this second option is only viable if there are enough fluent speakers of the target language who are willing to do the job in the first place (and unemployed or willing to switch jobs). Perhaps a compromise would be the most realistic option, that is give the services a time window to make the change in staff (training and new hirings), so they do not need to make any drastic changes suddenly. And, of course, this example can be generalised for other situations as well. And there lies the extra layer of this issue. Perhaps one activity or another will have enough suitable speakers available to them and they can make the

transition smoothly. But the lower the number of speakers of the target language, the higher the chances that some or many fields will have a shortage of qualified professionals and switching might be even more difficult for institutions, forcing them into training their staff, which obviously costs time and money and possibly other resources.

5.5 Trialability

“Trialability is the degree to which an innovation may be experimented with on a limited basis. New ideas that can be tried on the instalment plan will generally be adopted more quickly than innovations that are not divisible.” – Rogers (1983, pp 15)

The impact of trialability on language endangerment is so obvious and glaring that it is almost not necessary to mention it, although knowing that it is a main characteristic of innovations and that the idea of adopting a language is an innovation does help us to understand the phenomenon better. Dominant languages are very likely to be spoken by a large number of people around the endangered language, to be the language in education in the first place, to be used in mass media and the local news, and to be the language of business. The actual challenge is not trying at least a little a dominant language in the region where it is dominant. It is not hard to conclude that it is almost impossible to avoid it, it would hardly be a dominant language if it were easy.

On the side of revitalization, trialability is one of the key elements that puts to question ideas that consider digital interactions much less important than physical interactions. Digital media, be it social media or otherwise, are perfect venues to increase the trialability of adopting a language. Digital and personal interactions are equal partners; they are neither enemies nor are one above the other, they are just different. Maybe a member of the target population still watches documentaries and news in a dominant language (which said person has already learned to rely on), but maybe this person can start consuming audiovisual entertainment in the target language. Or, better yet, just put the subtitles in the target language on and leave the audio on the dominant language option, which some might be more comfortable using. Maybe this person will not start writing professional texts in the target language just yet, but he or she can practice

writing to family and friends on social media. And so on. What language planners need to ensure is that there are enough opportunities for different kinds of people to experiment with the language on their own terms, and find for themselves the best ways to (re)incorporate the language into their lives and of their children, present or future.

General media can be used to help this process as well. For example, foreign productions (such as home discs, and movies on the theatres) can offer subtitles in the target language in addition to the dominant language. Local productions could also offer subtitles in the target language as well, so that people can still enjoy it in the language that they might have grown used to rely on, and still get to practice using the target language. However, local productions can still incorporate the language in a different way that improves not just the trialability but also the language's prestige and notoriety in the local context, being more visible, and potentially increasing its prestige. Take, for example, the fictional languages of Tolkien's Elvish languages, Klingon (featured in the Star Trek franchise), and Dovahzul (featured in the video game *The Elder Scrolls V: Skyrim*) and the works in which they are featured. These languages appear for a rather small amount of time in each work, and having any knowledge of them is entirely unnecessary to enjoy the works. And yet, it is not hard to find relatively large communities of admirers and enthusiasts for these languages, such as Thu'um.org for Dovahzul. Imagine for a moment if said fictional languages were actually real endangered languages and the positive impact that could have had for those languages.

A great example involving natural languages is the use of Spanish in American television and movies. While Spanish itself is not an endangered language worldwide, the tendency for immigrant populations in the United States is to lose their language from one generation to the next. In the words of Finegan and Rickford (2004, pp 115), "immigrant languages in the USA have traditionally experienced an extremely tough time being transmitted into the linguistic repertoire of the grandchildren of immigrants." It is hard to argue against the idea that most endangered languages undergo similar processes, with the difference being that those languages do not have a presence elsewhere in the world that would keep them alive (i.e. while immigrant populations to the USA losing their language only means a loss of the language in the USA but not as a whole, for endangered languages the local loss of the language is losing the language

worldwide). In her analyses of the use of the use Spanish in American movies and television, Carra (2009) states that “the code-switching [switching between the two languages in a single conversation] between the two languages emerges as a tool of identification with both cultures. Over the past few years, the cultural reality of all those people who are able to alternate English and Spanish in the same conversation has emerged in the United States as a new theme for movies and television shows.” It is not unreasonable to assume that if it works for Latino communities that are treated and seen as a minority in the local context of the US, it would work for any other language and its people in any other local context that displays the same dynamics. Furthermore, this is a way that is both low in complexity and convenient for people to experiment with the language, they do not have to go out of their way to experiment with it, they do not need even to intentionally try, it happens naturally.

This use of both languages within audiovisual media has not only the effect of increasing trialability, but also other extremely positive consequences to the image of the language (its prestige) as previously stated. As mentioned by Carra, it is a tool for identification with both cultures. And I find that to be very important because the situation of speakers of considerably endangered languages is very likely to be the same. On the one hand, it is not inherently antagonizing to either culture, or to those who chose (or happen to due to life’s conditions) to belong to both. And I firmly believe it will help to increase the language’s and its culture’s prestige with monolinguals of either group and with those who identify with both groups, because it uses both as equals, and those who only speak one language can see the artistic beauty of the other language and how a plurality of languages can make for very unique and interesting works. Thus, it also increases the compatibility of the (re)adoption of the language – people do not need to pick one over the other with such a bilingual approach, so they do not truly need to give up anything while enjoying their entertainment. Finally, it once again shows that pushing for a monolingual solution for a language that is already in disadvantage is likely to be a weaker, if not impossible and fruitless, direction—bilingual approaches are far more likely to succeed simply because they are less complex (for the target audience at least), easier to approach, and demands fewer choices and changes from the affected population.

5.6 Observability

“Observability is the degree to which the results of an innovation are visible to others. The easier it is for individuals to see the results of an innovation, the more likely they are to adopt. Such visibility stimulates peer discussion of a new idea, as friends and neighbours of an adopter ask him or her for innovation-evaluation information about it.” – Rogers (1983, pp 16)

This is one point where I have to expand Rogers’ original definition for a more contemporary context before I explore it. In his original writings, Rogers’ talked primarily about personally close contacts, but today, being virtually “close” is also a possibility, and the lines between personally knowing someone and having heard of are more blurred. For comparison, a few decades ago, the idea of “social media (only) friends” did not exist, because social media did not exist. Yet, today we live in a world where we add “friends” in our platforms, interact with them in a daily basis primarily virtually, hear about their day, their views, what they are doing in life in general and so on, and some of us interact with such “digital only friends” even more than they do with many of their physical neighbours, family members and certain other friends. But the interaction fulfils very similar roles, specially regarding observability of the positive impacts of any innovation they might have adopted. And even people we do not know personally in the traditional sense. We have internet celebrities that have a considerably personal (and sometimes relatively close) relationship with their audience (i.e. they talk with them directly and on an individual level), they respond to individuals’ comments and posts addressed directly at said public figure, and they discuss things and have certain kinds of interactions that historically people normally only experienced with people they knew in person and physically. Thus, I would certainly extend this definition to include more than those physically close people as well. Observability is affected by people others observe and interact with primarily or even only through the digital, because in the part of our modern lives that exists as ones and zeroes rather than atoms, we *are* “physically” close to them.

Observability, specially when combined with perceived relative advantages, is a very obvious reason for why a language becomes displaced by another. Every single person who gets better education, better jobs, better salaries, enviable life experiences after having adopted the dominant language is a living testimony (and an easy one to

observe) of the advantages of the innovation that is the idea of adopting the language of the majority or more economically developed group. The concept that exposure to a message breeds familiarity and positive reactions to the message is not new. There is a whole wealth of literature on the general theme in multiple disciplines. We could take examples from even the late 1800s, in marketing with authors such as Smith (1885) on the idea of effective frequency (and all the literature on the topic developed since), to modern era psychology, where the related principle is called mere-exposure and other times familiarity principle, that says that people tend to be more biased to prefer what is familiar to them (Zanjonc, 2001).

It is a vast topic that could be its own research, but to us it matters that such types of phenomenon are well observed for years and there is overwhelming evidence. Of course, Rogers also provided plenty more evidence for the phenomenon, no point proving the argument again. Thus, it is not hard to deliberate that being exposed to a considerably large amount of people who seem successful by speaking the locally dominant language would have an impact on people. Not just economical success, but also in other aspects of life (e.g. dating and social modern connections, or even something as simple as the ability to a cinema and enjoy international movies, that is something from that globalized world that they have come to be interested in, and experience it in the dominant language). It is also easy to extrapolate that, by having far fewer sources of exposure (if any) of seemingly successful people whose primary language is the endangered language, which can often be the logical consequence of there being fewer speakers, that it would also have an impact. This impact could range from a mere relative lack of observability of the endangered language (i.e. only the success of those using the dominant language is observed) to an impression that the endangered language is not relevant to their present lives (i.e. the observability of a negative message about sticking to their original language), all while there is a very positive message about the dominant language. Of course, these impressions do not need to be objectively true – as long as that is what is perceived, there are non-negligible effects. This makes it very clear another way by which a language displaces another in modern globalized times.

For revitalization of an endangered language, I believe that the effects of observability on language adoption are, in many ways, a matter of public relations and image management just as much as they would be for most other innovations. This principle is also corroborated by the ideas of increasing the language's prestige within and without the target community by authors such as Crystal (2000), mentioned previously. But with this theory, we have a different, and hopefully better too, insight as to why it matters. Language planners need to evaluate the current visibility of the success cases of people who use the language for their success (again, not necessarily a utilitarian success such as their economic life, but also in terms of, for example, feeling better about themselves, feeling a greater sense of belonging and fellowship with their fellows and having higher quality of life because of it), and use those examples to show people that they too could use the language to their benefit. And whether those cases already exist or not, they need to make or promote initiatives that create those stories and that make them visible. And it is important to understand that they need to be real cases of real people achieving something with the language; a list of hypothetical benefits of adopting (or not abandoning) the language is not the same as the observation of real cases of the adoption of a language.

5.7 Suggestions to improve the situation of endangered languages

The short conclusion is, of course, that improving each characteristic of innovations for adopting an endangered language is the key to making a language more likely to be adopted, and thus survive. Sadly, that is much easier and simpler said than done. The first, and perhaps most important aspect to consider is that these characteristics do not exist in a vacuum, but are intertwined with one another. And there are further aspects of the theory which were not covered in this research to be considered too. This means that language planners must think both about the details, and the larger picture, going back and forth between the microscope and the larger picture, understanding not just the

individual parts or the situation in general, but also the mechanics and interactions between said parts. Another key point to be considered in general is the fact that globalization has already altered the life of the community, which means they have chosen to make part of their lives certain aspects of the global culture and are likely to continue to do so. If that was not already the case, logic would suggest that their language would probably not be too affected, and it is also evidenced in the literature of endangered languages discussed previously, which does point out communities with less contact are often less affected. Therefore, it is reasonable to assume that if a language is already endangered or at risk, it is better to embrace that fact and work with, or at least around it, rather than to oppose globalization's influence head-on as that would mean opposing the people's own individual life choices and style, and that should require little science or study to conclude that it has little to no chance of success. Cultural exchange and evolution, which includes linguistic exchange and evolution, is a well-known natural phenomenon, so it logically follows that any path to "saving" a language and the culture it nests in has to accommodate for that fact, and acknowledge that the "revitalized" version of them will not be a frozen in time copy of what it is today or has been in the past, but a newer version of itself – as it would have been if the language had never been endangered in the first place, the difference is that it mutates and through that survives, rather than just get replaced altogether by something else.

First, I would suggest increasing the involvement of so called "allies". That is, members that are not technically part of the community but are sympathetic for a reason or another, and specially those who are willing to learn and use the language. Be them members of the dominant culture or other groups. This argument could get rather philosophical and idealistic (reading some of the previously discussed classic literature in the review chapter would at least suggest it might not be a very popular idea in this regard), but I would rather prefer to remain pragmatic in this discussion and adhere strictly to the theory of diffusion of innovations, even though it might go against some strong opinions from more classic writers on these issues. And in terms of characteristics of innovations, this would help to increase all of them. With their potentially higher economic power and options, this could help to improve the relative advantages, in particular those of a more utilitarian nature. I deduce that the more likely allies would be found amongst those who live close to, or have some kind of connection

(friendship or family, for example) to members of the target community. This means that there is less need for compartmentalizing aspects of one's life, lowering complexity and compatibility. Instead of living in "two worlds", one can more easily leave in one world with two parts that dialogue with one another. Of course, their potential number and just whatever other conveniences that they bring with them, that would mean increasing the potential for trialability (by their numbers and by anything they decide to create with the language) and observability – if even an outsider can somehow derive some personal value that makes them more satisfied in life by their involvement with and potential adoption (in some degree) of the language, would native members of the community not see that as positive incentive to adopt/re-adopt/not give up the language themselves? While careless involvement of external members could backfire (again, see the aforementioned study of the situation of Irish), if done correctly (i.e. involving people with genuine interest and self-motivated) it seems to me a case of simple logical deduction that all characteristics of innovation would improve, and by consequence it would raise the chance of adoption, thus survival and revitalization, of the language.

6 Conclusion

As we can infer from the literature in chapter 4, there are real world issues that have significant impact that are related to language adoption. It is established through different sources that these issues are connected to people's sense of identity and quality of life, and as such are worth addressing in the best and most efficient ways we can. As such, it is important to explore all the tools at our disposal that we can use to understand and attack these issues. Such is the importance of research such as this, which purpose is to explore the viability of using a well developed tool, both in theory and in practice, and apply it to these problems.

As hopefully demonstrated in this work, approaching these issues as a matter of innovation adoption can be a power tool to both understand and address such issues as even an analysis of the basics already gives new perspectives on how to address these issues. For example, by taking a cursory look at the general state of endangered languages and attempting to make a brief assessment of the relative advantages dominant languages have or had over them, it was already possible to predict to some extent that something similar to the extensive findings of Amano et al. (2014), i.e. that globalization and economic pressure are the root of the cause, should exist. Alternatively, we could infer from Amano et al.'s study that the relative advantages of endangered languages are probably low, in particular when it comes to utilitarian advantages (in comparison to dominant languages). We can also go further than that. We can better understand how those globalization forces cause language displacement and make it harder for a language to survive when we consider how it impacts the other characteristics of innovation for an endangered language and its surrounding dominant language or languages.

When a population comes in contact with a globalized world and further their interactions with it, there is more than practical advantages that make the dominant language more and more important to a population and eventually displace them. When studying the characteristic of compatibility, we can logically conclude that these populations were confronted with ideas that were very compatible with their value

systems (for example, a short trip to the Inari region make it overly clear at first glance that the Sami Finland and their modern lifestyles are considerably integrated into this globalized world and society, regardless of the specific degree in which they are). This creates a conundrum, most likely developed through time and generations rather than instantly. These additions to their lifestyle, thus value system, are important to them, and adopting the local dominant language is convenient to access these life changing elements. That is to say, abandoning the dominant language is not a realistic option. At the same time, readopting their original language(s) does not necessarily align with the population's new value system (it might even misalign with it depending on the current local scenario, for example in a scenario where the language is culturally associated with some strict adherence to the "old ways" that rejects the incorporation of new behaviours the population has already adopted and now values).

With globalization, there also comes a dual need to both prepare one's population to interact with other cultures, but also to prepare itself to be interacted with by members of other cultures. A dominant culture, thus its language, is not in that position for no reason. It has to have some overwhelming factor in its favour, be it political power, economic, relative size of its population or anything else. Relative population size is usually a given. As such, this means that there are already many ways for members of the other cultures to experiment adapting the dominant culture, but not the other way around. This is accentuated when the culture has began to participate in the globalized world in any degree, as that means that in their new everyday lives, there are situations in which they may have difficulties to use and experiment with their original language, but they will always be able to try the dominant language (when that is not the only option). For example, while using banks (which are more likely to be owned, or at least managed and organized by members of the dominant culture), online services or government services. This of course refers to the mechanics of the trialability of these languages. But it also affects the complexity of adopting either language, because that dynamic also makes it increasingly less complex to adopt the dominant language (e.g. as services provided and often brought to by the dominant culture become more common and important to their lives, but the services are only provided in the dominant languages), and harder to adopt or use their original language in their everyday lives.

Finally, we can also conclude that also affects the observability of the languages, the final characteristic of innovation. By merely making the contact with the dominant group much more common for the affected groups, if not an everyday occurrence, it increases the exposition of the success of those who speak the dominant language, which may also obfuscate the success of those who do not. From the studies we have seen throughout this research, and even by mere deduction, we can conclude that dominant languages normally have a disproportionately larger number of speakers, in addition to political and economic power. This usually means that their narratives, and narratives in their language, will dominate media outlets, be them print or digital. This means that seeing those who do speak the dominant language succeed, or seem to succeed, will be essentially unavoidable, and rather overwhelming with so many sources, and by contrast that will make those who do not speak a language seem few and even not successful at all depending on what sort of social interactions an individual has. While a little more speculative at this point, it is reasonable to suspect that at least for some people that will be turned into associating proficiency in the dominant language with success and speaking the non-dominant language with less success due to impression these observations may cause, even though that is not inherently the case. As we can see, each characteristic of innovation adds a new dimension to previous findings by mere thought exercise and reasonable extrapolation at even a simple a surface level generalization. This makes me confident that further research in this direction would only help us to understand and address this issue further in ways that would otherwise be unlikely to be possible, specially at the same rate.

In a suggestive way, it was also concluded that there seems to be a need for a change in mentality, not just in methods, in how to approach these issues. Language planers seeking to revitalize a language need to accept an endangered language is already not in a strong position, otherwise the language would not be endangered. A lot of damage is already done, and the consequences are already in place and in motion. In many cases, unfortunately, it might be already less about saving the language and aspects of their culture, as much as it is salvaging whatever is still realistically possible. If one wants to succeed in revitalizing their language, they need to compromise with said reality. They might need the help of and to get (more) involved with so called allies. That is, people from outside of the target community who show sympathy and interest in their cause,

culture, and language, and are willing to actually help them, be it with their actions, resources or both. As a rule of thumb, the more endangered the language is, the more likely that external help is needed, otherwise they will not have the means to change the situation of their language regarding the characteristics of innovation, and therefore will not be able to achieve change before it is too late. They need to accept and even embrace the digital and globalization. If a language has been endangered by globalization it logically follows that elements of it have already become part of the life of their communities to some extent and expecting the community to dial back and give up those elements solely for ideological reasons is highly unrealistic. The best way to deal with that is to work with and around globalization's impact, rather than going head-on against this behemoth. Since those elements are now part of the lives of community, this ties those elements to people's lifestyles and choices, aspirations and goals in the modern world, and strongly opposing that will be seen as a strong opposition to themselves by individuals of the community, in some way or another.

For future research, I see three primary directions or next steps. First, it would be specialized researches on individual endangered languages. That is, to take individual endangered languages (or a group of related languages, for example the Sami languages in Nordic countries and Russia), map the exact condition of each language and the current revitalization initiatives (if any exist), and from those results evaluate what can be done to help these languages to improve their situation. Secondly, would be to make a more in-depth analysis of the theory of diffusion of innovations, expanding it beyond the characteristics, and other innovation adoption theories and models and adapt them for the specific needs of language adoption. The goal of this research was to introduce the concept and it was limited by the fact it is a master's thesis written by a single researcher with limited resources. It was never the largest step, but the first step only. So it is only logical to follow it up with a more detailed and in-depth analysis now that it is clear that it is an idea worth investing time. Not just logical, but necessary to fully explore the potential of using our knowledge of innovation adoption applied to issues of language adoption. Finally, it would be important to collect data from the field and try it in practice. Theoretical analysis and review is important, we need the best intellectual tools we can get to properly address issues, but we need to test them in practice. This would also compliment the previous two points, and vice-versa. We need to set up

language revitalization plans and strategies based on studies of innovation adoption, work with people who have experiences in fields that use such knowledge in practice, and collect all the data we can, and see how well we can do. That way, we can better refine the theory for the specific setting of language adoption issues and, hopefully, help a few languages along the way.

7 Evaluation of Research

As a primarily theoretical review, this is a fundamentally simple research in terms of methods which, at first glance, might not deserve much commentary. In short, it was mostly a matter of contrasting the findings and conclusions of one area with those of another area of research, and reinterpret said findings and conclusions through the lenses of the second area. The basic research and data collection on both fields is already done, that is not the purpose of this work, so nothing particularly advanced in there to be analyzed. While the basic process is itself rather simple, the value and complexity comes from trying to bridge two areas until now not so well connected, showing new opportunities for future research, which is worth of some reflection. There are also a few elements worth discussing on the process itself, as well as in the preparatory steps before the research and that shaped it, that is, on how this research came to be and the factors that might have affected it.

7.1 Researcher's background and its influence on this research

First and foremost, this research is a master's thesis. And to me, the author, this is my last opportunity to learn something new through my present studies and course. Thus, it is fair to say that this entire research was a personal experiment for self-improvement above all else. Every choice made was for self-improvement, even if other reasons and factors were involved too. Thus, it is fair to say it was the single most relevant factor in this research. In particular, I have tried to identify research areas that I would like to improve and begin said development through this research, to use it to explore methods and approaches that are out of my comfort zone. This directly brings us to my background, its impact on my choices here and consequentially on the research through said choices.

My earlier background, both academically and professionally, was dominated by information technology, computer science and business related studies. Later it became more diversified, including management, media and arts (in particular of the digital

variety), while still having plenty of the former fields. As one might expect or realize from that short description, it is a background and experience dominated by exact sciences and quantitative methods. However, my interests have changed through the years and as a consequence I wanted to move away from some of those areas, in particular those more directly connected to pure computer science, and move closer to the administrative and creative sides of media. In fact, this is the reason for me enrolling in the master's program of which this thesis is the conclusion.

As a learning method, I imposed certain rules and restrictions on my work. One of said self-imposed limitations was a direct response to that intention of moving away from my previous fields, and it was to not use quantitative methods directly. That is not to say that the literature I have used does not contain it. A lot of the research on both innovation adoption and language endangerment/revitalization has plenty of quantitative research supporting it, and I had no problems working with their findings. The limitation was only imposed on myself, as a way to allow me to try something more purely qualitative in nature, which is something I see that I need to improve. Again, as one might conclude from this description, this means my approach here is unlikely to be flawless, and I am aware of that. It was a conscious trade-off for the potential learning (which I consider to be the primary goal of the program and this research) and making me a more complete researcher for the future.

This approach also eventually led to me choosing to make this research primarily a theoretical literature review. In my former background, everything is extremely practical, and data collection and data processing are trivial matters that I am too familiar with. Literature review, thrusting the findings of others rather than just running the data on my own, arriving at conclusions based on the findings of others by analyzing what they have said rather than what I can infer directly from the numbers, all of this was somewhat new to me. As such, those were skills and areas I could benefit from improving, which made the choice almost natural and automatic given the primary objective of using this research as a self-improvement tool.

7.2 Personal issues

An unfortunate consequence of using this research as a self-improvement tool was that I wrote it at my own pace. In hindsight, it might have been a mistake. Unfortunately, this has also been a very complicated time in my life (professionally, personally, familywise and healthwise), and writing it at my own pace allowed the writing of this research to more easily overlap with said issues, which then often got into the way of the development of this research, causing considerably long pauses in between writing periods and eventual re-writes when the personal conflict of time arose. Normally, I would not even mention these types of issues, but then again the consequences might be noticeable to the reader and I believe it is important to be transparent and upfront with it rather than pretend there was no issue. Perhaps, if I had had a different approach, my writing could have been more time effective from the start and there would have been a smaller window for the writing to overlap with said personal issues. Of course, this is hindsight and there was no way to be certain of that, but at least I could have minimized the chances of personal matters interfering with the development of the research. On the other hand, that was certainly a lesson learned.

Perhaps the most direct and noticeable effect of these issues for the reader was the length of this research. Considering that it was already not an easy topic to tackle (more on this soon), due to having to deal with these problems I had to give up on a few extra topics I wanted to address. Namely, it would be an analysis of the segments of a population in regard to adoption as well as short case studies. They were not essential to the main argument (i.e. language adoption, in particular language endangerment and revitalization, is a matter of innovation adoption and should be studied as such), so in that sense I do not see a problem, but it certainly is below my own expectation.

7.3 Complexity of the topic (or why this topic)

Originally, the topic was going to be something that I consider far more directly related to my fields of study and even interesting. It all started with a wonder. What if famous

fictional works that have constructed languages had used endangered languages instead? For example, Tolkien created an entire family of Elvish languages (among others) for his fantasy works that have gathered unquestionable international interest. These languages are also known to have been inspired by Finnish, along other references. What would the world be like today if, instead, he had used real and endangered Finnic languages (e.g. the Sami languages, most of which endangered) instead? Or any set of related endangered languages, for the matter. What kinds of benefit would the endangered languages involved have if newer works used them as “verbal props” (as Klingon, from Star Trek, has been called before) ? I believe they would strongly benefit from it. As one can conclude, that is quite different from the actual topic presented in this research.

To me, the above topic seemed natural and easy going, to a point I would even call it simple. Of course, that was only when I thought about it. Then I had to try to explain it, and that is when I realized that is only clear and so natural to me because of my diverse background. What followed was a series of attempts to isolate the elements that allowed me to reach such conclusions and find it so simple. By trimming and refining the topic I have come to the conclusion that the theory of discussion of innovations was a primary factor, and from that point to isolating a single aspect of the theory that I could analyse and present without writing a 400 pages long book (entirely out of scope for a master’s thesis) was a straight forward process.

This process of topic choosing (or, more accurately, arriving at a topic) had pros and cons. On the pros side, it allowed me to still write about something I am particularly interested (languages) in a way that relate to my formal studies. While a long step, in terms of personal development, it did allow for plenty of self-awareness and reflection, which was good. On the cons side, it does at least read like a huge leap of logic (if one look merely at the starting point and the final topic, rather than all the small steps in between those and the considerations that happened in each of them), and it still left me with a topic that was complicated to address at this point.

However, I have to also point out that, that the real reason for this topic to not be so easy to address was the lack of previous research explicitly and directly interpreting language

adoption issues as a matter of innovation adoption and other similarly multidisciplinary research that could be referred and used. That was one of the reasons that led to the final choice of this topic, in spite of personally considering it perhaps a bit too much for the scope of a master's thesis, because it became clear to me that such topic was needed and important. Hopefully, this research will, at the very least, serve as motivation for others to explore these language related issues (even though I would not call them a linguistics issues) through the lenses of other disciplines, in particular media and innovation adoption.

7.4 Lessons learned

I believe a few things have been learned throughout this research. First, and perhaps foremost, is that there is a severe lack of and need for multidisciplinary research on the topics of language adoption, even though the essence of these issues seem to be multidisciplinary. If there is one thing that should be taken away from this research, I would say that is it.

On a personal level, I have become more intimate with the idea of not depending exclusively or overwhelmingly on quantitative methods (essentially, statistical data analysis). While there certainly is room for quantitative methods in fields involving society, they are not enough – after all, these are not exact sciences. By trying to rationalize things through words (as I would describe it) rather than just through raw number data and numeric analysis (as the technologist in me would normally approach anything), it does allow for exploration of themes where specific or precise data collection might not always be viable or yet possible. It did develop in me a better appreciation and understanding of qualitative approaches, even if I am only a beginner. It also has made me better able to thrust and rely on the research of others, something I have until now not been particularly keen.

References

- Amano, T.; Sandel, B.; Eager, H.; Bulteau, E.; Svenning, J.; Dalsgaard, B.; Rahbek, C.; Davies, R. G. & Sutherland, W. J. (2014). *Global distribution and drivers of language extinction risk*. *Proceedings of the Royal Society*, 281(1783). doi: 10.1098/rspb.2014.1574
- Austin, P. K. & Sallabank, J. (2011): *The Cambridge handbook of endangered languages*. Cambridge: Cambridge University Press.
- Buckeye, B. (2007, September 19). *How important is language death?* [Blog post], Retrieved from: <http://thelanguageguy.blogspot.fi/2007/09/how-important-is-language-death.html>.
- Carra, N. J. (2009). The presence of Spanish in American movies and television shows. Dubbing and subtitling strategies. *Vigo International Journal of Applied Linguistics*, 6, 51-71.
- Crystal, D. (2000). *Language Death* (pp. 130-141). Cambridge: Cambridge University Press,
- Finegan, E. & Rickford, J. (2004). Editors' Introduction to J. A. Fishman's article 'Multilingualism and non-English mother tongues'. In E. Finegan and J. Rickford (Eds.) *Language in the U.S.A.: themes for the 21st century*. New York: Cambridge University Press.
- Fishman, J. A. (2001). *Can Threatened Languages Be Saved? Reversing Language Shift, Revisited: A 21st Century Perspective*. Clevedon: Multilingual Matters.
- Gardner, R. C. (1982). Language attitudes and language learning. In E. Bouchard Ryan & H. Giles (Eds.), *Attitudes towards language variation*. London: Edward Arnold.
- Greenhalgh, T.; Robert, G.; Macfarlane, F.; Bate, P.; Kyriakidou, O. (2004). Diffusion of Innovations in Service Organizations: Systematic Review and Recommendations. *The Milbank Quarterly*, 82(4): 581–629. doi:10.1111/j.0887-378x.2004.00325.x.
- Koulopoulos, Thomas. (2012, July 31). Innovation Isn't About New Products, It's About Changing Behavior. Retrieved from: <https://www.fastcompany.com/1844177/innovation-isnt-about-new-products-its-about-changing-behavior>. Accessed 29 Octo. 2017.
- Krauss, M. E. (2007). Keynote—Mass Language Extinction and Documentation: The Race Against Time. In Miyaoka, O.; Sakiyama, Osamu; Krauss, Michael E. *The Vanishing Languages of the Pacific Rim* (pp. 3-24). Oxford: Oxford University Press.
- Lambert, Wallace E. (1972). *Language, Psychology, and Culture: essays*. Stanford, Cal.: Stanford University Press

Mobile Millennials: Over 85% of Generation Y Owns Smartphones. (2014, September 05). Retrieved from: <http://www.nielsen.com/us/en/insights/news/2014/mobile-millennials-over-85-percent-of-generation-y-owns-smartphones.html>.

Moore, G. (2014). *Crossing the chasm*. 3rd ed. New York: Harper Collins.

Moseley, C. (2010). Introduction. In C. Moseley (ed.), *Atlas of the world's languages in danger* (p. 9). Paris: United Nations Educational, Scientific and Cultural Organization (UNESCO).

Mowrer, O. Hobart (1950). *Learning theory and personality dynamics: selected papers*. New York: Ronald Press

Osterman, Jordan (2016). Why do people still study Latin?. Minnesota: University of St. Thomas. Online version: <http://www.stthomas.edu/news/people-still-study-latin> . Accessed on 10/03/2016.

Pietikäinen, Sari (2008). Sami in the Media: Questions of Language Vitality and Cultural Hybridisation. *Journal of Multicultural Discourses*, 3(1). 22. doi: 10.1080/17447140802153519

Rice, R. E. (2009). Diffusion of innovations: Theoretical extensions. In R. Nabi & M. B. Oliver (Eds.), *Handbook of media effects* (pp. 489-503). Thousand Oaks, CA: Sage.

Ridanpää, Juhaa & Pasanen, Annika (2009). From the Bronx to the Wilderness: Inari-Sami Rap, Language Revitalisation and Contested Ethnic Stereotypes. *Studies in Ethnicity and Nationalism* 9(2):213-230. doi: 10.1111/j.1754-9469.2009.01051.x

Rogers, Everett M. (1983). *Diffusion of innovations* (3rd ed.). New York: Free Press.

Shah, Inayat. (2014). Linguistic Attitude and the Failure of Irish Language Revival Efforts. *International Journal of Innovation and Scientific Research.*, 1(2), pp. 67-74. Available at: <http://www.ijisr.issr-journals.org/abstract.php?article=IJISR-14-111-02>

Simons, G. F. and Fennig, C. D. (eds.). 2017. *Ethnologue: Languages of the World, Twentieth edition*. Dallas, Texas: SIL International. Online version: <http://www.ethnologue.com/endangered-languages>.

Smith, T. (1885). *Successful Advertising*.

Spalding, Roger; Brown, Alyson (2007). *Entertainment, Leisure and Identities*. Cambridge: Cambridge Scholars Publishing.

Turkle, Sherry. (2011). *Life on the Screen: Identity in the Age of the Internet* (p. 23). New York: Simon and Schuster.

University of Southern California. (2017). Organizing Your Social Sciences Research Paper: 5. The Literature Review [Online] Available at: <http://libguides.usc.edu/c.php?g=235034&p=1559822>

Valente, Thomas (1996). Social network thresholds in the diffusion of innovations. *Social Networks*, 18(1), 69-89. [https://doi.org/10.1016/0378-8733\(95\)00256-1](https://doi.org/10.1016/0378-8733(95)00256-1)

Zanjon, R. B. (2001). Mere exposure: a gateway to the subliminal. *Current Directions in Psychological Science*, 10(224). doi: 10.1111/1467-8721.00154