

Language contact and constructed languages

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People who construct languages – whether they are called **Esperanto** (Zamenhof 1887), or Dothraki (Peterson 2011-2016) –, typically do so because they are somehow dissatisfied with the set of existing languages: those are considered inadequate instruments for thought or for communication, or too difficult to learn, or to not fit the imaginary world of a fiction writer. A common distinction in interlinguistics, the field that studies such languages (cf. Schubert 1989 for an overview), is between ***a posteriori*** and ***a priori*** constructed languages, where the former are built on the model of existing languages (for instance *Latine sine flexione* of Peano 1903, which, as its name suggests, is basically a version of Latin without the inflectional **morphology**), whereas the latter are constructed ‘from scratch’, such as *Lojban* (Cowan 1997), which is supposed to provide a purely logical way of expressing thoughts.

However, the ***a priori*** – ***a posteriori*** distinction is best to be seen as a scale rather than as a binary opposition. On the one hand, *a posteriori* languages will always display elements of willful design, based on some *a priori* idea of how languages can be improved. On the other hand, it is probably not difficult to show that *a priori* language creators are influenced by the languages they already know, and that such influence is similar to the influence that language contact has.

Artificial or constructed languages are interesting for any scholar of language contact for this reason alone. They present extreme cases of contact: extreme in the level of consciousness that is involved in their planning, and extreme in that we can typically point to an originator or a committee of originators. Furthermore, in the (rare) case people adopt **constructed languages** in their everyday life, for instance as a family language, the language will undergo further contact, for instance because there are no communities in which one can live one’s entire life speaking an artificial language. There will always be an ‘outside world’ in which other languages will be used; the speakers of these languages will therefore always be at least bilingual; and these other (‘natural’) languages will always be dominant.

In this chapter, I discuss both parts of language contact in **constructed languages**, where I concentrate mostly on languages from the 19th and 20th Century. Those of the 17th Century were mostly ‘philosophical’ and were not necessarily meant to resemble existing languages in any way; the eventually led to notation systems in logic and mathematics. Languages of the 21st Century are usually designed for use in fictional worlds and often meant to express the fictionality of those worlds in some way (see Peterson 2015 for a nice introduction for how to use linguistic insights in this kind of language design). The most interesting contact phenomena we find, I think, in languages that were designed for human and international use, and that has been mostly a preoccupation of the 19th and 20th Century.

After a terminological discussion in section 1, I first turn to the relevance of the *a priori* vs. *a posteriori* dimension in our understanding of language contact before I discuss the way language projects are influenced by existing languages in section 2 and their development when they become part of a community in section 3. The emphasis in this later section will be on **Esperanto**, as this is the artificial language with the longest history and the widest application. In section 4 I point to some implications of these findings for contact linguistics.

1. Terminology

The languages we are interested in here are different in kind from ‘natural’ languages in one shared characteristic: we can point to one or more human beings who have put some conscious effort into

‘creating’ them. They did not exist before those people put that effort, although it is not immediately clear at what point (if ever) they actually became ‘languages’. A conscious act of **creation** may not have been enough. The act of **creation** usually would involve setting up some vocabulary – usually with translation of a few words into some other, already existing language – and some rules of grammar. It is a matter of debate whether one can say that those systems in their own right already constitute a language. I suppose most scholars would say that more is needed, although there could be an argument as to exactly what that would be.

One would typically claim that there should at least be one or more people who use the language for some purpose; and the acts of those people are at least as important for ‘creating’ the languages as the initial steps set by the initiator. But also, as soon as this happens, and these languages start functioning more or less ‘normally’, there is no reason anymore to expect them to develop differently from other languages.

The question now is twofold: what do we call the first step? And how do we call the languages that are eventually the product of this change? So far I have used the term **artificial languages** (Comrie 1996) and **constructed languages**; another term we sometimes find is **planned languages**, with *planning* as the relevant act; and finally we occasionally find *invented languages* and *synthetic languages*.

Constructed language seems the most popular term among scholars at least in the literature in English (this is definitely different in the German literature, for instance, where *Plansprache* is a common term, Blanke 1985), whereas *artificial language* may be the more popular among the general public; in linguistics it is also used for experimental work with made-up stimuli (Miller 1958, Moro 2016). A recent collection of scholarly work (Adams 2011a) uses *invented languages*.

Planned language is possibly a somewhat wider term, as standard languages have probably all undergone some level of planning. One interesting case in this is Modern Hebrew which to some extent has been ‘planned into existence’ (Berdichevsky 2014, and Romaine 2011 for revitalized languages more generally). It would not have existed in its present form, were it not for the active involvement of a certain number of intellectuals. Modern Hebrew can therefore be called a ‘**planned language**’, but the terms ‘constructed’ or ‘artificial’ seem less suitable for this language.

In this paper, I use the terms ‘**artificial**’ and ‘**constructed language**’, because they are the most frequent, and because I want to *exclude* languages like Hebrew and Indonesian from consideration here. It is useful, however to realize that the boundaries of the languages discussed here with other (standardized) languages are not precisely delineated, and a central claim of this paper will be that not all aspects of ‘**constructed languages**’ are indeed carefully crafted, so that there is quite some space for influence of other languages (Adams 2011b).

One can have similar concerns about the term ‘language’ in this connection. The question is at what point we can call a constructed object a language. A useful taxonomy has been proposed by Blanke (1989), who envisaged a three-way distinction of ‘projects’, ‘semi-languages’ and ‘languages’, where ‘projects’ are basically objects which never grew out of the initial grammars and lexicons written by their constructors. They can grow into ‘semi-languages’ and eventually ‘languages’ if they start satisfying a whole list of criteria such as being used in written communication in books and journals, or having specialized vocabulary about a number of topics, etc. where languages are distinguished from semi-languages by having **native speakers**. According to Blanke, **Esperanto** is the only full ‘language’ in the set of constructed objects; as Blanke was a leading figure in the **Esperanto** movement, one might suspect that this judgement was biased, but at the same time it is undeniably the case that **Esperanto** has been most widely applied in a wide variety of linguistic contexts (see also Pereltsvaig 2016 for an overview of linguistic literature on **Esperanto**).

A final distinction needs to be made between **constructed languages** and ‘secret languages’ and/or language games (Bausani 1974). The latter are more clearly parasitic on an existing language, in the simplest case replacing e.g single sounds with other sounds in a systematic way or distorting the phonology in some other ways. These systems are of course immensely interesting and the boundaries between them and **constructed languages** seems easier to draw in practice than in theory

(if one sees a secret language, one knows one, but it is difficult to give a definition), but we will not go into these systems as they fall beyond the scope of this chapter.

2. **A priori and a posteriori language creation**

Since it seems humanly impossible to create something as complex as a human language from scratch, language makers by necessity always depend on existing languages. Sometimes this happens unconsciously, at other times also consciously. Typically, unconscious influence takes place at phonetic, grammatical, semantic and pragmatic levels, whereas more conscious influence occurs on the lexical level. For instance, **Interlingua** was designed by a committee – for some time under the direction of the well-known French structuralist linguist André Martinet – which utilized very specific rules about how to include a form in the morpheme stock of the language. There was a precise method of counting in how many European languages a form occurred, and if this count crossed an established threshold, this form was chosen (Martinet 1946). Although the committee also set some rules for deriving the grammar, – which amounted to taking the smallest common denominator; only rules which were present in the **Romance** languages and English were supposed to be operative –, we know that there is no full description of any language in the world, and therefore there can also not be a full proscription. As a matter of fact, the overt rules are often defined only negatively, in terms of what the new language does not have that distinguishes it from other languages known to the author or to the intended readership (e.g. morphological case). A careful scholar may therefore presumably extract regularities in an **Interlingua** corpus that are not in the official grammar. These hidden rules could for instance be borrowed from the native language of the speaker.

We can take the following passage on adjective placement from the grammar of the language, Gode and Blair (1951), as an example:

Adjectives placed next to a noun can either *precede or follow*. The latter position is more frequent and hence normal. Adjectives preceding a noun tend to suggest that what they express is an essential feature of the noun concept and not merely a feature distinguishing the present representative of the noun concept from others.

le lingua international e le linguas national
'the international language and the national languages'

Su integre vita esseva ric in viages longe e breve
'His whole life was rich in long and short trips'

Long adjectives should rarely be allowed to precede a noun. Brief adjectives like *bon, alte, parve, grande, belle, breve, longe*, etc., may precede merely for rhythm's sake or as a matter of personal preference. The two possible positions of the adjective cannot ever express two distinct meanings.¹ Numeral adjectives (cardinals as well as ordinals) precede the noun they qualify.

The tone of this passage is descriptive; it bases its recommendations what to say on what is 'more frequent' and 'normal', even though there had been very few publications in **Interlingua** at the time when Gode and Blair (1951) appeared, so that it is unclear how 'frequency' could even be measured. However, the tentative rules which are formulated here – there is a specialized interpretation for prenominal adjectives, and shorter adjectives are more free to precede the noun, and there is a 'personal preference' – resemble those of (modern) **Romance** languages. It is as if the

¹ Wim Jansen (p.c.) points out that this practice does not always seem to have been followed faithfully, and that e.g. *povre* 'poor' seems to differentiate between prenominal use (where it means 'pitiful') and postnominal use (where it means 'without sufficient material support'); a similar distinction is made e.g. in Italian.

authors (both English-speaking Americans) refer the reader to linguistic intuitions for **Romance**, which make it unnecessary to be more explicit, as the reader is supposed to share those intuitions.

This is a common practice in many grammars of language projects: they use the terminology of neutral description, as if the language is already there, and especially they take many things for granted (e.g. the grammar in this case does not answer the question at all how to deal with cases where there is more than one adjective with a noun and one does not want to use the conjunction *e*). One can say that all this makes such grammars a parody of ‘real grammars’, describing a phantasy rather than a reality, but we cannot exclude that the authors of these grammars had a real feel about what ‘sounded’ usual or unusual, and on the other hand, statements such as these in traditional grammars of ‘real’ natural languages may also not be always based on careful counting of items in a high-quality corpus. As a matter of fact, we can even observe that in **standardization** processes we find similar statements; **standardization** in some cases also means trying to change a language in such a way that it superficially resembles some other language more. E.g. in the **standardization** of European languages, Latin was often taken as a model (so that tables with grammatical cases would be established even if the languages did not have cases any more; Eco 1993).

Among ‘**a posteriori**’ languages we may further subdivide among those which are based on just one language, such as Basic English (Ogden 1930) or Latino sine flexione (Peano 1903), and those which are based on some kind of typological comparison, such as most other language projects of the 19th and 20th century, like **Interlingua** but also Volapük (Schleyer 1982/1880). In the former cases, the goal is usually to ‘simplify’ the language, e.g. eliminate grammar that is deemed unnecessary (as *sine flexione* ‘without flexion’ suggests), or reduce the vocabulary (this was the main goal of Basic English: to allow for communication using only words from a list of a few hundred vocabulary items); see Gobbo (2017). In the latter case, creators aim to make a language that is like the ‘greatest common denominator’ of all languages in the sample. For instance, Schleyer had as his goal to make the words of Volapük easy to pronounce for people around the world, and he therefore eliminated the distinction between *l* and *r*. At the same time, he kept to unlauded letters which, like in his native German, stood for front rounded vowels. These are not exactly widespread in languages of the world, and also the unlauded letters caused quite some criticism, which according to some historians even were instrumental in the language’s eventual lack of success (Garvía 2015). The question how to ‘blend’ languages in this way has occasionally also attracted the attention of professional linguists; for instance Trubetzkoy (1939) discusses the question which phonemes should be used in an ideal language for international communication such that there would be enough contrasts between sounds, and at the same time no major problems would arise for any speaker.

To some extent, obviously all **artificial languages**, including heavily **a priori** systems, are influenced by existing ‘natural’ languages, if only because they are designed to be *languages*. For instance, they will typically have some concept of a word, and of syntax, a way of arranging those words, as one cannot imagine a language being otherwise. This was definitely true even in the case of 17th Century creators of ‘philosophical’ languages such as Leibniz and Wilkins, who were not meant to be similar to existing ‘natural’ languages as well, but be more perfect tools for thinking (Maat 2004). These languages use their own systems for word formation, basing every individual element on some idea of rationality and logic rather than on what exists in language. Yet, as far as I am able to tell, notions similar to words and sentences are always there. The same can be said, I think, of formal logic, which derives from those 17th Century attempts. Although one could argue in this case whether such divisions are *derived* from the natural languages, or those languages just reflect something which is fundamentally logical. That seems to have been the point of many of the language creators of this period: that they revealed the underlying structure which was available in all languages, but without the historically grown and ‘unnecessary’ additions.

Furthermore, in view of the thousands of decisions that have to be made when one tries to create a language *ab ovo*, inevitably language creators will turn to linguistic traits that seem familiar, or even inevitable, to them. The most dominant languages for Lejzer Zamenhof, the creator of **Esperanto**,

presumably were Russian and Yiddish (Schor 2016), but he was also familiar at least with Hebrew, Polish and German. Being the 19th Century language lover that he was, most of Zamenhof's conscious efforts were directed at building a morphological system, in which for instance, all nouns end in an *-o*, all adjectives in an *-a*, all infinitives of verbs in an *-i*, etc., which makes it easy to convert words from one category in another (*bono* is 'goodness', *bona* 'good', *boni* 'being good'). He also cared about the etymological origin of the word stock, which is mostly **Romance**, probably because of Latin's claim to once having been an international language, and French being the most important language for international trade and diplomacy of the 19th Century. However part of the words is also of Slavic (*barakti* 'to struggle') or Germanic (*hundo* 'dog') origin.

As far as is known, Zamenhof did not spend a lot of time designing e.g. the phoneme inventory of the language or its syntax; he published a list of 16 'grammatical rules' which have very little to say about either phonology or syntax (one rule says 'the definite determiner is *la*'). There is probably a relation between this fact and the fact that the consonant inventory of **Esperanto** is exactly the same as that which Zamenhof described in his grammar of Yiddish (Piron 1984); as a matter of fact, he used more or less the same symbols for the same sounds in his proposal for a Latinate script for Yiddish as he later used for **Esperanto**. Similarly, the syntax of **Esperanto** in several ways resembles that of Russian and/or Yiddish (for instance its basic word order) in a way that should probably be understood as subconscious influence. The influence of Yiddish on **Esperanto** has been pointed out by several scholars (Gold 1980, Golden 1982, Piron 1984, Biró 2004, Lindstedt 2009, Schor 2016), and the influence of Russian has been explored in Kolker and Piron (2015). There is very little reason to assume that this was a conscious choice on Zamenhof's part, however. I think it is more likely that the creator did not think it necessary to take any decision on these matters and just chose whatever felt most natural to him, viz. the kind of linguistic solutions he had practical experience with. It has been argued, as a matter of fact that also the consciously designed **morphology** had its origins in existing language. Zamenhof himself reported that the idea for a very regular derivational agglutinative **morphology** came to him as a child when he observed that the words *shvejcarskaja* (porter's lodge) and *konditorskaja* (candy shop) both contained the locational suffix *-skaja* (Zamenhof 1948). In turn, the idea that word category (noun/adjective/verb/adverb) can have a phonological exponence might be borrowed from Hebrew (Berdichevsky 1986, 2007).

An interesting twist to language contact in language design is provided by those constructed languages that were designed to be as *unnatural* as possible, or as different from existing languages as possible in certain dimensions. Examples of this are Klingon (Okrand 1985, Okrand *et al.* 2011) and Spocanian (Tweehuysen 1982). The latter language for instance, imagined to be used in an imaginary but realistic country *Spocania*, expresses tense by word order (past tense is VSO, present tense SVO, future tense SOV), a property that does not exist in any known other language. It is probably significant that such languages are usually made for phantasy worlds and also that they are typically constructed by people with some linguistic training so that they are aware of the linguistic rules they are breaking. It is in this case as if the languages in question have undergone a *negative* influence of language contact: they went in the opposite direction from that of the languages with which they were in contact.

3. Change in **constructed languages**

While the majority of **constructed languages** never leave the drawing board of their makers, some make it to a small community, and very occasionally, there have also been some (multilingual) **native speakers** of such languages (in particular of **Esperanto**). In such cases, the other languages used by members of the community can influence the structure of the language as well.

Furthermore, in many cases some mechanism for adding new words for new concepts are necessary, and this will often involve some concept of **'borrowing'**.

The most well-known artificial language, and also definitely the language that has found the vastest range of application, thus coming closest to being a 'natural' language, is **Esperanto**. This language was adopted by a diasporic community of a few tens of thousands of speakers (Nielsen 2016),

among whom a group of about 1,000 **native speakers**, according to an estimate by Lindstedt (1996); it seems that those numbers have stayed relatively stable over the past decades.

Several studies have appeared over the years on the question how **Esperanto** has changed in the course of time, and borrowed words for new concepts, e.g. from new technology (*apo* ‘app’) or for aspects of daily life by **Esperanto**-speaking families which were not foreseen by Zamenhof (*butikumi* ‘go shopping’). Philippe (1991) gives an overview of changes in the lexicon in the course of time. He points out that different languages were dominant in different periods, and new **Esperanto** words were modeled on them as loan translations (see also Gregor 1974). For instance, in the first period, loans were generally modeled on either Russian or German. The word for ‘security’ was *sen-danĝer-ec-o* (I added hyphens for morphological transparency), which can be glossed as ‘without-danger-property-noun’, modeled on Russian *bezopasnost*), and the word for ‘singular’ was *unu-nombr-o* (one-number-noun), modeled on German *Einzahl*. (In some cases, the model is Yiddish rather than German, as in *lern-o-libr-o* (learn-noun-book-noun, ‘textbook’), which does not directly correspond to German *Lehrbuch* (‘teach-book’), but more directly to Yiddish *lernbukh*, Lindstedt 2009).

Around the beginning of the 20th Century, these words were replaced in common practice by *sekur-ec-o* (safe-property-noun) and *singular-o*, respectively. This was a period in which the centre of the movement was to be found in French. Also other loan translations from this period can be brought back to this language. Philippe points to *flav-bek-ul-o* for instance, inexperienced young person, (‘yellow-mouth-person-noun’). The model for this word was French *bec-jaune* (‘mouth-yellow’), but the **Esperanto** word has a different order, and contains a personifying suffix in order to conform to **Esperanto** (i.e. Yiddish, German or Russian) **morphology**. Contemporary loans are built on English models: *korp-o-konstru-o* (‘body-noun-build-noun’, ‘bodybuilding’), *sub-urb-o* (‘under-city-noun’, ‘suburb’) (Van Oostendorp 1998).

Lindstedt (2009) discusses how there was also semantic shift in the early period of **Esperanto**, away from the Russian origins. For example, in early **Esperanto** texts, *naĝi*, which means ‘to swim’ could be used also for ships, like Russian *plyt* ‘and *plavat*’, but this is no longer possible.

Dankova (1999, 2007) shows in an experimental study how contemporary **Esperanto** speakers with different (Slavic vs. **Romance**) linguistic backgrounds use the verbal system of the language in different ways when telling a story to express temporal and aspectual details, and how these align with the systems used in their native language. She points out that Zamenhof did not establish a ‘norm’ on this (although his own use of the system was unsurprisingly more on the Slavic side). Interestingly, Jansen (2007) has very different findings for word order. Although the **Esperanto** ideology is that all word orders (e.g. SVO, SOV, VSO, VOS, OVS, OSV for the order of subject, verb, object, and AN, NA for noun and adjective) are permitted, Jansen found that in actual fact, speakers in experiments had an overwhelming preference for a very small range of orders (SVO and AN), which was also reflected in several corpora of written Esperanto that were consulted by Jansen.

It is not clear what is the relevant difference between word order and tense/aspect that causes one to become fixated across speakers of very different languages whereas the latter stays more flexible; possibly it is the fact that one is more superficial (and therefore easier to observe) than the other. It is also not entirely clear why the preference went to SVO and AN. Other word orders did occur in the corpus and in experimental settings, for instance to express information structure. Jansen did already find a preference for the basic orders in a corpus of Zamenhof’s own writings – and it seems to be true even of his earliest writings before there were any other speakers of the language –, so maybe this is (just) another example of a subconscious influence of his dominant languages on his grammatical choices. (Lindstedt 2009 mentions that “perhaps the most deep-seated Slavonic feature” in Esperanto syntax is the tendency to place manner adverbs before verbs as in ‘mi bone scias tion’ ‘I know that well.’”)

An alternative analysis may be that of Esperanto as a form of **pidgin** or **creole** (Heil 1999, Parkvall 2008, 2010). One could then claim that these word orders are the result of similar forces to those

which are typically choose contact languages to have certain ‘default’ order. In that case, even the very early ‘community’ consisting of only Zamenhof would have been subjected to such forces. Of interest in this connection are of course also the ‘native speakers’ of Esperanto. This is a small group of about 1,000 people spread around the world. They are hardly a community, none of them is monolingual and the dominant language is always another one, and furthermore almost all of them are first-generation native speakers, although some second and maybe third generation speakers have also been reported. But none of this means that studying this situation is uninteresting, of course. Some work has been done on their first language acquisition (Versteegh 1993, Bergen 2001), but in my feeling this is hardly enough to draw good conclusions about the process. An interesting point is put forward by Pereltsvaig (2016), who mentions that according to Corsetti (1996) in most families it is the father who speaks Esperanto to the child. It could be interesting to see what the precise implications are of this fact that the language is mostly transmitted as a ‘paternal’ language.

4. Conclusion

Any kind of language creation is inevitably influenced by existing languages in one way or another. This seems true even for the more extreme cases: languages that do not even pretend to be used in everyday human communication, like programming languages, the ‘language’ of logic or the languages that have been designed for science fiction movies. It is particularly true, however, for those languages that aim to compete with existing languages in the domain of (international) communication.

An important aspect of this is that it is simply not possible to really design a complete language, just like it is not possible to describe one in its entirety. If all grammars leak, so do all prescriptions. If such projects are to grow into real languages, the holes have to be filled, and the stuff of the existing languages known to the speakers of the new project will fill those holes. This makes constructed languages to an interesting laboratory into how language works, and in particular also into how language contact works. For this reason it is unfortunate that constructed languages hitherto have not received a lot of attention, although this seems to be gradually changing in the scholarly literature.

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