Language in the Age of Mechanical Reproduction

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Abstract
The technology of machine translation has become an integral part of our interaction with the world. This article wants to explore the effects these systems might have on our languages. Most of the time this technology is being investigated regarding its reproduction of (gender) bias. This article argues that the reproduction produced by machine translation is of a more fundamental type: it reproduces language itself. To motivate research in this direction this article will first look at Walter Benjamin's thoughts on language and translation to then show that machine translation can be seen as a mechanical reproduction reproducing language itself. This will become visible in the way machine translation systems are being trained. By relying on past translations these systems reproduce former states of our languages. With this observation this article then focuses on a certain aspect that was highlighted by Benjamin in his essay on mechanical reproduction: the shift in historicity of the reproduced (language). With this we will be able to glimpse a shift in our perception that accompanies this changed situation: the withering of dialectical moments in our interaction with the world.

Keywords: Machine translation; Mechanical reproduction; Language; Translation; Philosophy; Walter Benjamin

Язык в эпоху механического воспроизводства

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Аннотация
Технология машинного перевода стала неотъемлемой частью нашего взаимодействия с миром. Эта статья посвящена изучению того, какое влияние эти системы могут оказать на наши языки. В большинстве случаев эта технологии исследуется на предмет воспроизведения (гендерной) предвзятости. В данной статье утверждается, что воспроизводство, которое производит машинный перевод, имеет более фундаментальный характер: он воспроизводит сам язык. Чтобы мотивировать исследования в этом направлении, в данной статье сначала будут рассмотрены мысли Вальтера Беньямина о языке и переводе, а затем показано, что машинный перевод можно рассматривать как механическое воспроизведение, воспроизводящее сам язык. Это становится заметно по тому, как обучаются системы машинного перевода. Опираясь на прошлые переводы, эти системы воспроизводят прежние состояния наших языков. Опираясь на это наблюдение, данная статья затем фокусируется на определенном аспекте, который Беньямин выделяет в своем эссе о механическом воспроизведении: сдвиг в историчности воспроизводимого (языка). При этом мы сможем увидеть возможный сдвиг нашего восприятия, который сопровождается этой измененной ситуацией: ослаблением диалектических моментов в нашем взаимодействии с миром.

Ключевые слова: Машинный перевод; Репродуктивная технология; Язык; Перевод; Философия; Вальтер Беньямин

INTRODUCTION

Due to the advancing process of globalization and the accompanying need for translation, the market share of the translation industry grew from 23 billion USD in 2009 to an estimate of 48 billion USD in 2020.[1] Just by looking at these numbers one can see why there is a rising interest in the technology of machine translation – a technology that has already entered our everyday lives. While scrolling through Twitter one can press the *Translate Tweet* button to read Tweets from another language in one's own; when we watch a French panel discussion on YouTube we can read automatically translated subtitles; or we can use Google Chrome and its function to translate whole webpages. Machine Translation is already shaping our interaction with the world.

The question we want to explore in this article can be summarized as follows: How does the technology of machine translation affect the development of our languages? What happens to us if we get everything we want to read presented in our own language? As a first step of investigation we will look into a shift in the temporality regarding the translational process and its accompanying effects.

To do so we will first turn to Walter Benjamin's philosophy of language and translation. His approach offers a way to view language as more than just an instrument. After that we will have a closer look on how machine translation works and why it can be seen as a mechanical reproduction that reproduces language itself. Combining these two perspectives Benjamin offers, we will be able to glimpse a potential shift of our perception: the loss of dialectical moments in our interaction with the world.

WALTER BENJAMIN ON LANGUAGE

Walter Benjamin, born in 1892 in Berlin, was a philosopher and cultural critic, who had to exile to Paris in 1933 due to the fascistic regime in Germany and his Jewish heritage. Not just his contributions to aesthetic theory and historical materialism became influential in various academic disciplines; he is well known also for translating texts from Honoré de Balzac, Charles Baudelaire and Marcel Proust. His philosophical interest in language and translation, which he investigated for example in his two essays *On Language as Such and the Language of Man* and *The Task of the Translator*, were coupled with his focus on how technologies can change our perception of the world, which he explores in his famous essay *The Work of Art in the Age of Mechanical Reproduction*. This makes Benjamin an exciting figure to turn to when being interested in the technology of machine translation and its potential effects on our languages. Before we can look at the reproductive aspect of machine translation technology, we have to first understand the potentially reproduced subject itself: language. Therefore, we will first introduce fundamental aspects of Benjamin's thoughts on language and translation to then talk about mechanical reproduction.

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[1] https://www.statista.com/statistics/257656/size-of-the-global-language-services-market/

When we talk or listen, read or write, we are using and experiencing language as a medium for communication. Most of the time we are interested in what has been said or written. We focus on the verbal content and start to think about the meaning that is expressed through language. But Benjamin focuses on another aspect of language. For him language expresses something immediately that cannot be reduced to its verbal content.

Before we get into Benjamin's thoughts on this immediate content of language, being transcendent of its verbal content, we will look into some common examples where this aspect can be experienced. A first example is the tone of a language. Imagine you are talking to someone who is speaking in a low and sad voice. Whatever verbal content she is communicating through her choice of words, the expression in her depressed tone lets you perceive her message differently then when she would have uttered the same words in a high spirited and happy voice. What is communicated through her language is the same. But what is expressed in her language is something quite different and has an effect on how your experience and understanding of this conversation will be. Similar to this emotional tone is the ironic one in which the tone alone suggests that the exact opposite of the verbal content is actually meant. Another example is the style of language. Not just the style of expressing the same verbal content in different languages is of interest here. Styles differ not just in different regions (dialects) or over time but as well between individuals. If a close friend of yours writes you a message in a totally unfamiliar style, you will become suspicious whether the author for this content really was that friend of yours. These examples show us that there is more to language than just its meaning.

This raises the question: What is a language communicating that is immediately expressing something which cannot be reduced to its verbal content? "It communicates the mental being corresponding to it. It is fundamental to know that this mental being communicates itself *in* language and not *through* language" (Benjamin, 1972c, p. 142).[2] Benjamin's focus on language lies in the immediate expression we perceive "and if one chooses to call this immediacy magic, then the primary problem of language is its magic" (p, 142).[3] Language understood in this regard is powerful without being reduced to its instrumental or technical reasoning, a view which Benjamin calls "the bourgeois conception of language" (p. 144).[4] The immediate expression of the mental being exceeds this way of understanding the effects of language. To look at the magical side of language (*Sprachmagie*) Benjamin is applying terms commonly used in mystical or occult settings. It is not surprising that he is going back to the first book of Moses, the Genesis, and starts

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[2] „Sie teilt das ihr entsprechende geistige Wesen mit. Es ist fundamental zu wissen, daß dieses geistige Wesen sich *in* der Sprache mitteilt und nicht *durch* die Sprache." (Benjamin, 1972c, p. 142) All citations, unless otherwise noted, are from Walter Benjamin, *Gesammelte Schriften* (Frankfurt a.M.: Suhrkamp Verlag, 1972). References are made with the volume number (in roman numerals) and the page number. Throughout the whole article, the German original will be presented in the footnotes to follow up on some of Benjamins thoughts we are going to talk about. The English translations are all made with DeepL to build in a self-exemplifying performative element.

[3] „und wenn man diese Unmittelbarkeit magisch nennen will, so ist das Urproblem der Sprache ihre Magie." (Benjamin, 1972c, p. 142).

[4] „Diese Ansicht ist die bürgerliche Auffassung der Sprache." (Benjamin, 1972c, p. 144)

his investigation of *Sprachmagie* with the story of creation. All things express themselves via language, what Benjamin therefore calls "revelation" (p. 146),[5] and it is stated in Genesis that God knows everything regarding its given name. From this, Benjamin draws an epistemological consequence. The Fall from Grace divorced humans from the *names* of things and enabled the human ability to name things by *words*: "It is therefore the linguistic being of the human being to name things" (p. 143).[6] *Name* and w*ord* are his fundamental distinction between absolute and perspectival knowledge, represented by the language of God and the Adamic language.

For addressing *Sprachmagie* Benjamin's fundamental distinction between the verbal content communicated through and the mental being communicated in language appears not just in his early essay *On Language as such and the Language of Man*. In *The Task of the Translator* he uses this distinction to investigate the problem of translation between human languages. If we adhere to Benjamin's biblical terms, we could say that the problem of translation has to deal not just with the Fall from Grace but with the Tower of Babel as well. Humans are not just cut off from the pure knowledge of names given by God and therefore have to deal with an Adamic language; the Adamic language itself has been split up into uncountable different languages, so that humans cannot become too powerful.

To examine the problem of translation between languages in light of the magical aspects of language he is interested in, Benjamin reuses his early distinction of what is communicated through and in language, but changes his terminology. In *The Task of the Translator* he is calling the first the actually *meant* and the second *the way of meaning* it (Benjamin, 1972b, p. 14).[7] How can we understand this distinction? If we look at the words „Brot" (German), „bread" (English) or „pain" (French), what is meant in all languages is the same. But the way of meaning, the pronunciation, the linguistic tradition and the styles of expressions differ. So what is communicated within different languages might on a verbal side be the same meaning, but considering its magical aspects, there are powerful differences due to the different ways of meaning. But since the different words for „bread" actually mean the same thing, we can see that languages are translatable and that they have a common something, a kind of kinship among them. This raises the question: What kind of kinship exists between languages?

We do know that in terms of verbal content the same thing is meant, the same thing is pointed towards. But since all languages point towards the same meaning in their various ways of meaning it, no single one is expressing the actual meaning. They just state their word for the original name. By comparing the different ways of meaning, the many different intentionalities or forms of directedness towards the same thing, we experience in this translatability "the innermost relationship of languages to each other. (The translation …) cannot possibly reveal this hidden relationship itself, cannot possibly produce it; but it can represent it by realizing it germinatively and intensively" (Benjamin,

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[5] „Offenbarung" (Benjamin, 1972c, p. 146).
[6] „Das sprachliche Wesen des Menschen ist also, daß er Dinge benennt." (Benjamin, 1972c, p. 143).
[7] „das Gemeinte" and „die Art des Meinens" (Benjamin, 1972b, p. 14).

1972b, p. 12).[8] Since this relationship can only be represented in the translation itself, it is this innermost relationship towards which all supplementary intentions converge; corresponding to an ideal perspective which a philosophical God can assume; an ideal language Benjamin calls the *pure language* (p. 13).[9]

What happens if we turn this argument around? What does it say about our possible knowledge in, for example, our mother tongue that it is just one way of wording or meaning things, as opposed to Benjamin's concept of a pure language? The first thing we find out is: what we understand at a certain point of time in a certain language is just a fraction of what could be expressed in the pure language. But translation offers us a way to add another fraction to this fractured state of our language. And by combining these two pieces together, we can see that they are just a part of a bigger picture that we have not been able to see before. So within the process of translation we can experience the harmony of ways of meaning pointing towards a convergent state of the pure language. This is only possible if we focus on the magical aspects of language, since the verbal content is always already the shared meaning.

Therefore, Benjamin declares as the task of the translator to represent the inner relationship between languages. This is a task that will never be completed as different translations, even in the same language, will differ at different times due to the constant changes of our languages. It is important to note that one cannot actually express this innermost relationship through verbal contents. The only thing possible is to represent this kinship. The pure language can only be highlighted within the translation, combining fractions of ways of meaning. What is important here is what is magically gestured at or pointed towards and not – as according to the bourgeois view – the accurate translation of meanings. "With this, however, it is conceded that all translation is only a somehow provisional way of dealing with the strangeness of languages" (Benjamin, 1972b, p. 14).[10] For a translation to represent the kinship between languages, it therefore should not try to eliminate the ways of meaning from the original language. "The true translation is translucent; it does not obscure the original, does not stand in its light, but allows the pure language, as if amplified by its own medium, to fall only the more fully upon the original" (p. 18).[11]

This brings us to another important aspect of Benjamin's philosophy of translation: the temporal structure of a translational process. Before we can even think or talk about a translation of a word, sentence, phrase or text, these linguistic entities have to be uttered or written in the first place. Therefore, "the translation originates from the original"

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[8] „So ist die Übersetzung zuletzt zweckmäßig für den Ausdruck des innersten Verhältnisses der Sprache zueinander. Sie kann dieses verborgene Verhältnis selbst unmöglich herstellen; aber darstellen, indem sie es keimhaft und intensiv verwirklicht, kann sie es""(Benjamin, 1972b, p. 12)..

[9] „Die reine Sprache"(Benjamin, 1972b, p. 13).

[10] „Damit ist allerdings zugestanden, daß alle Übersetzung nur eine irgendwie vorläufige Art ist, sich mit der Fremdheit der Sprachen auseinanderzusetzen." (Benjamin, 1972b, p. 14)

[11] „Die wahre Übersetzung ist durchscheinend, sie verdeckt nicht das Original, steht ihm nicht im Licht, sondern lässt die reine Sprache, wie verstärkt durch ihr eigenes Medium, nur um so voller aufs Original fallen." (Benjamin, 1972b, p. 18)

(Benjamin, 1972b, p. 10).[12] A translation can only appear later than the original. And since a "true translation is translucent" and brings the original to light "only the more fully," a translation can be considered the "state of continuance" of the orignal (p. 11).[13]

This "state of continuance" already implies a certain historicity of our languages. Retrospective we can recognize a linguistic tradition, that is being highlighted due to translation – even (or especially) if we talk about translation from former states of the same language to the contemporary one. Following Benjamin, a "true translation" therefore should make the dynamic processes visible that our languages are constantly in. The translation enhances this process since the contemporary form of our language represents a certain way of meaning which becomes recognizable as just one form of intentionality towards the subject at hand. All of this is just possible if the translation is viewed as "a somehow provisional way of dealing with the strangeness of languages" and not as a final way of communicating a fixed meaning. With Benjamin's magical perspective we know that the powerful aspects of language are not comprehensible by just looking at the bourgeois view on language.

MACHINE TRANSLATION AS A MECHANICAL REPRODUCTION

With this understanding of Benjamin's thoughts on language and translation we can now tend to the technology of machine translation and examine how it puts our languages in a new situation. In a first step, we will explain a specific aspect of how these systems translate one language into another. This understanding will make it possible for us to see this technology as a mechanical reproduction and this will then be used to argue for a crucial change in the temporality of translation and to consider its implications.

In the 1990s the computing capacity of computers became efficient enough to realize early research on machine learning (Hutchins, 1995). Especially in machine translation, statistical methods were used to find structures in existing translations and to calculate the statistically best result for a given input. To do so the algorithms had to be "fed" – as it is called in machine learning terminology – with corpora of professionally translated texts, pairing the two languages. This so-called statistical machine translation was used, for example, by Google Translate until 2016. With the rise of neural networks and the implementation of deep learning methods into machine translation systems in the mid 2010s these methods became even more sophisticated (Forcada, 2017). Due to repetition, massive data sets to feed them and savings in memory costs, these systems are generating fascinatingly good results – at least for languages for which these enormous data sets exist – as we have experienced in the translations of quotes from Benjamin in this paper so far. Even if we cannot fully understand the connections these neural machine translation systems find in their statistical analysis of the given corpora, just the fact that these systems perform in this way is already enough for the argument at hand.

Let us now look again at Benjamin's thoughts on the temporal aspects of translational processes. This temporal setting changes when using machine translation

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[12] „geht die Übersetzung aus dem Original hervor." (Benjamin, 1972b, p. 10)
[13] „das Stadium ihres Fortleben." (Benjamin, 1972b, p. 11)

systems. Since translation engines learn from past translations, they are not based on the current state of our languages. Learning from existing translated texts, these algorithms can be called *conservative* – in a sense that they are not open for new developments. Even though some systems continue to learn from the user interaction with them, the connections these neural networks find in their training data, structure their ways of operating.

We called the translation earlier a continuation of the original. A "true translation" was supposed to represent the dynamic processes our languages are constantly in and to enhance this progress by shifting the boundaries of our languages. But due to the conservative functioning of machine translation systems, their translations cannot be called a continuation anymore. By reactivating former states of our languages the translation has to be seen as a *recurrence*. Instead of boosting the vital dynamic of our languages, a machine translation recreates a recurrent state of our language.

Due to this conservative recurrence, blurring the ever-changing nature of our languages, our perspective on languages itself changes. While we are presented with translations that enable us to understand the meaning stated in another language without acknowledging the different ways of meaning it, the magical aspects fall behind the instrumental usage of languages. And not just that; "the historical testimony of the subject" itself is shaken (Benjaminm, 1972a, p. 438).[14] As Benjamin highlights in his essay *The Work of Art in the Age of Mechanical Reproduction*, this shaken "historical testimony" is characteristic of mechanical reproductions. "Reproductive technology, it can be said in general terms, detaches the reproduced from the realm of tradition" (p. 438).[15] Hence machine translation can be seen as a *mechanical reproduction*, reproducing language itself.

The detachment from tradition is the characteristic of mechanical reproductions which has crucial effects in the case of languages. The "here and now" of a language, "its unique existence at a given place" and time (Benjaminm, 1972b, p. 437),[16] that what was supposed to be made visible in a translation, looses its meaning in times of its mechanical reproduction. But it was this authenticity and this historicity that was central for viewing language regarding its magical aspects and not just in a bourgeois way. Benjamin summarizes this development in the following way (Fürnkas, 2000):[17] "What withers in the age of technical reproducibility (…) is its aura" (Benjaminm, 1972b, p. 438).[18] The magically appealing aura of languages with their various ways of referring to the same meaning degenerates due to the conservative recurrence of the algorithmic reproduction produced by machine translation systems.

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[14] „die historische Zeugenschaft der Sache (gerät) ins Wanken" (Benjaminm, 1972a, p. 438).

[15] „Die Reproduktionstechnik, so läßt sich allgemein formulieren, löst das Reproduzierte aus dem Bereich der Tradition ab" (Benjaminm, 1972a, p. 438).

[16] „Noch bei der höchstvollendeten Reproduktion fällt eins aus: das Hier und Jetzt (…) – sein einmaliges Dasein an dem Ort" (Benjaminm, 1972a, p. 437)

[17] Josef Fürnkäs argues in his article *Aura* that aura and magic are similar terms, focusing on on slightly different aspects of the appearance of things.

[18] „Was im Zeitalter der technischen Reproduzierbarkeit … verkümmert, das ist seine Aura." (Benjaminm, 1972a, p. 438)

The loss of aura of our languages has epistemological consequences, since a purely instrumental view on language strips us of the possibility to represent the innermost kinship between languages. By experiencing this kinship in a true translation, we were able to recognize the perspectival character of our words compared to the absolute knowledge of names in the language of God. Due to the loss of Aura we do not even consider our words to be just a fraction of all intentions anymore. Especially if these machines get even better, we will not experience other ways of meaning. In this regard, translations from machine translation systems can be seen as a mere tool instead of an aesthetic process which it was supposed to be in Benjamin's thoughts on translation. Using these systems will not make us think about the different ways of meaning in different languages anymore – as long as they function without any conspicuousness. Only a disconnect between these algorithmic translations and our current use of language will make us question the way of meaning which is offered to us by a machine translation system. This is why most research regarding the effects of machine translation on our languages is dedicated to gender bias in the translated results (Mehrabi et al., 2021, Savoldi, et al., 2021). It becomes recognized since, as societies, we have become more aware of gender and bias over the last few decades.[19]

All of what has been said can be summarized in the following way: The conservative recurrence that is forced upon our languages by machine translation systems goes hand in hand with the withering of their Aura. This hardens a bourgeois view on language and represses *Sprachmagie* itself. Without the focus on the different ways of meaning we are not confronted with the representations of the kinship between all languages and the accompanying realization that our language offers us only a perspectival knowledge, compared to the absolute knowledge represented by pure language. Hence, machine translation systems strip us of dialectical moments in our experiences with languages.

The effects of this new situation for our languages have to be investigated further. With Benjamin we know that mechanical reproductions have an impact on our perception of the world. He writes: "Within large historical periods, the entire mode of existence of historical collectives changes as well as their perception" (Benjaminm, 1972b, p. 438).[20] But if machine translation really is a reproductive technology that reproduces language itself, we are just at the beginning of this investigation.

CONCLUSION

This paper discussed whether machine translation systems should be seen as a reproductive technology reproducing language itself. For this, we first looked into Benjamins philosophy of language where his fundamental distinction between verbal content and mental being was an essential first step, as is the distinction between what is communicated through and in language. With the concept of *Sprachmagie* we then turned

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[19] Perhaps this kind of research is being funded so much because companies selling translation machines do not want to have bad public relations.

[20] „Innerhalb großer geschichtlicher Zeiträume verändert sich mit der gesamten Daseinsweise der historischen Kollektiva auch ihre Wahrnehmung." (Benjamin, 1972c, p. 439)

to his thoughts on translation and his concept of pure language. Here, the temporal aspect of translation proved important as well as its role for the dynamic of experience and understanding of languages.

With this we started investigating the functioning of machine translation systems and saw that their ways of operating can be called conservative. By highlighting that these systems are recurring former states of our languages, we saw that the machine translations were undermining the historicity of language as such. Since this, for Benjamin, is a fundamental characteristic of reproductive technologies, we learned to see that machine translation systems are reproductive technologies that are conservatively reproducing language itself. The loss of aura of this along with other reproductions then led us to understand that we are being stripped of dialectical moments in our ways of thinking and experiencing in general.

If machine translation really can be seen as a reproduction of language itself, there are many questions that seek answers. Benjamin sees in the introduction of a new medium a momentum for restructuring perception itself. If we understand language as the medium of our thought, what implications could the mere reproduction of language have on our possibilities for thinking about and acting within the world?

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