INTERDISCIPLINARY DESCRIPTION OF COMPLEX SYSTEMS

Scientific Journal

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NOTE

This is a thematic issue of the journal INDECS, entitled *The Phenomenon of Esperanto*, devoted to the complexity of Esperanto culture, language, ideology and community. Guest editors of the thematic issue are Prof. Humphrey Tonkin and Veronika Poór, Ph.D.

The corresponding *Call for Papers* is available on the Journal's web page http://indecs.eu/CFP__The_Phenomenon_of_Esperanto.pdf.

FOREWORD

When I accepted an invitation from Spomenka Štimec to attend a writers' workshop in Croatia for authors in Esperanto, I had no idea that it would be the beginning of an extensive and satisfying venture leading to the publication of a special issue of INDECS on the phenomenon of Esperanto. What happened? Following the meeting I enjoyed a few days of hospitality with Đivo Pulitika, at which time I met Josip Stepanić, and a few hours later the idea of compiling a special issue of INDECS devoted to the general topic of Esperanto was born. Josip has remained consistently supportive of preparation of this special issue, which you now hold in your hands.

Professor Humphrey Tonkin, President Emeritus and University Professor of the Humanities at the University of Hartford, USA, agreed to oversee the preparation and publication of the collection. Thanks to his reputation, enthusiasm and clear sense of direction, we now have this extensive and varied volume in English on the phenomenon of Esperanto.

The publication in itself fills a significant gap in the English-language literature on Esperanto – something which I, as the board member of TEJO (the World Esperanto Youth Organization) responsible for, among other things, scholarly activities and external relations, can fully appreciate. Indeed, the publication will not only be useful in academic circles but will also assist those engaged in external relations by providing them with high-quality material allowing them to present the phenomenon of Esperanto from various points of view, always with scientific rigour.

For the reasons mentioned by Humphrey Tonkin in his introductory essay, it is particularly difficult to explain Esperanto society to those who are not acquainted with it. For example, sometimes the question arises as to whether there is a society behind the language.

Working, as I am, together with over 100 volunteers in more than 35 countries to create Muzaiko, a world-wide internet radio entirely in Esperanto, now regularly listened to in over 100 countries, I am very much aware of this truly international, diverse Esperanto society. And now, thanks to the scholarly articles presented here, I will have not only my own experience but also facts from a wide range of disciplines to allow me to present Esperanto fairly and appropriately.

This publication could not have happened without being in the right place at the right time, nor without the initial ambitious ideas that were followed by the enthusiastic, high-quality cooperation of many people on several continents. It seems that the history of this special issue of INDECS on the phenomenon of Esperanto closely resembles the varied history of Esperanto itself; let us hope for a thoroughly fruitful future for both.

Budapest, April 2015   Veronika Poór, Ph.D.

INTRODUCTION: IN SEARCH OF ESPERANTO

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ABSTRACT

After almost one hundred years of continuous use, Esperanto has achieved the status and character of a fully-fledged language, functioning much as any other language does. Research on Esperanto is hampered because knowledge of the subject is often regarded, ipso facto, as evidence of a lack of objectivity, and also because Esperanto, as largely an L2, is elusive, and its speakers hard to quantify. The problem is compounded by the rapid shift in its community from membership-based organizations to decentralized, informal web-based communication. Also shifting are the community's ideological underpinnings: it began as a response to lack of communication across languages but is now often perceived by its users as an alternative, more equitable means of communication than the increasingly ubiquitous English. Underlying these changes is a flourishing cultural base, including an extensive literature and periodical press. There is a need for more research – linguistic, sociolinguistic, and in the history of ideas. In intellectual history, Esperanto and related ideas have played a larger role than is generally recognized, intersecting with, and influencing, such movements as modernization in Japan, the development of international organizations, socialism in many parts of the world, and, in our own day, machine translation.

KEY WORDS

Esperanto, Esperanto community, interlinguistic research, language ideology

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INTRODUCTION

In an influential essay some years ago, the late Richard Wood described Esperanto as "a voluntary, non-ethnic, non-territorial speech community" [1]. Wood stressed the fact that Esperanto is largely an elective language, learned by its speakers through conscious decision, rather than acquired as a first language, and he emphasized that the speaking of Esperanto is in large part not determined by geographical location or ethnic background. As a language created to serve as a bridge between languages – a lingua franca intended not to replace but to supplement other languages – Esperanto occupies an unusual, not to say uneasy, place in linguistics. Is it a *real* language? Is it fully expressive? Is it a utopian idea unworthy of our attention? These are the kinds of questions that scholars of Esperanto have not infrequently to contend with. They often find themselves explaining that, with almost 130 years of use behind it and, over the years, incontestably millions of users, it constitutes a linguistic phenomenon that cannot be explained away, even if it seems to violate some of the conventional definitions of language. Perhaps fortunately, we are today questioning some of those conventional definitions in other ways as well, not least in our relatively new-found interest in the study of language, and language communities, as complex adaptive systems; and the study of Esperanto as a *phenomenon* rather than as an *enthusiasm* seems increasingly possible within the realms of general linguistics and sociolinguistics [2-4].

Those scholars who study the language often find themselves caught in a variation of the anthropologist's dilemma, or the double-bind: if they have learned this *voluntary* language, they must have lost their objectivity, say the critics, and are therefore disqualified from commenting on it; if they have not learned the language, they lack adequate information to pronounce on it … and are therefore disqualified [5]. The lack of prestige associated with Esperanto is a significant stumbling-block. This author knows of more than one promising study abandoned because of colleagues' scepticism about the value of Esperanto and strong advice to avoid it. Two truths emerge: first, to be acquainted with something is not in itself evidence of bias; second, to study a phenomenon that lacks value is not in itself a guarantee that the research will lack value. To these truths we might add a third: there are plenty of ways of studying a phenomenon objectively even if one is ideologically committed to that phenomenon. A study of the grammar of Esperanto does not require lack of commitment to Esperanto; a study of the Esperanto community need not show bias just because the researcher is a member of that community.

COMMUNITY

These problems are made doubly difficult by Esperanto's sheer elusiveness.: it exists, wraith-like, in the interstices of language, with no geographical location, no L1 users to speak of, little continuity from generation to generation, and no ethnic identification; it seldom appears in institutional settings or official pronouncements.

Efforts to count its speakers have had little success. Two essays in the present collection, those of Puškar and Wandel, attempt, in their various ways, to pin it down – one (Puškar), based on the conventional model of membership-based organizations, implies that its numbers are actually declining; the other (Wandel), extrapolating from self-reporting in social media, suggests that they are rising. Both methodologies have significant limitations, but even the best of methodologies will not solve the problem. Speakers of languages are notoriously difficult to count [6]: statistics may be based on self-reported census data, or on school enrolments, or on the assumption that in a given geographical area – say Sussex, or Iowa, or New South Wales – everyone speaks the local language, except for those who

identifiably do not. But however precise these methods, or a combination of these methods, might be, they founder on one fundamental question: How much language must someone have in order to be recognized as a speaker of that language? For Esperanto and its worldwide community there are no censuses, no school systems; there is no geography. And as a *second* language for virtually all its speakers, it is spoken imperfectly by many, less imperfectly by a few.

The issue is made even more complicated by the demise of the membership-based organization. It used to be that the active Esperantist had to join an organization to link up with Esperantists in other countries, or to gain access to its books and periodicals, which were distributed mostly through these organizations. Today, however, it is enough to hop on the internet to connect with the world; the old, paper-based, geographically limited organizations are less and less essential. Furthermore, dependent on the consent of their members, they are insufficiently agile to deal with the demands of the electronic age. The language-learning and social media site *lernu.net* has over ten times as many members as the largest conventional organization, the Universal Esperanto Association (UEA); the Facebook group Esperanto, still only two years old, has also surpassed the UEA in the number of its members, which continues to increase. While the members of UEA are easy to count, the numbers in these electronic domains barely stand still for long enough to be counted.

Indeed, the fluidity of the Esperanto speech community is one of its primary characteristics: members move into it and out of it at various times in their lives, much as speakers of second or third languages often use those languages to a greater or lesser extent as their lives change. Nor are their views of the language consistent. Conventionally, speakers of Esperanto make a distinction between *finvenkismo* – dissatisfaction with present levels of dissemination and advocacy of greater use of the language, particularly in official contexts – and *raŭmismo* (named after the Finnish city of Rauma where this view was codified during a youth conference), which maintains that Esperanto has already reached a level of self-sufficiency and viability in which its users can enjoy its cultural products, communicate with one another for their own self-realisation, and thus take on the role of an international linguistic minority. As with many other dichotomies of this kind, this is a false dichotomy, since most Esperantists probably occupy a position somewhere in the middle – a position that varies over time. Tired of battling a sceptical public, they may retreat into their own linguistic shells for a while, enjoying this worldwide culture for its own sake, but then re-emerging to argue the case for the language. This is one of the areas where sociological research is needed: we do not know enough about the language attitudes of Esperantists, nor about fluctuations in those attitudes.

IDEOLOGY

Behind this lack of clarity lies a larger question. If Esperanto *is* a language (and it surely is), is it *just* a language, or does it carry with it a particular ideology? In truth, the language has been used for every ideological purpose, from official Maoist pronouncements by the old-style Chinese government in the early days of the Chinese revolution to reports by the German High Command in World War I, and from anarchist sympathies in Japan a century ago to favourable commentary in a recent issue of the *Wall Street Journal.* Languages can certainly be seen as conveyors of ideology, but as any student of language attitudes (to say nothing of students of language rights) can attest, the relationship between language and identity is not linguistic but psychological, and not absolute but contingent. Studies of Esperanto speakers and organizations in the past [7-9] have revealed a left-of-centre bias hardly surprising given the internationalist origins of the language and its function as a bridge between languages and cultures; but learning the language carries with it no ideological requirement, no attitudinal prerequisites.

We might also ask what the person who has learned Esperanto actually joins. Is it a *movement* (which suggests the activist *finvenkismo* mentioned above) or a *community* (which implies self-sufficiency)? The topic is a source of endless debate in Esperanto-speaking circles. Less in question, however, are the tangible manifestations of this movement or community, among them a published literature to which hundreds, if not thousands, of writers have contributed over the years [10-12]; a network of national and international organizations, some based on geography, some on professional or social interests (and *all* currently reconstituting and decentralising themselves in new ways as a result of the electronic revolution); an extensive periodical press [13]; cultural institutions, such as study centres in many locations, specialised libraries; international meetings and gatherings. The sheer multiplicity of these institutions suggests a self-sufficient language community unlikely to be extinguished over anxiety about Esperanto's larger purpose in world affairs, and accordingly an enduring laboratory for those interested in such topics as language change, communicative competence, and a host of related issues.

LANGUAGE RIVALRY

However, Esperanto's larger purpose is increasingly open to question. The retreat of the bigger European, or European-based, languages (French, Italian, German) – a product of the vicissitudes of two world wars and new economic arrangements that have weakened the connection between language and nation in a largely borderless European Union – has allowed the expansion of English as the language of science and business; or, to put it another way, the sheer power of English has necessitated this European retreat [14]. Either way, the process, like so many other economic processes, is self-reinforcing: as educational institutions on the American model expand, and as more and more players join the international market, English offers itself as the commodity in the world language system most worthy of investment [15], and particularly as the language of globalisation.

Zamenhof introduced Esperanto in the late nineteenth century as a means to promote understanding where understanding was lacking; his broader target was the world, his immediate concern the scourge of Russian anti-Semitism [16-20]. Until the end of World War II, and even beyond, it was possible to argue that Esperanto could bridge stubborn language difficulties. Such a development would be practical as well as equitable. It was this belief that stimulated interest in its use in the League of Nations (and, later, the United Nations) [21-23], in schools across the world, and, on the left, as a means of linking the worldwide proletariat.

As long as there was relatively equal competition among the world's leading languages, Esperanto offered itself as a compromise; as that competition became unequal, for example with the drastic undermining of the status of French at the Versailles Conference in 1919 (where David Lloyd George and Woodrow Wilson insisted on the use of English), the compromising of German as a language of science during the Hitler regime [24], and, more recently, the regional decline of Russian, the option of adopting an underfunded international auxiliary language like Esperanto has become increasingly unrealistic.

Thus, what was once perhaps both equitable and practical – the adoption of Esperanto for international communication – has become merely equitable: the spirit of Esperanto imbues and coincides with the struggles for language rights, promotes hybridity and bilingualism by protecting against a one-size-fits-all approach to language difference, and offers an *alternative* means of communication, side by side with the less equitable, but increasingly practical, required mastery of English.

We should not, however, ignore those whose entirely rational approach to the problem points to other solutions than globalized English. François Grin, addressing the pay-off in foreign-

language teaching, finds that emphasis on Esperanto makes economic sense [25]; Philippe Van Parijs, while accepting the inevitability of English, argues for the application of distributive justice to balance the costs of such a solution [26]; Ralph Harry proposes an altogether simpler way of handling the language services of international organizations by the staged application of Esperanto [27]. Perhaps we should resist the assumption that the "language problem" is already solved, and that a melding of the world's cultures has no negative implications – in short, it may be that ultimately equity trumps practicality.

ESPERANTO IN SCHOOLS

Much of the ideology of equity promotes advocacy of Esperanto teaching in the schools: learning the language, it is asserted, enhances respect for other languages and cultures, opens the learner not to one country or language, but to many, and paves the way for the acquisition of other languages. It is hard, if not impossible, to prove such educational assertions incontrovertibly, since creating control groups whose enthusiasm is matched by those advocating the learning of Esperanto is difficult; but, as Duncan Charters' article in the present collection makes clear, there is plenty of evidence to show that students learning Esperanto prosper both in Esperanto and in other ways [28-30]. Yet the argument is difficult not because of its plausibility or lack of plausibility, but because of the competing interests of education systems geared to crude measures of economic development and international competition, or, in some cases, because of the politicisation of the educational system. One would not look to the United States, for example, where political pressure groups of all kinds tend to compromise educational planning, for rational approaches to bilingualism or even foreign language education [31]. If efforts to introduce Esperanto into the schools have not borne fruit today (indeed, there appear to be fewer formal classes in Esperanto in the schools across the world than there used to be), the reason is only partially due to the insufficiency of research: its main cause is shifting educational priorities, coupled with simple lack of knowledge of the alternatives, or perhaps in some cases prejudice against Esperanto on the part of language teachers eager to preserve their own shrinking territory or doubts about its relevance by those teaching English.

RESEARCH ON ESPERANTO

The lack of knowledge, for many of the reasons already mentioned, extends to the phenomenon of Esperanto itself. It is here that the question of research enters the picture. There is an acute need for more research (and more support for it [32]), and for overcoming any bias against that research generated by misunderstanding of the difference between knowledge and advocacy with which I began this essay. Jansen's investigation, in this collection, of the grammar of Esperanto, bolstered by the existence of the chair in Esperanto and interlinguistics at the University of Amsterdam now occupied by Federico Gobbo, another contributor to this collection, is an example of the exploration of the *linguistic* system of Esperanto – an objective study of an objective phenomenon. The same can be said of Fiedler's or Melnikov's research on Esperanto phraseology and colloquialism [33-35], or Koutny's on Esperanto as a complex system. Konishi's work on the history of Esperanto in Japan is likewise an attempt to identify a strain in Japanese thought *objectively,* not in the role of an advocate.

As already mentioned, a glaring gap in the field is sociolinguistic research: on the linguistic side, we know little about conversational Esperanto or about its change over time; we know little about pragmatics, or about those aspects of usage that are not prescribed by grammars and dictionaries but created on the spot through informal interaction among speakers, including word play. Relatively little is known about linguistic interference (surely an obvious topic for the researcher), code-switching or –mixing, or conversational gambits. Above all, we know little about the people who actually make up the language community.

Given Wood's reminder that Esperanto is an elective language, we might note the likelihood that, compared with other language communities, the Esperanto population is highly educated, mobile, internationally connected, and politically engaged. To my knowledge, we have no studies that can be said to have *proved* the point, but it may well be that a relatively small population has created an imposing structure of intellectual inquiry (evidenced by a profusion of international gatherings, a lively periodical press, and an increasingly lively web presence) and of cultural engagement (Esperanto literature is varied, productive, and often of high quality).

Paradoxically, a large part of the problem of research springs from the fact that many of the research findings are written in Esperanto and therefore only accessible to the researcher willing to learn the language. The dimensions of this problem are apparent from surveys of research such as Blanke provides in the collection – surveys which include scholarly work *within* Esperanto. Blanke is right to warn about reinventing the wheel. The Esperanto community, understandably, is accommodating of research into Esperanto; the external community less so. Thus, work that might be conducted in other languages is apt to get published in Esperanto for want of a home in more mainstream publications. Perhaps the biggest challenge to Esperanto research is precisely the double bind to which I have already referred: the more research that is generated in Esperanto, the more we know – but the more the researcher with limited knowledge of the language itself is disqualified from pronouncing on it. For the student of linguistics or sociology who is willing to learn the language, a more or less open field is available in the Esperanto movement and community.

ESPERANTO LITERATURE

We have so far paid little attention to those aspects of Esperanto, in addition to the language itself, that are largely invisible outside the community. Perhaps the most important is its literature, both original [11] and translated. Translation has traditionally played a key role in the development of Esperanto, not least because it forces the language to confront the description of phenomena hitherto not encountered in the normal give-and-take of ordinary communication, while at the same time serving as a means of acquainting readers of Esperanto with literary works from across the world [36]. Original literature – poetry, the novel, the short story, drama – also brings into play new experiences requiring linguistic description [37]. The unique flexibility of Esperanto, and, paradoxically, the lack of a constraining literary tradition extending several centuries into the past, provides writers with a remarkable freedom and has produced poetry and prose of considerable accomplishment. Unfortunately, precisely because of these qualities of flexibility and freshness, which actually facilitate translation *into* Esperanto, it is very difficult to translate out of Esperanto into other languages. There is very little good translation from Esperanto into, say, English. Compounding the problem is the fact that publishing in other languages tends to follow linguistic and national boundaries. Few national-language publishers are interested in producing work in a language that is spoken in far-flung corners of the world; thus the realm of Esperanto literature is one of small, often under-financed, publishers specializing in Esperanto and distributing their products largely through small mail-order booksellers. The arrival of web-based sales may change this relative isolation, but today it remains a factor in an environment in which sales of 500 copies of a given work constitute a bestseller.

ESPERANTO IN THE HISTORY OF IDEAS

However, lest we assume that in this sense Esperanto is peripheral to intellectual history, locked in its own cultural and ideological territory and isolated from larger intellectual movements, we should note a related yet opposite phenomenon – the extent to which Esperanto in fact intersects with other social and intellectual movements and forms a

significant part of intellectual history. The publication of Umberto Eco's *The Search for the Perfect Language* in the 1990s [38] opened up one such connection by pointing out that linguistic utopianism and the urge to invent languages (Zamenhof's is only the most successful among many[39, 40]) is an element in a much wider human desire – the desire to increase the expressiveness of language, to bring linguistic medium and message closer together. Bacon, Descartes, and Newton shared this goal in their attention to scientific language and the language of logic [41]. They, with their so-called philosophical languages – *a priori* attempts to create total systems of meaning – and later projectors of languages based on existing tongues (so-called *a posteriori* schemes) are the objects of study in the sub-field of linguistics known as interlinguistics (the term was created by the Danish linguist Otto Jespersen).

In a different but related medium, also alluded to by Eco, we may see the language of poetry as evidence of the poet's skill in using language better than others, or alternatively as evidence of the poet's struggle to bend an inadequate linguistic medium to his or her purposes (Is language a subtle medium that only poets can master, or a blunt instrument that they force to do their will?). When Zamenhof created Esperanto, he chose to write poetry in it, and to use it for translation: his first major accomplishment was *Hamlet,* the culmination of his translating work the entire Old Testament. The poetry, and indeed Zamenhof's work in general, makes it clear that he saw his language not simply as a neutral linguistic medium, but as a conveyor of understanding where previously there was no means for such understanding, and above all as a conveyor of humane values. Only in recent years is this extraordinary story receiving the attention from biographers that it deserves, and the intersection of Zamenhof's ideas not only with the impulses described by Eco is being examined, but also their intersection with the intellectual currents of East European Jewry and the Jewish Enlightenment [16, 17, 19, 42]. Eliezer Ben-Yehuda, the driving force behind the creation of Modern Hebrew, was influenced by many of the same forces – in the same region of Europe at the same time – as Zamenhof [43]: one sought to move his people's linguistic tradition toward the creation of a Jewish homeland; the other sought to take elements from that tradition and reshape the entire world.

Zamenhof embarked on his project at a time of optimism in science and technology – a time of the invention of the telephone, the expansion of telegraphy, the shift from the horse to the internal combustion engine [44, 45]. Zamenhof's creation of Esperanto was part and parcel of the movement that created the utopianism of Edward Bellamy and Henry George (and Karl Marx), of the emergence of international organizations like the Red Cross and the Universal Postal Union, of international expositions and the expansion of world trade, of growing scientific cooperation and the pursuit of the possibility of an international auxiliary language as the language of science [46]. It was a time when the intractable problems of the past and present seemed, at least for a moment, tractable. Thus Esperanto was also a response to the growing shadow of anti-Semitism, the disquieting rise of nationalism, and the human exploitation that accompanied it, both at home and in far-flung empires.

When, a few years later, the pace of scientific and technological discovery led not to utopia but to a world war, the Esperantists made use of their unique international network to reunite families across warring states, and to promote international communication at a time when governments were dead set against it. Young men imprisoned in Britain as conscientious objectors studied Esperanto; others learned it in the trenches on the western and eastern fronts. When the war was over, Esperanto played significant roles in the proletarian revolution in the east [47], in the Spanish civil war [48, 49], and in numerous other social movements – and, with a ghastly inevitability, Esperantists were duly persecuted by both Hitler and Stalin for their audacious interest in socialism (Hitler) and cosmopolitanism (Stalin) [21].

Nor were these developments limited to the western world. Sho Konishi, in the present collection, demonstrates the role of Esperanto in the work of anarchist modernisers in Japan; other scholars have shown how Esperanto influenced the Romanisation effort in China in the 1920s and animated Chinese resistance to the Japanese invasion in the 1930s [50-53].

Konishi's work, here and elsewhere, points to the link between intellectual developments and literary history [54]. There is hardly a literature in the world that has not been influenced in some way by Esperanto: there are references to Esperanto in James Joyce's work; Orwell's Newspeak borrows not only from Basic English but also from Esperanto; Tolkien dabbled in Esperanto as well as Elvish; Jules Verne was fascinated by Esperanto; it influenced the work of the Hungarian Karinthy – and so on [55, 56].

The language also intersected with the emerging field of linguistics. Jan Baudouin de Courtenay, founder of the Kazan school and precursor of the structuralism of Ferdinand de Saussure, was a convinced enthusiast for Esperanto, and Saussure's younger brother René was active in Esperanto circles and wrote on Esperanto linguistics [57]. Later, as Wera and Detlev Blanke explain in the present collection, Eugen Wüster, father of terminology science, used Esperanto as a model in his efforts to standardize the development of scientific and technical vocabulary. His was only one of a number of connections between planned language and language planning, which I address elsewhere in this collection.

Closer to our own time, Gobbo has pointed out, also in the present collection, the link between Esperanto and the development of machine translation. While often these revelations have been slow in coming, they leave one with the clear impression that, far from being isolated or lacking in influence, Esperanto played a role in numerous social and intellectual movements throughout its history.

Thus Esperanto, little known though it may be (and despite efforts to make it better known [58-61]), has much to offer the researcher, if the researcher (such is the irony…) can cross the language barrier separating Esperanto from consideration by outsiders, and if this researcher has the tools to discover its many influences.

Defining the nature of this "voluntary, non-ethnic, non-territorial" community (we note that Wood describes Esperanto by what it is not) is perhaps the biggest and most fundamental challenge. Most generalizations about Esperanto fail to address the sheer heterogeneity of the speech community, the eclectic nature of its language, and the extent of its footprint. As Esperantists sometimes point out, there can be no doubt about its success as a means of linguistic expression [62], even if it has not (yet?) succeeded as a broadly accepted means of international communication.

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LANGUAGE PLANNING AND PLANNED LANGUAGES: HOW CAN PLANNED LANGUAGES INFORM LANGUAGE PLANNING?

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ABSTRACT

The field of language planning (LP) has largely ignored planned languages. Of classic descriptions of LP processes, only Tauli (preceded by Wüster) suggests that planned languages (what Wüster calls *Plansprache*) might bear on LP theory and practice. If LP aims "to modify the linguistic behaviour of some community for some reason," as Kaplan and Baldauf put it, creating a language *de novo* is little different. Language policy and planning are increasingly seen as more local and less official, and occasionally more international and cosmopolitan. Zamenhof's work on Esperanto provides extensive material, little studied, documenting the formation of the language and linking it particularly to issues of supranational LP. Defining LP decision-making, Kaplan & Baldauf begin with context and target population. Zamenhof's Esperanto came shortly before Ben-Yehuda's revived Hebrew. His target community was (mostly) the world's educated elite; Ben-Yehuda's was worldwide Jewry. Both planners were driven not by linguistic interest but by sociopolitical ideology rooted in reaction to anti-Semitism and imbued with the idea of progress. Their territories had no boundaries, but were not imaginary. Function mattered as much as form (Haugen's terms), status as much as corpus. For Zamenhof, status planning involved emphasis on Esperanto's ownership by its community – a collective planning process embracing all speakers (cf. Hebrew). Corpus planning included a standardized European semantics, lexical selectivity based not simply on standardization but on representation, and the development of written, and literary, style. Esperanto was successful as linguistic system and community language, less as generally accepted lingua franca. Its terminology development and language cultivation offers a model for language revival, but Zamenhof's somewhat limited analysis of language economy left him unprepared to deal with language as power.

KEY WORDS

planned languages, language planning, Esperanto, modern Hebrew

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INTRODUCTION: LANGUAGE PLANNING

In an article published in the journal *Language Problems and Language Planning* in 1977 [1], Moshe Nahir described "the five aspects of language planning" as purification, revival, reform, standardization, and lexical modernization. A second, highly influential article in the same journal seven years later [2] added six additional "aspects": language spread, terminology unification, stylistic simplification, interlingual communication, language maintenance, and auxiliary-code standardization. In describing these aspects of language planning, Nahir sought to focus on the goals of planning rather than the processes: the processes had been identified by Haugen [3-5], but the goals remained undefined.

A great deal has happened in language planning since Nahir published his two articles. There has been a shift away from seeing language planning as a function of the state or of institutions toward seeing planning and policy as occurring at all levels, from the most formal to the most informal [6]. Furthermore, the optimism that surrounded the first British and American forays into the field has largely given way to the realization that planning the future of language is at best an inexact science, at worst an activity unlikely to achieve lasting results. Change may come about through conscious desire, but that desire tends to be that of the collective, or a politicized part of that collective, rather than the deliberate efforts of individuals or even institutions.

Nahir's article was unusual in giving room, under the general heading of interlingual communication, to two concerns often shunted aside by LP experts: terminology unification, and auxiliary languages – languages created by design for the purpose of communication across regional and ethnic languages, now more commonly known as planned languages (the term *Plansprache* was created in 1931 by Wüster [7]: see below [8]). While terminology unification is certainly an element in the field of language planning, and while terminology science is an important and ongoing pursuit, it receives relatively short shrift in general theories of language planning, perhaps because of its fundamentally interlingual and technical nature and also because it sits somewhere between lexicology on the one hand and semantics on the other (terminology is essentially concerned with concepts rather than lexis; its goal – both a corpus goal and a status goal – is consistency; its territory is the relationships among concepts).

PLANNED LANGUAGES

As for planned languages, what one might describe as the Anglo-Saxon branch of language planning – going back to Le Page's *The National Language Question* of 1964 [9] and Rubin and Jernudd's *Can Language Be Planned?* of 1971 [10] – has largely ignored planned languages. This is unfortunate, since the only such language to develop an authentic speech community, namely Esperanto, displays in its ongoing development many of the processes that are of direct interest to specialists in language planning [11, 12]. Indeed, Esperanto today is not fundamentally different from other languages, even if its origins are different [13, 14].

Of classic descriptions of language planning processes and goals, e.g. [5, 15-18], only Tauli [15] suggests that planned languages might be relevant more generally to language planning theory and practice. Tauli's sense of the field was different from that of later scholars in that he saw the field as existing long before it had a name (the term goes back at least to Bodmer [19]) – particularly in terminology standardization and in planned (auxiliary) languages.

TERMINOLOGY SCIENCE

In truth, the fields of terminology science and planned language are near allied historically: Eugen Wüster, generally regarded as the founder of terminology science, began his work at

the age of nineteen as a result of a commission from a minor publisher to compile a small Esperanto dictionary, having learned that language several years before. He became fascinated by the strengths and weaknesses of the system of word formation in Esperanto, an issue that had already preoccupied René de Saussure, brother of Ferdinand, who had published extensively on the subject [20]. The result of Wüster's interest was a far more extensive dictionary that occupied him for much of the next decade (four sections of this Esperanto-German "encyclopedic dictionary" appeared between 1923 and 1929, until its publication was halted by the advent of the Nazi regime [21]), and that provided the theoretical underpinning of his major work *Internationale Sprachnormung in der Technik* [7]. Out of this effort, and parallel efforts by Ernest Drezen (also a speaker of Esperanto) in the Soviet Union, grew the terminological work of the International Standards Association, later the ISO [21; pp.243-254]. Wüster sought to apply the consistency that he perceived in Esperanto (imperfect and unsystematic as it was in some instances), creating transparent Esperanto models that could then serve as starting points for terminology development in other languages (on Wüster, and on terminology and Esperanto, see W. Blanke [22] and in this collection).

Esperanto was imperfect for Wüster's purposes (though better than ethnic languages and more established than other planned languages) because it was not fully schematic and was not designed with terminological transparency in mind. It was one among hundreds of language schemes developed by individuals for the purpose of interlingual communication [23-27]. It is customary to divide such schemes into two categories – so-called *a priori* (or philosophical) schemes, based on the encyclopedic classification of all phenomena and linked with the development of mathematical logic (Descartes, Newton, and Leibnitz all dabbled in a priori language schemes [28]), and *a posteriori* schemes based to varying degrees on existing ethnic languages, particularly European languages. This latter category, our principal concern here, can be further subdivided into schematic and naturalistic projects, according to their emphasis on mnemonic systems (the so-called correlatives in Esperanto, for example) on the one hand, and their following the vagaries of ethnic languages on the other. In general, such projects are more schematic than ethnic languages, but less schematic than so-called philosophical languages. In the case of Esperanto, for example, the system of word formation familiar to us from Latin and only partially consistent in modern western languages, is made fully applicable in all instances in Esperanto, thereby allowing for the constant expansion of the language through the application of simple morphological rules.

ZAMENHOF AS LANGUAGE PLANNER

These characteristics of Esperanto are a direct product of the work of its creator, Lazar Ludwik Zamenhof, but many characteristics of the language do not have so simple a genesis. Unlike most authors of planned languages, Zamenhof's interest was not primarily linguistic, but humanitarian [29-32]. His Esperanto, published in 1887, in Warsaw, came at about the same time as Ben Yehuda's advocacy of an expanded and modernized Hebrew. Both Zamenhof and Ben Yehuda were born in the same corner of northern Europe: they both considered themselves Litvaks, Lithuanian Jews. Both were driven to an interest in the unifying power of language by the anti-Semitic violence that swept across the Russian Empire in the 1880s. Their interests, in other words, lay in community and ideology rather than in language per se. Function mattered as much as form (Haugen's terms), status as much as corpus.

Zamenhof's work on Esperanto provides extensive material, little studied, documenting the formation of the language and linking it particularly to issues of supranational language planning. While much can be gleaned from his writings about the linguistic intricacies of planning a language, perhaps more germane is his emphatic belief in the need to create a *community of speakers* who could take ownership of the language and expand and adapt it

through the use of the open systems and principles that he had built into the language. Unlike other authors of planned languages, Zamenhof's interest was not control but participation. Now, 128 years later, the vast majority of the vocabulary has been created by the speakers of the language rather than its originator; grammatical forms, while based on the original principles, have moved in new directions; pronunciation has shifted; in short, Esperanto is subject to language change like all other languages.

Of course, a planned language is different from a conventional ethnic language in that certain historical processes are reversed: writing comes before speech; whereas one of the goals of language planning may be standardization, planned languages begin with standardization and progress to the spontaneous and non-canonical; community is a manifestation of language, rather than language a manifestation of community. Furthermore, language and community advance hand in hand: everyone has to learn the language. This means that it begins as a community of imperfect speakers (much, by the way, as Hebrew did in Palestine [16; pp.11-14]) who must gradually master and use the system. Arguably, all three forms of language planning in Cooper's definition – corpus, status, acquisition – must be applied at once.

For Zamenhof, status planning involved emphasis on Esperanto's ownership by its community – a collective planning process embracing all speakers. Corpus planning included a standardized European semantics (with its attendant inconsistencies, as noted by Wüster, [8; pp.27-43]; cf. Schubert [33]), lexical selectivity based not simply on standardization but also on representativeness, and the development of a coherent and recognizable style.

ESPERANTO AND LANGUAGE REVIVAL

The parallels with Modern Hebrew are obvious. It is axiomatic that the most powerful unifier among threatened languages is the use of the language in the home. Thus, the defenders of Irish point to the shortsightedness of a policy that puts emphasis on the teaching of the language in the schools and does relatively little to preserve it in the home [34]. Yet Hebrew moved in the opposite direction: from school into the home, as noted by Cooper [16; p.13]. While the number of speakers of Esperanto who acquired the language in the home is still small and their language use has little influence on linguistic norms in Esperanto [35, 36], some of the most prominent members of the Esperanto community would consider themselves native speakers.

Perhaps the place where language planning and Esperanto intersect most obviously is in language revival [37, 38]. Languages such as Cornish, for example, are faced with problems closely parallel to those of Esperanto. Cornish survives in written texts. whereas only the germs of Esperanto existed in Latin and western European linguistic precedents. However, the users of Cornish are mostly imperfect speakers; it requires acquisition planning in the form of textbooks and other learning aids; all of its speakers speak it as a second language and under limited circumstances; it requires modernization and expansion. While planning for the expansion of Esperanto (both corpus planning and status planning) cannot be regarded strictly as language *revival*, the problems overlap.

LANGUAGE MAINTENANCE

The same can be said of a number of Nahir's other so-called processes, notably language standardization, language spread, language maintenance, and of course terminology development and unification. While the Esperanto Academy makes an effort to preserve and establish standards, for the most part the process of terminology development is informal: the ideological basis of Esperanto – the promotion of international understanding – serves a normative function by motivating speakers to maximize their comprehensibility. At the same

time, an active original literature permits experimentation, and a translated literature allows for the expansion of the lexis and the application of the language in new ways; literary translation was an important element in Zamenhof's agenda and has characterized Esperanto from the beginning [39]. While terminology development in Esperanto may be regarded as insufficient both in theory and in practice, at least there is lively debate on the subject [22, 40-42] – again, debate which could and should be shared with language revivalists dealing with similar problems.

Esperanto speakers are nothing if not contentious: there is constant tension between the neologists and the traditionalists (see, for example, Piron [43]), and between the activists and those who see Esperanto as primarily a language community rather than a movement [44]. Perhaps the most persistent difficulty faced by this community is simple language maintenance: maintaining the resources needed for the full exploitation of the language (publishing, artistic creation, journalism, radio, television, music), and preserving language loyalty. With over a century of experience of such matters, there is much that the Esperanto movement and community could share with language revival movements [45]. If such sharing is currently not taking place, this may be a result of lack of attention to Esperanto with its hundreds of thousands of speakers and its long history – a lack of attention arising from the imperfect association of Esperanto with dreamers and hobbyists and a failure to recognize its significant intellectual contribution to language planning through such individuals as Eugen Wüster and his successors.

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HOW NOT TO REINVENT THE WHEEL …
THE ESSENTIAL SCHOLARLY LITERATURE
IN INTERLINGUISTICS AND ESPERANTOLOGY

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ABSTRACT

Studies of interlinguistics written in ethnic languages – particularly research on planned languages – are often insufficiently grounded in the essential scholarly literature. English-language studies frequently fail to consider scholarly literature in German, Russian, French, and other languages. An important part of this specialized literature is written in planned languages (particularly Esperanto) and all too frequently remains unknown. For lack of knowledge of actual planned-language praxis, misunderstandings arise, for example on the relations between a language and a language project, a language and a language community, language and culture, expressibility in planned languages, and so on. For scientifically valid studies, specialized materials written in planned languages (approximately 95 % of them in Esperanto) are essential. This article provides an overview of the principal accessible sources of scholarly literature on interlinguistics and Esperantology and, inter alia, gives information on specialized libraries and archives, bibliographies, major monographs, anthologies, conferences and conference proceedings, university studies and dissertations, periodicals, internet materials, and handbooks for interlinguistics specialists.

KEY WORDS

CLASSIFICATION

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INTRODUCTION

DEFINITIONS

While not ignoring the various scholarly positions on the objectives of interlinguistics (see, for example [1; pp.19-34, 2]), for the limited purposes of the present study I will apply the most commonly accepted definition, namely that *interlinguistics* is the study of planned languages in theory and practice. However, for more and more researchers interlinguistics also includes other aspects of language invention, language planning and language policy. Sometimes the term interlinguistics refers to the study of interlinguistic contact and interlinguistic relations and interferences (e.g. [3]). Although these aspects of the topic can play a role in interlinguistic research, they do not constitute the traditional understanding of the objectives of interlinguistics.

A *planned language*[1] (also *universal language, artificial language, world* [*auxiliary*] *language, international constructed language*) is a language consciously created to facilitate international linguistic communication. *Esperantology* (*Esperanto studies*) is a branch of interlinguistics which studies the sources, principles of construction, structure, development and application of Esperanto. It includes studies of the language community because, unlike ethnic languages, the language "created" its community.

MISUNDERSTANDINGS

The quality of a study on a given topic is heavily dependent on, among other things, the scholarly literature consulted or neglected. Although it is essential to acquaint oneself with the relevant publications before expressing oneself on a given topic, this often does not occur.

Opinions expressed on planned languages, particularly Esperanto, by authors of studies of linguistics and language policy, in various languages, are often superficial or are not based on points of view based in fact or rooted in the disciplines in question (see for example [4-6]). Analysis of such texts often reveals two principal reasons for such misunderstandings:

- no distinction is made between planned language *projects* that never became languages, and authentically functioning planned languages. There are hundreds of projects, and new ones are constantly appearing, particularly in the internet[2]. The principal representative of planned language systems that achieved the status of languages is *Esperanto,* proposed in 1887 by L.L. Zamenhof (1859-1917) as a preliminary project. From this preliminary document, the users – as a result of the interplay of various factors [7] – created over a period of decades a richly expressive means of communication with the principal characteristics of a developing language. Other systems that achieved the status of languages include *Ido* (primarily the work of Louis Couturat 1907) and *Interlingua* (developed chiefly by Alexander Gode 1951), which still have small language communities,
- not infrequently, writers (e.g. [8]) present various different manifestations of language invention equally, in a single context, so that Esperanto appears next to Klingon and other recent "cult languages," which – unlike traditional planned languages – were not constructed to facilitate international communication.

This failure to distinguish among invented languages leads to one of the chief arguments against planned languages, namely their alleged lack of culture. Authors seem unaware that in the case of Esperanto there exists a language community which for almost 130 years has used and therefore developed the planned language. This community is the creator, carrier, and conserver of a specific culture containing elements of world culture and also unique

elements linked specifically to characteristics of the language community itself, with its institutions, activities, history, traditions, and literature.

DIFFICULTIES IN APPROACHING THE PHENOMENON OF PLANNED LANGUAGES

Inaccurate presentations of topics in interlinguistics and Esperantology are not automatically expressions of prejudice or intentional ignorance. We must concede that a planned language, functioning in practice, is an anomaly in the conceptual sphere of no small number of traditionally trained linguists.

Sometimes we also encounter a kind of psychic opposition to an "artificial" language, which seems to constitute an absurd contrast, or even a threat, to a "natural" language [9]. Persecution of Esperanto under Hitler and Stalin may also have a deterrent effect in circles insuffiently knowledgeable politically and historically. And, in addition, there is indeed a specific language barrier that inhibits access to the scholarly literature (see sub-section *The M.L.A. Bibliography*, further in the text). Even without that barrier, finding useful sources among the considerable quantity of studies is problematic. I will limit myself here to a few of those most useful materials.

BIBLIOGRAPHIES

BASIC BIBLIOGRAPHIES

To find one's way in the scholarly literature, it helps to know where to look for basic information and so develop an awareness of the sources (on this topic see [10]). The most extensive historically oriented bibliography, particularly for works up to the 1920s, was compiled by Stojan (over 6 000 titles). The bibliography was reprinted in 1973 [11]. A more up-to-date bibliography (and bibliography of bibliographies) appeared in 1985 [12; pp.296-381] (with over 2 000 titles). Also Wood [13] and Tonkin/Fettes [14] provide a selection of more recent work.

The most recent summary bibliography of interlinguistics and Esperantology (in Esperanto and German), with more than 300 titles (mostly monographs and anthologies, with few individual studies and without information on web access) was compiled by Irmi and Reinhard Haupenthal [15][3].

BIBLIOGRAPHIES ON INDIVIDUAL PLANNED LANGUAGES

Few planned languages have reasonably complete bibliographies. One such is *Volapük,* in which no recent works have appeared [16], another is *Ido*, in which occasional publications are still produced [17]; a third is *Occidental-Interlingue*[4], which has at its disposal today only a modest newsletter [18]. Occasionally information on publications in *Interlingua* is posted on the internet[5].

PLANNED-LANGUAGE LITERATURE PUBLISHED IN INDIVIDUAL COUNTRIES

There are a few bibliographies of planned-language literature appearing in individual countries, namely the Czech Republic, Japan, Yugoslavia, Lithuania, the Netherlands, and USSR/Russia [15; p.5]. There is also a bibliography of all interlinguistics publications appearing in the German Democratic Republic between 1949 and 1990 [19].

PERSONAL BIBLIOGRAPHIES

Personal bibliographies tend to be included in Festschriften, but are sometimes published separately. Such bibliographies exists for André Albault, Adolf Burkhardt, Louis Couturat,

Ada Csiszár and Henri Vatré [15; pp.5-6]. There are particularly detailed bibliographies for Reinhard Haupenthal [20], Aleksandr Duličenko [21], Gaston Waringhien [22], Humphrey Tonkin [23] and Detlev Blanke [24].

Bibliographies of the publications of more than thirty individuals have appeared in *Informilo por Interlingvistoj* (IpI) since 1992 (up to and including 2014), among them such prominent interlinguistics scholars as Otto Back (57)[6], Věra Barandovská-Frank (81), Ignat F. Bociort (90), Dalibor Brozović (69), Tazio Carlevaro (73), André Cherpillod (82), Renato Corsetti (76), Till Dahlenburg (69), Michel Duc Goninaz (68), Aleksandr D. Duličenko (39, 42, 58-59), Sabine Fiedler (30, 68), Helmar Frank (84-85), Federico Gobbo (86), Reinhard Haupenthal (92-93), Magomet I. Isaev (65), Wim Jansen (63), Goro Christoph Kimura (68, 84-85), Christer O. Kiselman (90), Ilona Koutny (70), Erich-Dieter Krause (92-93), Ulrich Lins (68), Aleksandr Melnikov (88-89), Carlo Minnaja (69), Hermann Ölberg (42), Claude Piron (65, 68), Alicja Sakaguchi (34) and Klaus Schubert (63).

PERIODICALS

Periodicals are the sources of the most up-to-date information on the history and current activities of planned-language communities. The largest of such bibliographies lists 14 143 titles [25]. Mathé [26] has analyzed part of this total (11 393 titles) as shown in Table 1. The proportion of journals in the various languages remains little changed.

Table 1. Part of bibliographies lists as analyzed by Mathé [26].

Journals in or about the language	Founding year of language	Number of journals	% of total
Esperanto	1887	10 440	91,63
Volapük	1879	297	2,61
Ido	1907	286	2,51
Occidental-Interlingue	1922	99	0,87
Interlingua (IALA/Gode)	1951	83	0,73
Other planned languages	-	188	1,65

UNIVERSITY DISSERTATIONS AND FINAL THESES

Interlinguistics and Esperanto (or Esperantology) are official subjects of study only in a few universities. In this regard particularly worthy of mention is the work of István Szerdahelyi (1924-1987) at Eötvös Loránd University (ELTE) in Budapest, and his ten-or-so university textbooks (see [27]). The holder of the chair in interlinguistics at the University of Amsterdam was, until recently, Wim Jansen (now succeeded by Federico Gobbo), also the author of textbooks [28]. The program in Interlinguistic Studies at Adam Mickiewicz University in Poznan, Poland, has been in operation since 1998 under the guidance of Professor Ilona Koutny[7].

Over the past four decades, the number of university dissertations and various kinds of final theses has grown greatly. They have been listed by Symoens [29, 30] and, since 1995, in the bulletins IntI and IpI (see further in the text). Information on university dissertations is also available on the internet[8].

SERIAL BIBLIOGRAPHIES

BULLETINS

Two bibliographically oriented bulletins attempt to provide regular information on publications, conferences and other events in the field of interlinguistics and Esperantology:

- *Interlinguistische Informationen* (*IntI*)[9], bulletin of the German society Gesellschaft für Interlinguistik e.V. (GIL, Gesellschaft für Interlinguistik) has been published regularly since 1992, reaching its 93rd issue at the end of 2014 (more than 1400 pages in total). *IntI* is aimed at German-speaking linguists and people interested in linguistics,
- *Informilo por Interlingvistoj* (*IpI*)[10] is published by the Centre for Research and Documentation on World Language Problems (CED) and serves linguistically interested Esperantists. It has been published (with interruptions) since 1974, reaching 114 issues and a total of over 2 000 pages by the end of 2014 [31]. The two bulletins carry much of the same information but vary somewhat to match their readership.

LINGUISTICS BIBLIOGRAPHIES

Several linguistics bibliographies contain sections on interlinguistic materials and Esperanto. Among them, the most important are:

- *Bibliographie linguistique de l'année ... et compléments des années précédentes.* Comité International Permanent des Linguistes, Kluwer, Dordrecht & Boston & London[11]. The bibliography began publication in 1939 and is the internationally most extensive linguistics bibliography,
- *Bibliography of Linguistic Literature*, Klostermann, Frankfurt[12].

These bibliographies record 10-20 titles yearly.

- The U.S. abstract service *Linguistics and Language Behavior Abstracts (incorporating Reading Abstracts)*, formerly San Diego, now Ann Arbor, Michigan) began publication in 1965, with five extensive editions yearly[13]. The volumes contain concise summaries of linguistics journals and monographs. In section 18, *International Languages,* it is not uncommon to find English summaries of interlinguistics materials published in various languages.
- *International Bibliography of Books and Articles on the Modern Languages and Literatures. New York,* published by the *Modern Language Association of America (MLA)*[14].

THE M.L.A. BIBLIOGRAPHY[15]

Organization of the bibliography

The largest quantity of interlinguistic studies is recorded in the huge volumes (now in the form of an online data base) of the MLA Bibliography. Before 1931 the bibliography formed part of the Association's journal, PMLA (then known as Publications of the Modern Language Association of America), and covered only U.S. publications, but since then its international coverage has steadily increased.

Since 1960, interlinguistics publications have been listed primarily under the following rubrics:

1960-1967: International Languages (under General Language and Linguistics),

1968-1973: Interlinguistics (under Composite and Derivative Languages, Other Communicative Behavior),

1974-1980: International Languages,

1981-1982: International Languages. Auxiliary Languages,

as of 1983: Auxiliary Languages. International Languages[16].

In the period 1960-1968 only a few sporadic titles were listed, and very few from 1969 to 1978. Continuous and more systematic compilation began in 1969.

Between 1960 and 1998 a total of 5 723 titles were listed; for the period 1999-2008 some 2 735 titles were added. So between 1960 and 2008 a total of 8 458 titles appeared, primarily

on Esperanto. These numbers are, however, only minimal, because a further group of items must be added, from the rubric Invented Languages and (as of 2000) in the section Teaching of Language (dealing, among other things, with the methodology of teaching Esperanto). Further items can be found in the sections on literatures and literary theory, for example on national literary translations in Esperanto, literary criticism, and individual authors who write in Esperanto.

Until 2008, the MLA Bibliography was published annually in two large volumes, one of them a Subject Index, and the other containing Classified Listings and an Author Index. These volumes are generally available in national and university libraries and linguistic and literary institutions. The Subject Index recorded the items by topic and (in the case of literary entries) by author (e.g. articles on the work of the important original Esperanto writer William Auld, or on Esperanto translations of the works of Shakespeare). The items were referenced to the Classified Listings. The Classified Listings allowed the user to identify individual planned language systems, particularly Esperanto. The volume also contained a huge index of authors.

General subsections in the opening chapter

I have made a somewhat systematic study of items registered in the ten most recent printed compilations, so for the period 1999-2008.

In the introductory part of the chapter entitled "Auxiliary Languages. International Languages" I found (though not in all years), the following subsections:

> bibliography, grammar (grammatical categories, pronoun), lexicology (lexicography, word borrowing), morphology, phonology (syllable), syntax (voice), translation (machine translation), writing systems (orthography).

Mentioned during this period are studies in various languages dealing with the following planned language projects, in addition to Esperanto: *Adjuvilo, Dilpok, Glosa, Ido* (bibliography, grammar, lexicology [etymology, phraseology], morphology, onomastics [toponymy]), *Interlingua* (bibliography, grammar, lexicology [lexicography], morphology [word formation], translation), *Ling, Solresol, Paraglot, Loglan/Lojban* (syntax), *Neo, Occidental* (bibliography, grammar, lexicology [etymology, word borrowing], morphology, phonetics [orthoepy], syntax [word order], writing systems [orthography], *Slovio* (lexicology), *Unish* (grammar, lexicology, syntax, writing system), *Volapük* (bibliography, lexicology [etymology, lexicography]) and *Zilengo*[17].

Subsections on Esperanto studies

The chapter "Esperanto language" deals with studies largely focused on Esperanto, with the following divisions:

> bibliography, grammar (article, preposition, pronoun, verb), lexicology (etymology, lexicography, phraseology, slang, terminology, word borrowing), morphology (word formation), onomastics (anthroponymy, toponymy), phonetics (consonants, orthoepy, phonology, speech synthesis, syllable, vowels), pragmatics, prosody (intonation), semantics, stylistics (metrics, rhetoric), syntax (aspect, case, clause, negation, predicate, voice, word order), translation (machine translation), writing systems (alphabet, graphemics, orthography, punctuation).

In short, there exists a diverse literature in Esperanto studies, of dimensions that cannot be ignored.

Material recorded in the MLA Bibliography as of 1963 can also be consulted electronically. As of 2009, the entries can be accessed only in electronic form. Access to this material requires a password, generally available (as with the printed volumes) through universities and research institutes, national libraries, and similar institutions.

What languages are used in the scholarly literature?

Increasingly, scholars tend to cite literature in English, paying little attention to work in other languages (see, for example, [32-34]). This shortcoming prompted me to investigate the "language application policy" of MLA's bibliographers. Do they tend to favor English-language literature, also in the fields of interlinguistics and Esperanto studies?

I carried out a detailed analysis of the languages of publication (main heading 'Linguistics', section on "Auxiliary language. International language") in the volumes for 1999-2008 [35]. All told, 2 735 bibliographical units were listed. They were divided into the following languages of publication, Table 2.

Table 2. Analysis of language of publication in the volumes MLA 1999-2008 [35].

Language of publication	Quantity	Quantity, %	% by Fiedler/Tonkin[18]
Esperanto	1943	71,0	72,9
German	298	10,9	10,0
English	110	4,0	5,2
French	57	2,0	2,9
Italian	41	1,5	
Russian	31	1,3	5,7
Dutch	29	1,0	
Hungarian	28	1,0	
Other planned languages[19]	81	3,0	
Other languages	117	4,3	3,3[*]

[*]*Other planned languages* and *Other languages* together.

Table 2 shows that, at least in terms of quantity of publications, English is not the principal language of publication. The quantities, of course, say nothing about quality. They do indicate, however, that interlinguists, at least during the years in question, tended to publish their work in Esperanto, and that interlinguistic work was particularly active in Germany. But also in English-speaking countries and in such places as Estonia, France, Hungary, Italy, the Netherlands, and Russia there existed, and continues to exist, an identifiable research tradition on interlinguistic topics. Because scholars in these countries, and also in Germany, often publish their work in Esperanto, the figures do not give an entirely accurate picture of actual research activity.

MONOGRAPHS AND ANTHOLOGIES

BASIC WORKS

Among basic works on interlinguistics and Esperanto studies are historically important items by Couturat and Leau [36] and Drezen [37].

The earliest rigorous analyses of planned languages in terms of their communicative potential were carried out by Wüster [38]. Other more recent overviews can be found in [2, 12, 39-47].

In addition, numerous monographs have appeared on universal languages in particular historical periods (17th and 18th centures), and on authors and regions [15; p.7]. Künzli [48] describes the particularly rich interlinguistic tradition of Switzerland. Sutton [49] records the most important original literary works written in Esperanto. See also the English-language anthology of Esperanto literature by Gubbins [50]. Abundant material on planned languages is included in the encyclopedic work of Albani and Buonarotti [51].

ANTHOLOGIES, FESTSCHRIFTEN, CONFERENCE PROCEEDINGS

Relatively up-to-date information can also be found in various anthologies and multiple-author publications: Haupenthal & Haupenthal [15; p.8] mentions more than 30 titles. Historically important material has been reprinted by Haupenthal [52] and more recent contributions by Tonkin [53]. Among anthologies, particularly worthy of mention is Duc Goninaz [54]. From time to time, beginning in 1985, Festschriften dedicated to outstanding interlinguists and esperantologists have appeared, along with books dedicated to non-Esperantist linguists and interlinguistic studies [15; p.9, 55][20].

Most important among conference proceedings are the partly Russian-language and partly Esperanto-language series *Interlinguistica Tartuensis* (1982-2009, 9 volumes, ed. Aleksandr Duličenko) and the German-language series of the Gesellschaft für Interlinguistik (GIL, the Interlinguistics Society)[21], whose conference proceedings had produced by the end of 2014 a total of 21 volumes (on GIL see [56]). Although annual Esperantology Conferences have had a place in the World Congresses of Esperanto since 1978, their proceedings have been published[22] only since 2005.

INTERLINGUISTIC PERIODICALS

At the end of the 19th century the first small journals addressing various planned languages (or projects for planned languages) began to appear. These journals also discussed what linguistic details should characterize a "perfect" language [15; pp.14-15][23]. Among current periodicals, *Language Problems and Language Planning* (*LPLP,* Amsterdam)[24] publishes, in addition to contributions on language policy, also articles on interlinguistics. Work on Esperanto studies can also be found in *Esperantologio* (1949-1961, Copenhagen, ed. Paul Neergaard) and its successor *Esperantologio. Esperanto Studies* (launched 1999, Uppsala, ed. Christer Kiselman)[25].

Electronic journals include *Lingva Kritiko*[26] and, as of 2010, *Interlingvistikaj Kajeroj (InKoj)*[27]. Problems in the teaching of Esperanto are discussed in [57-59], and Internacia Pedagogia Revuo[28]. The journal of the Universal Esperanto Association, *Esperanto*[29], offers information on the practice of the language and on new publications.

WORKS SPECIFICALLY ON ESPERANTO STUDIES (ESPERANTOLOGY)

THE LANGUAGE

In the titles mentioned above, there is abundant material on Esperantology. However, we must also note some more specialized items. The first detailed bibliography of Esperanto studies was compiled by Neergaard [60]. It contains work appearing up to the end of the 1930s. From then on, the following basic works on Esperanto studies record the principal contributions, listed as of the 1970s also in the MLA Bibliography.

We should mention particularly studies of the language by Janton [61][30], Wells [62], Gledhill [63], and the extensive grammars of Kalocsay and Waringhien [64] and Wennergren [65]. Specialized studies include those on versification [66], phraseology [67], wordplay and expressions specific to the Esperanto community [68, 69], and rhetorical devices [70]. Wera Blanke [71, 72] summarizes the practice and problems of terminological work and particularly the development of terminology. Single-language and two-directional dictionaries and glossaries have been registered in print by Ockey and Sutton (2002) and (as of 1980) by Vachey[31] (in electronic form only).

THE LANGUAGE COMMUNITY

A good overview of Esperanto up to 1930, in theory and (particularly) in practice, is provided by the Esperanto encyclopedia *Enciklopedio de Esperanto* [73] and, up to 1970, by the handbook by Lapenna, Lins, and Carlevaro [74].

The history of the Esperanto language community is fairly well covered [15; pp.10-11]. An overview of the history of the Universal Esperanto Association, the language community's most important international organization, is provided by van Dijk [75]. Lins [76] deals particularly with the persecution of Esperantists under Hitler and Stalin. Current problems of the Esperanto movement are analyzed by Tonkin [77]. The workers' Esperanto movement has been studied by Kolbe [78].

There are several biographies of the originator of Esperanto, L.L. Zamenhof [15; p.11]. The most traditional is that by Privat [79], the most current that by Korĵenkov [80], available in an abridge English-language edition [81]. Also worthy of mention is biography byKünzli [82]. The Zamenhof's works and those originating under his influence were republished and analyzed between 1974 and 2004 by the Japanese scholar Itô Kanzi (under the pseudonym Ludovikito) in 58 volumes (see the list in [79; pp.173-176]). A selection of works by Zamenhof is available in Italian translation [83].

LIBRARIES AND ARCHIVES

The first scholar to describe the status of libraries, archives and museums was Gjivoje [84]. Two sets of conference proceedings [85, 86] present the situation of planned-language libraries and archives (particularly those focused on Esperanto) in practically all current aspects. The largest collection (with an electronic catalogue, Trovanto) is that of Vienna (the Planned-Language Collection of the Austrian National Library / Vienna International Esperanto Museum [IEMW])[32]. Next in importance are the Centre de documentation et d'étude sur la langue auxiliaire internationale (CDELI) in La Chaux-de-Fonds, Switzerland[33], and the German Esperanto Library, part of the city library in Aalen, Germany[34]. Additional libraries are listed in the Yearbook of UEA[35] and the internet[36].

Among the most important and extensive catalogues are those of IEMW [87-90] and of the private collection of Károly Fajszi, now housed in the Budapest Foreign Language Library [91, 92]. Abundant and particularly up-to-date material is also contained in the Hector Hodler Library of the the Universal Esperanto Association, Rotterdam[37], and the Butler Library of the Esperanto Association of Britain[38].

Much needed is a regularly updated master bibliography of titles in interlinguistics and Esperanto studies and, linked to it, a master catalogue. Planning for such a bibliography is now in the discussion stage on the Internet[39].

CONCLUSIONS

Planned-language theory and observable practice are described in the scholarly literature in relative detail, though not always easily accessed by outside researchers. Much as scholars in the Middle Ages needed a knowledge of Latin, researchers on planned languages should have a command at least of Esperanto, and, if possible, of other planned languages. As we have shown, it is not enough to limit oneself to English-language literature. And, furthermore, simply studying the scholarly literature is insufficient if one wishes to understand planned languages in practice – particularly in the case of Esperanto, with its numerous and multifaceted international activities, radio programs, and representations in the internet.

Attention to planned languages opens up to linguists entirely new aspects of the essential characteristics of languages. For example, it is possible to study, in effect under laboratory conditions, how a language created by a single individual actually functions and develops. This is a field in which pioneering work is still possible.

REMARKS

[1]The expression planned language (Esp planlingvo, de Plansprache, en planned language, fr langue planifiée, it lingua pianificata, ru planovyj jazyk etc.) was introduced by the founder of the field of terminological science, Eugen Wüster (1898-1977) and has established itself as an interlinguistic term in various languages [93, 94].

[2]Duličenko [95] lists over 900 systems (up to the date of completion of the book in 1970). On the lively language invention on the internet, see, for example, [96].

[3]Where convenient and in the interests of space, I refer to information available in [15].

[4]After 1947 Occidental (created in 1922) was called Interlingue, not to be confused with Interlingua (published in 1951).

[5]http://www.interlingua.com/libros (all web pages last visited on January 1, 2015).

[6]The numbers refer to the issues of IpI.

[7]http://www.staff.amu.edu.pl/~interl.

[8]http://www.edukado.net/biblioteko/diplomlaborajhoj.

[9]http://www.interlinguistik-gil.de/wb/pages/bulletin-inti.php.

[10]http://esperantic.org/en/communications/ipi/archive.

[11]http://www.brill.com/linguistic-bibliography-year-2012-bibliographie-linguistique-de-l-annee-2012.

[12]Bibliography of General Linguistics and of English, German, and Romance Linguistics. Compiled by Elke Suchan, Heike Westermann and Marc-Oliver Vorköper, http://www.blldb-online.de.

[13]http://search.proquest.com/llba.

[14]http://www.mla.org/bibliography.

[15]On MLA see [97].

[16]Bibliographers for the interlinguistics sections were Willem A. Verloren van Themaat (1979-1989), Humphrey Tonkin (1980-2011), Jane Edwards (1984-1998) and Detlev Blanke (1992-2011). The current bibliographer, as of 2012, is Wim Jansen.

[17]Of the systems mentioned, only Ido, Interlingua and (to some degree) Occidental/Interlingue have their own actually functioning small language communities. Volapük also still has a few followers, particularly in Britain.

[18]Fiedler [98; p.99] analyzed the language used in MLA entries for the year 2006, on the basis of a list supplied by Tonkin [99].

[19]*Interlingua*: 36, *Ido*: 30, *Occidental*/*Interlingue*: 13, *Glosa*: 1 and Loglan: 1.

[20]The genre of Festschriften in Esperanto was founded by Reinhard Haupenthal with his volume for Waringhien. Haupenthal & Haupenthal [15] and Blanke [55] list Esperanto-language Festschriften for Gaston Waringhien (1985), Juan Régulo Pérez (1987), Reinhard Haupenthal (1998), William Auld/Marjorie Boulton (1999), André Albault (2000), Detlev Blanke (2001; 2011), Fernando de Diego (2003), Adolf Burkhardt (2004), Humphrey Tonkin (2010) and Claude Gacond (2011). Blanke also mentions some 18 non-Esperanto Festschriften written for professional linguists in various languages that contain 37 studies by scholars in interlinguistics. We should also add a second Festschrift for Helmar Frank (2013) with 19 interlinguistically interesting contributions.

[21]www.interlinguistik-gil.de.

[22]http://eo.wikipedia.org/wiki/Esperantologia_Konferenco.

[23]See also [100].

[24]http://benjamins.com/#catalog/journals/lplp/main.

[25]All issues are accessible electronically, http://www.cb.uu.se/esperanto.

[26]Edited by Bertilo Wennergren. Beginning in 2008 and up to autumn 2014, 56 studies in esperantology (with various subsequent commentaries) have appeared: http://lingvakritiko.com.

[27]http://riviste.unimi.it/index.php/inkoj/index, editor-in-chief Paolo Valore.

[28]The abundant website www.edukado.net, edited by Katalin Kováts, provides information on many specialized and organizational aspects of Esperanto teaching, serves as a forum and credentialing agency for Esperanto teachers and provides current instructional materials.

[29]http://www.uea.org.

[30]The English-language version of Janton's book [101] was significantly reworked by Tonkin and is far richer than the original.

[31]Jérôme Vachey: http://www.uea.org/teko/terminaroj_ekde_1980. On dictionaries for Germans see also [1; pp.249-286].

[32]Containing 35 000 printed volumes, 2 500 periodical titles, 3 000 museum objects, 2 000 manuscripts, 23 000 photographs, 1100 posters and 40 000 leaflets (Bernhard Tuider, director). "Trovanto" catalogue: http://search.obvsg.at/primo_library/libweb/action/search .do?dscnt=0&scp.scps=scope%3A%28ONB_aleph_esperanto%29&tab=onb_sondersamml ungen&mode=Basic&vid=ONB.

[33]http://www.cdeli.org, with over 20 000 bibliographic items; founder and chief archivist Claude Gacond.

[34]With over 50 000 bibliographic items, http://espbib.de.nr.

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IS SCHOLARLY COMMUNICATION POSSIBLE IN A SO-CALLED "ARTIFICIAL" LANGUAGE?

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ABSTRACT

Important for the status of any language is its function as a scholarly language. Are "artificial" languages, i.e. "international planned languages", available for such a function? This article demonstrates that they are. Among planned languages, language planning, and research on scholarly language there are several connections, particularly demonstrable through the example of Esperanto. This language, from as early as the beginning of the 20th century, has had available to it scholarly texts in journals and other publications, and oral scholarly discourse through individual communication among individual scholars and in the context of organizations and other communities of discourse on various subjects, today also web-based. Characteristics of the language, particularly its word-formation, tend to favor the flexible naming of notions and the creation of terms in line with the criteria of ISO/TC 37. Such stabilized scientific vocabulary is recorded in over 200 dictionaries covering some 90 fields. The Universal Esperanto Association seeks to coordinate work on terminology and collaborates with the principal international terminological institutions. Outside their own range of discourse, planned languages have served to stimulate work, for example, in decimal classification, in nomenclature, and in terminology science. There is a broad scholarly literature in the field.

KEY WORDS

CLASSIFICATION

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SCHOLARLY LANGUAGE

"Scholarly language", understood as the total of linguistic elements used in individual fields and branches of science, is an integral part of a given language. According to the prestigious German specialist in scientific language, Lothar Hoffmann [1; p.53], such scholarly language (variously known as specialized language, scientific language, or language for special purposes) is "The sum of all linguistic resources used in a communicative field limited to a specific scientific field of inquiry, in order to guarantee communication among people in that field."[1]

So defined, a "scholarly language" is an abstraction. In practice, there exist in various languages what we might call *sublanguages* (lects) for various kinds of scholarly discourse, for industrial and technical areas of production, and for other special activities. But there also exist certain characteristics common to all such scholarly and specialized languages.

When we speak of such "languages," we often have in mind specialized vocabulary, the "terminology" of given fields. But in reality such specialized language includes syntactic rules, specific stylistic resources, phraseologies, and mechanisms for the organization of texts to create the various types that such texts assume.

The application of specialized language is particularly significant for at least three principal functions of language:

a) *communication*: Specialized communication allows for more effective and more precise linguistic communication than would be possible through the general resources of the language,

b) *discovery of new knowledge*: The discovery of new facts and connections in nature and society, and their cognitive appropriation, is made significantly easier through application of specialized language,

c) *recording, conserving and conveying new knowledge:* By applying adequate specialized linguistic resources to various phenomena and channels of communication, we can record facts, actions and connections in nature and society, thereby conserving their existence and transferring them to current and future users.

Given the increasing growth of human knowledge, the influence of science and technology is expanding in ordinary life. Accordingly, our understanding of specialized language plays a larger and larger role in everyday communication.

PLANNED LANGUAGES, LANGUAGE PLANNING, AND RESEARCH ON SCHOLARLY LANGUAGE

Planned languages (other terms include: "artificial" or "constructed" international languages, international auxiliary languages, universal languages)[2] are the result of conscious and goal-oriented creation and can therefore be regarded as products of *language planning*. This idea is particularly emphasized by the Estonian scholar of language planning Valter Tauli. He describes language planning as "… the methodical activity of regulating and improving existing languages or creating new common regional, national or international languages" [2; p.27]. In this sense planned languages are both products of and devices for language planning. This is so at least of Esperanto [3].

For the study of specialized language, planned languages are of interest for at least the following reasons:

1) planned languages are often results of the search for rational and more precise linguistic resources than can be found in ethnic languages. In this sense, they perform a similar role

to that of efforts to regularize and adapt ethnic languages to the needs of specialized and automated communication (see [4]),

2) planned languages have historically provided an impulse for the development of specialized languages (including nomenclatures) and the emergence of terminology science,

3) language planning plays a significant role in the creation and development of specialized vocabulary in both ethnic and planned languages,

4) planned languages have played a role as means of international scholarly communication and continue to do so,

5) ethnic languages and planned languages, if they have developed specialized languages, have a common need for quality standards for the formation and expansion of terminology, for terminological standardization and planning, and for the practical organization of these activities,

6) in addition – though to a different degree in various ethnic languages and a lesser degree in planned languages – we can observe efforts to collect and document terminology, to explore the development of theory, to examine knowledge transfer and research methods, and to exploit modern electronic resources and data-processing systems (among them, electronic terminology banks).

Because planned languages have been applied to communication needs only to a very limited extent, most of the results in the field of specialized communication in planned languages have been achieved (almost always in Esperanto) not by state-supported or institutionally supported efforts, but through private initiatives. The lack of professional grounding has led to considerable variability in the quality of individual specialized terminologies.

Given the varying extent and development of the application of given fields in planned languages, some parts of the specialized vocabulary should be regarded in the first instance as mere proposals, because they relate to a field not yet fully active in the medium of a planned language.

Description of the problems of scholarly communication in Esperanto has up to now been largely limited to the development of terminology.

LANGUAGES WITHOUT LINGUISTIC SPECIALIZATION?

ETHNIC LANGUAGES

A language that lacks specialized fields of communication faces the threat of decline and finally the withering away of its social significance. Such limited communicative functionality may lead to a kind of folkloric marginalization and the use of the language only as a family language.

Even the ethnic languages of Europe may be threatened by such a development, given the hegemonic role of English and the pressure on other languages that such hegemony produces. Robert Phillipson [5, 6] has rightly drawn attention to the phenomenon of linguistic imperialism and its negative consequences. The gradual loss of specialized function will become evident in, among other considerations, the fact that important scholarly and specialized texts will cease to be produced in a given language, and specialized terminology will not be taught. Furthermore, there is a danger that important specialized texts written in the past will be ignored. This shift is beginning to concern even speakers of "major" languages, like German and others, in which important scholarly texts have been produced for centuries. In bibliographies of current scholarly works, doctoral dissertations, and other forms of research, works in other languages are already barely mentioned, thus ignoring important discoveries (on the Anglicization of economics, for example, see [7]).

PLANNED LANGUAGES

In addressing planned languages, we must distinguish among:

a) *projects* with no practical application,

b) some *planned-language systems with limited practical application* (particularly Volapük, Ido, Latino sine flexione, Occidental-Interlingue, Basic English and Interlingua), and

c) a planned *language* – i.e. a language in the full sense of the notion, with well-developed and *various* communicative functions – a status so far achieved only by Esperanto.

Furthermore, it would be a mistake to assume that all Esperanto speakers share the ideals of the language's creator, Zamenhof, or that they see the language as first and foremost an embodiment of the ideals of peace. Adepts of Esperanto may see the language as, variously:

a) a hobby,

b) a language game,

c) a means of artistic expression (for creative literature),

d) an instrument of practical communication,

e) an idealistic or alternative means of identity, primarily, though not exclusively, in line with the ideas of Zamenhof,

f) a language policy alternative.

Among these six there are variations and commonalities. Probably all Esperantists share some common values, but such commonality varies enormously from one speaker to another.

A certain proportion of the adepts of planned languages (particularly those in categories d), e) and f) are politically engaged (see [8]). They are interested in language rights and are critical of the hegemonic position of a few major languages in international communication, particularly English. They argue for non-discriminatory communication through a politically neutral language and they draw appropriate attention to the phenomenon of linguistic imperialism and its negative consequences. Their attention is particularly focused on European language problems, which have proved especially complicated and multi-faceted within the European Union.

As for the development of Esperanto and its communicative potential, attention is often drawn to the abundant creative literature in the language, both original and translated. Such literature exists in considerable quantity and quality (on original literature, see [9, 10]). There is no doubt that creative literature is of great significance in the development and stabilization of the means of expression in a planned language and serves to prove its independent cultural function. However, it is insufficient if the language is ever to function in a given context as an *official,* even if limited, means of international communication on a par with other languages.

Accordingly, the specialized-language function is indispensable, not least because in international cooperation in official contexts (organizations, institutions, etc.), most communication is on specialized topics. Such topics also play a growing role in everyday communication.

The German Romanist Karl Vossler (1872-1949) once put it like this:

> a purely poetic literature, without scholarly works, is a written dialect, but not
> a fully rounded literature [11; p.236][3].

In sum, the modern scholarly application of a planned language is one of the basic conditions for its eventual role as a language policy alternative.

What role is played by specialized-language communication in planned languages, particularly Esperanto? We will attempt a brief summary.

THE SCHOLARLY APPLICATION OF PLANNED LANGUAGES

Outside Esperanto, the application of scholarly language in the context of planned languages has been very limited.

In *Volapük* (1879, the work of the German Catholic prelate Johann Martin Schleyer), a strictly agglutinative language with radically adapted (not to say distorted) morphemes derived from Latin and from Romance and Germanic languages, there exist only a few modest attempts at commercial correspondence (see [12; p.29, 12; p.41, 12; p.47]).

In *Latino sine flexione* (initiated in 1903 by the well-known Italian mathematician Giuseppe Peano), based on the ideas of Gottfried Wilhelm Leibniz (1646-1716) for a simplified Latin, a few scientific texts were published, primarily in the periodical *Schola et Vita* (1926-1939)[4], among them Peano's work *Formulario mathematico* (see [13] passim, especially [13; p.107, 13; p.118, 13; p.125]).

In *Ido* (1907, published by the well-known French mathematician, logician, and Leibniz specialist Louis Couturat), which is to some degree a reformed version of Esperanto, especially in word-formation and lexis, a few scientific texts appeared. They include some eight specialized terminologies, on, among other fields, biology, chemistry, business, machine building, mathematics, and radio technology, and also philological, philosophical and religious texts (see [14; pp.199-201, 15])[5].

In *Occidental* (published in 1922 by the German-Baltic mathematics teacher Edgar de Wahl and known after 1945 as *Interlingue*), a largely uninflected but Romance-based language, there appeared only a few scientific texts, in the fields of philosophy, philology, and – even more rarely – politics, economics, and pedagogy. Worthy of mention, however, is a sizable collection of specialized texts in mathematics and a mathematical dictionary (see [14; p.167, 16])[6].

In *Interlingua* (1951, initiated by IALA, the International Auxiliary Language Association and completed by the German-American Romanist Alexander Gode), a planned language deeply indebted to Romance languages with reduced inflective characteristics, abstracts appeared in the 1950s and 1960s in a few medical periodicals and between 1952 and 1955 in two abstract compilations, *Spectroscopia Molecular* and *Scientia International* (see [17; pp.7-8]). The Interlingua book catalogue[7] [18] mentions only a few specialized publications, in, among other fields, demography, art history, mathematics, philology, philosophy, plant diseases, and theology. There are also a few specialized dictionaries, in biology and botany, among others.

Also in *Basic English* (1929, by the British linguist and translator Charles Ogden), a variant of English with a lexis reduced semantically to 850 words and some systematization in word-formation, there appeared several specialized texts, for example in electrotechnology, geology, and economics [19; pp.75-82].

In these various planned languages very few specialized texts have appeared in printed form. However, we can find a number of new texts of this kind in the various versions of Wikipedia and in newly-established websites. A common element in all these linguistic systems is the fact that in principle they are structurally well-adapted for the presentation of specialized texts and terminologies. Even so, the limited number of specialized texts and dictionaries that have appeared in these languages hardly responds to the real needs of international communication, given that there are so few of them and the number of users of these languages interested in their use is so limited.

SPECIALIZED TEXTS IN ESPERANTO

A GENERAL OVERVIEW

The initiator of Esperanto, a physician well grounded in the natural sciences, Ludwig Leyzer Zamenhof (1859-1917), put no particular emphasis on the scientific role of his language, unlike, for example, the initiators of Latino sine flexione, Ido and Interlingua. However, in the first collection of model texts, *Fundamenta Krestomatio* [20], we find popular science texts, for example in medicine and astronomy.

It was primarily French intellectuals who, at the turn of the 19th and 20th centuries, first grasped the significance of Esperanto as a scholarly language and engaged themselves in its development. The language was not yet two decades old when the first such journal, *Internacia Scienca Revuo*[8], was launched. Between then and 1909 organizations were founded for *scientists, doctors, vegetarians* and *railway workers* (see [21]), all contributing to the development of their specialized languages. In 1910 a further scientific journal, *Medicina Internacia Revuo,* was launched.

It is difficult to present a complete picture of the scientific and scholarly initiatives and applications in Esperanto, since so much depends, and has depended, on individual efforts. Journals appear and, in due course, disappear[9], though the possibilities for scientific and specialized discourse have increased with the arrival of web-based opportunities.

Specialized texts exist in this planned language in considerable numbers. Today they appear in small journals and bulletins, and in web-based discussion groups and publications – of varying quality – at least in the following fields:

> Atheism, ecology, economics, ecumenism, Esperantology, railways, philately, philosophy, forestry, linguistics and interlinguistics, law, journalism, the construction industry, language policy, language minorities, medicine, music, homeopathy, ornithology, education, post and telecommunication, amateur radio, interdisciplinary science, theology and various religions, vegetarianism.

In addition to *Internacia Scienca Revuo,* a particularly important role in the publication of scientific texts has been played, or continues to be played, by the following periodicals:

- *Medicina Internacia Revuo* (1910-1911, 1923-36, 1952-),
- *Internacia Pedagogia Revuo* (1908-1922, 1927-1939, 1956-1959, 1970-),
- *Homo kaj Kosmo* (astronomy, 1963-1987),
- *Esperantologio* (1949-1955, 1959-1961, 1999-),
- *Internacia Geografia Revuo* (1956-1964),
- *Kemio Internacia* (1965-1968),
- *Internacia Komputado/Fokuso* (1983-1988),
- *Planlingvistiko* (1981-1986),
- *Scienca Mondo* (science policy, 1976-1989),
- *Sciencaj Komunikaĵoj* (1975-1986),
- *Tutmondaj Sciencoj kaj Teknikoj* (in Chinese and Esperanto, 1985-1995).

The most important journal in general science up to now is *(Internacia) Scienca Revuo*. Its genealogy is as follows:

- 1904-1911: *Internacia Scienca Revuo,*
- 1912-1914: *Scienca Gazeto,*
- 1918/19: *La Teknika Revuo* (subtitled *Sekvo de Internacia Scienca Revuo,* continuation of *Internacia Scienca Revuo*),

- 1922-1923: *Internacia Scienca Revuo*,
- 1926-1939: *Bulteno de ISAE*,
- as of 1949: *Scienca Revuo* (*Fondita en 1904 kiel Internacia Scienca Revuo*, founded in 1904 as *Internacia Scienca Revuo*).

Recently the complete run of *Scienca Revuo* from 1949 to 2014 (more than 2 000 articles in various fields) has become available in electronically scanned form[10].

A few journals in ethnic languages occasionally include contributions and summaries in Esperanto, for example the language-policy journal *Language Problems & Language Planning* (*LPLP*, as of 1977)[11], and the journal of cybernetics and education *Grundlagenstudien aus Kybernetik und Geisteswissenschaft/Humankybernetik* (as of 1977). The bibliographically and scientifically oriented bulletin *Informilo por Interlingvistoj* (IpI)[12], published by the Center for Research and Documentation on World Language Problems (CED), attempts, among other things, to register the most important facts and information about scholarly communication in Esperanto. As of 1992, the bulletin *Interlinguistische Informationen* (IntI), organ of the *Gesellschaft für Interlinguistik e.V.* (Society for Interlinguistics), has done the same, with contents similar to those of IpI[13].

In the most recently published book catalogue of the Universal Esperanto Association [22] publications on the following subjects are listed as available:

> Archeology, astronomy, bee-keeping, biology, botany, chemistry, culinary arts, cybernetics, ecology, economics, ethnography, geography, geology, historiography, hydraulic engineering, hygiene, informatics, interlinguistics and Esperantology, journalism, law, linguistics, mathematics, medicine, meteorology, pedagogy, philosophy, political science, psychology, sociology, sport, stenography, telecommunications, theology (and philosophy of religion), traffic engineering, and zoology.

Every year some twenty or thirty specialized monographs of various lengths appear[14]. The UEA catalogue, mentioned above, contains information on the following specialized publications (by topic and numbers): Philosophy 141, Geography 114, History 82, Linguistics 463, Religion 264, Science and Technology 313, in total 1377 titles.

The available literature is regularly updated in the web versions of the catalogues.

Esperanto-language material in monographs, anthologies and periodicals is collected by several specialized libraries and archives across the world. Over the past decade, efforts have intensified to coordinate such activity with a view to conserving the collections and creating a world catalogue and bibliography (see [23] on a symposium held in Vienna on this subject). Discussion on the topic continues in conferences and internet discussion groups[15]. A particularly important step is the web-based catalogue of the Planned Language Collection of the Austrian National Library[16]. In addition, for almost fifty years scholarly materials and contributions on interlinguistics and Esperantology have been systematically recorded in the web-based bibliography of the Modern Language Association of America[17], where a search for "Esperanto terminology" will yield numerous titles on problems of specialized terminology in Esperanto.

SPECIALIZED TEXTS IN THE INTERNET

We can probably not expect the emergence of many new scientific journals in printed form, given that the Internet has largely assumed the role of communication channel in the various fields. Several web-based journals have begun publication, however:

- *Teleskopo* (edited in Brazil) publishes scientific texts on various topics[18],
- Interlinguistic and Esperantological contributions have been published as of 1999 in *Esperantologio – Esperanto Studies*, which also exists in paper form[19],
- as of 2006, the Swedish linguist Bertil Wennergren has edited the web-based journal on Esperanto studies *Lingva Kritiko*[20],
- from 2010 to 2012 *Inkoj: Interlingvistikaj Kajeroj*[21] was published by scholars in Italy.

A particular role in the creation of specialized texts has been played recently by *Vikipedio* (the Esperanto-language Wikipedia)*,* and the various "wikis" linked to it. The creation of articles, often with specialized content, has accelerated in recent years, and this has had a significant influence on the development of specialized language. The speed and sometimes hasty creation of such texts allows little time for competent discussion of the terms employed.

Here is how the major planned languages appear in Wikipedia:

Esperanto (to 12 January 2015)[22]	208 299 articles[23]
Ido[24]	26 229
Interlingua[25]	14 352
Interlingue/Occidental[26]	2 640

We should also mention the *WikiTrans* project of Eckhard Bick [24], which automatically translates large numbers of English-language articles into Esperanto. As of mid-2014, more than four million articles had been translated into Esperanto[27]. These articles, being automatically translated, need to be edited for, among other things, specialized terminology.

There are several Esperanto-language branches of the Wiki family that include specialized texts:

- *Meta-Vikio*[28], website of the Vikimedio Foundation,
- *Vikilibroj*[29], a project for the construction of open-source handbooks and textbooks,
- *Vikicitaro*[30], an open-source web-based dictionary of quotations,
- *Vikispecioj*[31], a project to register all living species,
- *Vikivortaro*[32], a general dictionary,
- *Vikinovaĵoj*[33], an open source news agency.

This abundance of already existing and steadily expanding texts naturally raises the question of the consistency and quality of the specialized language used and, particularly with WikiTrans, the influence of the English language.

TYPES OF SPECIALIZED TEXTS

Many specialized texts are also available in the Esperanto Library of Science and Technology (STEB)[34]. The growing number of specialized texts in Esperanto leads us to consider the characteristics of the phenomenon of "specialized text" if we are to distinguish it from other texts, such as literary texts or general texts.

In the 1980s and 1990s the definition of *specialized text* has become the focus of linguistic attention. What , then, is a "specialized text"? Lothar Hoffmann defines it as follows:

> *specialized text* is an instrument and a result of an act of linguistic communication occurring in connection with productive activity within specialized social contexts. It consists of a limited and ordered quantity of sentence or sentence-like units that are coherent with respect to logic, semantics and syntax. These units are complex signs corresponding to complex propositions in the human mind and to complex facts in objective reality [25; pp.233-234].

Such specialized texts come in many types with varied characteristics and communicative functions. They can, for example, be either written or spoken. However, it is important to emphasize that it is not always possible to make a clear distinction between a scientific text for a colleague in the field and a popular science text for a wider audience.

We can distinguish a few major forms of specialized texts, such as:

- **scientific and scholarly texts.** *Treatise, scientific survey, conference intervention, examination material.* All four exist in Esperanto,
- **technical texts.** *Patent application, instruction manual for a machine.* Such texts do not yet exist in Esperanto,
- **institutional texts.** *Law, decree, contract, birth certificate.* Translations of laws exist (in legal publications in Esperanto), likewise decrees and regulations (for example in offices), and contracts (for example agreements for cooperation among organizations), though not birth certificates,
- **field-dependent texts.** *Weather forecast (meteorology), prescription (medicine), recipe (culinary arts), instructions to patients (medicine, pharmacology).* There are abundant examples of recipes, and Esperanto-language radio and television programs involve weather forecasts, but the other forms are lacking.

To date, no detailed study of specialized texts in Esperanto (their typology, characteristics, and occurrence in linguistic practice) has been undertaken.

ORGANIZATIONAL STRUCTURES AND SPOKEN COMMUNICATION

Although Esperanto is in the first instance a written language, spoken use is expanding. This is so of specialized-language communication, which takes place in varying degrees of intensity, in *specialized organizations* and other fora, not least in online discussion groups. The following is a selection of specialized organizations (by year of foundation, as in [26; pp.61-75]):

Science. Internacia Scienca Asocio Esperantista (ISAE, 1906, interdisciplinary)
Medicine. Universala Medicina Esperanto-Asocio (UMEA, 1908)
Vegetarianism. Tutmonda Esperantista Vegetarana Asocio (TEVA, 1908)
Railways. Internacia Fervojista Esperanto-Federacio (IFEF, 1909)
Catholics. Internacia Katolika Unuiĝo Esperantista (IKUE, 1910)
Christians (Protestants). Kristana Esperantista Ligo Internacia (KELI, 1911)
Teachers. Internacia Ligo de Esperantistaj Instruistoj (ILEI, 1949)
Post and Telecommunication. Internacia Poŝtista kaj Telekomunikista Esperanto-Asocio (IPTEA, 1966)
Amateur radio. Internacia Ligo de Esperantistaj Radioamatoroj (ILERA, 1970)
Mathematics. Internacia Asocio de Esperantistaj Matematikistoj (IAdEM, 1974)
Ethnography. Internacia Komitato por Etnaj Liberecoj (IKEL, 1978)
Forestry. Internacia Forstista Rondo Esperantista (IFRE, 1981)
Philosophy. Filozofia Asocio Tutmonda (FAT, 1983)
Cybernetics. Tutmonda Asocio pri Kibernetiko, Informadiko kaj Sistemiko (TAKIS, 1983)
Business. Internacia Komerca kaj Ekonomia Fakgrupo (IKEF, 1985)
Homeopathy. Internacia Naturkuraca Asocio (INA, 1986)
Law. Esperanta Jura Asocio (EJA, 1989)
Spiritualism. Asocio de Studado Internacia pri Spiritaj kaj Teologiaj Instruoj (ASISTI, 1989)
Building trades. Tutmonda Asocio de Konstruistoj Esperantistaj (TAKE, 1993)
Agriculture. Internacia Agrikultura Esperanto-Asocio (IAEA, 1996)

Education. Edukado@Interreto (E@I, 2001)
Social issues. Monda Asembleo Socia (MAS, 2005)
Islam. Islama Esperanto-Asocio (2007)
Numismatics. Esperanto Numismatika Asocio (ENA, 2012)

A high proportion of these and other specialized organizations include a web presence[35].

There exist numbers of academic institutions whose goal is the promotion of interdisciplinary exchange. Among them are the *Akademio Internacia de Sciencoj San Marino* (AIS 1985: see [27; p.910]) and the *Internacia Scienca Akademio Comenius* [28; p.III]. International professional contacts are also aided by handbooks for scientists publishing in Esperanto or active as Esperantists (e.g. [29, 30]).

These and other specialized organizations, institutions and informal groupings commonly organize their meetings in the context of the annual World Congress of Esperanto, an annual event that convenes anywhere from 1000 to 3 000 (and even as many as 6 000 – in Esperanto's centennial year 1987) speakers from some 60 or 70 countries.

Some organizations have their own conferences and other events. Railway specialists hold an annual congress, doctors a biennial congress, and interlinguists and Esperantologists several annual national and international events. Specialists in information sciences, computer science, and cybernetics – and also religious groups – organize events less regularly.

Popular scientific events also contribute to the development of specialized texts and the establishment of specialized vocabulary. As of 1948, for example, sessions of the so-called International Congress University take place during the World Congress [31]. Also prominent have been various "Summer Universities" (e.g. 1963-1990 in Gyula, Hungary; 1980 and following years in Veliko Trnovo, Bulgaria), and the University Summer Courses in Liège, Belgium, from 1972 to 1980, which produced some 30 published papers, on such topics as anatomy, biology, chemistry, literary studies, mathematics, pharmacology, psychology, sociology, linguistics, and zoology [32; pp.82-87].

Particularly important was the series known as Application of Esperanto in Science and Technology (AEST) held in Czechoslovakia between 1978 and 1989. Individual conferences were devoted to selected topics (always with a secondary theme of "Esperanto as a scientific language" and "Esperanto and terminology"). The six volumes of this first series of events contains 156 separate papers. As of 1998 the series was continued by the Czech Esperanto Association under the title Conference on the Application of Esperanto in Science and Technology (KAEST). The proceedings of these conferences were also published[36]. A third series of biennial KAEST conferences has been organized since 2010 in Modra Harmónia, Slovakia, by a group of young specialists in internet applications, computers and other electronic devices, (papers in [33, 34])[37]. Similar conferences etc. have been arranged from time to time in Bulgaria, China, and Cuba.

Scholarly exchange in Esperanto has been particularly active in Japan. A series of six largely language-policy-oriented symposia have been recently organized by the Japanese Esperanto Institute [35]. Japanese scholars are particularly active in medicine, contributing frequently to *Medicina Internacia Revuo,* and have made important contributions to Esperantology. Itô Kanzi (1918-2005, under the pseudonym Ludovikito) provided a fundamental basis for the scholarly study of Esperanto and of Zamenhof by editing 58 volumes of the works of Zamenhof and of journals, dictionaries and textbooks influenced by him (see the list in [36]). In the Republic of Korea, university-based activity has included publication of the journal *Mondo de Universitato* (Seoul, Dankook University, 1987-1994) and other publications and conferences.

In several non-Esperanto specialized conferences, Esperanto is occasionally used as a conference language in parallel with other languages, for example as of 1968 by geologists (10 volumes of conference proceedings so far), and in the 1980s by specialists in cybernetics in Namur, Belgium. The international conference Interkomputo took place entirely in Esperanto in Budapest in 1982, attracting 200 computer scientists from 19 countries. The conference produced over 100 papers, published in 6 volumes. In the international informatics conference in Budapest in 1985, 17 out of 45 papers were given in Esperanto. The proceedings were subsequently published.

We should not underestimate the important role in the development of specialized communication played by informal correspondence among specialists, now much facilitated by the internet. There exist discussion groups and innumerable individual contacts. The Universal Esperanto Association's Yearbook contains 1700 addresses of variously oriented speakers of Esperanto in 100 countries, exchanging and promoting contacts on some 800 different topics [26; pp.99-259].

SPECIALIZED VOCABULARY AND SPECIALIZED DICTIONARIES

The structural characteristics of the Esperanto language make it particularly suitable for scientific communication, as the founder of terminology science Eugen Wüster (1889-1977) established long ago in his foundational work on language standardization [37; pp.294-323]. Among these characteristics are the easy linkage of morphemes (a consequence of, for example, the convenient morpho-phonological syllabic structure, the lack of morpheme changes, etc.), the fully productive affix system and the flexible application of word-formation rules[38]. This system was initially analyzed by René de Saussure [38], brother of the linguist Ferdinand de Saussure.

Such characteristics facilitate the adaptation of the language to new communicative needs and render it suitable for automatic documentation of specialized language, as has been shown for example in the planned-language research and dialogue system PREDIS [39] and in machine processing. The semiautomatic translation system Distributed Language Translation (DLT), initiated by Toon Witkam in 1983, in which a slightly modified Esperanto served as a bridge language (black-box language), was developed as far as a fully functioning prototype [40-42] before funding ran out. In recent years new initiatives have been published to develop software for machine translation into and out of Esperanto (see for example several contributions by Nosková & Baláž [33]). Also worthy of mention are the phonetic and phonological qualities of Esperanto, which favor high-quality speech recognition and speech synthesis [43].

Specialized vocabulary is recorded in specialized dictionaries[30]. Estimates of their numbers vary. Edward Ockey lists 200 specialized dictionaries of differing extent and quality up to the year 1980 [44]. Ockey's list has been updated to the year 2002 by Geoffrey Sutton, who mentions 280 dictionaries for some 70 fields[40] [45]. Some 140 specialized dictionaries are available on line[41]. Another web-based bibliography for 1980-2000 lists 188 specialized dictionaries for 88 fields[42]. Also the largest Esperanto-Esperanto dictionary, *La Nova Plena Ilustrita Vortaro de Esperanto,* includes specialized vocabulary for 73 fields [46; pp.36-37]. Krause's *Granda Vortaro Esperanto-Germana* seems even richer, with specialized vocabulary for 86 fields [47]. A similar number of fields is covered in the German-Esperanto volume [48].

Active development of specialized terminology has been particularly systematic and purposeful in the fields of forestry [49], railway terminology [50], and medicine [51]. Also the field of computer science is relatively well developed [52-54]. Many dictionaries are no longer published in printed form, but regularly updated in web-based versions, for example a list of terminology related to international organizations, particularly the United Nations[43].

FORMATION OF SPECIALIZED TERMS

For the formation of specialized terms, following responsible systematization of the field and definition of its ideas, the following procedures are available:

- creation of terms from already existing general words by modification of their definition, for example *funkcio* (function), which doubles as a part of the general vocabulary and as a mathematical term,
- borrowing from other languages: *softvaro*, *sputniko*,
- calques: *sin-mort-igo* (from the Latin *sui/cid/um,* or the German *Selbst/töt/ung*),
- use of metaphorical terms: *elektra kampo,*
- use of metonymy: the transfer of a proper name to a notion: *doplera efiko*[44], *leĝo de Ohm.*

The most common procedures in the formation of neologisms are calquing and the borrowing of compoundable morphemes from other languages. This sometimes leads to the creation of synonyms: *rul/ŝtup/ar/o* and *eskalator/o* for German "Rolltreppe" and English "escalator". For a while the terms *komput/il/o, komputer/o* and *komputor/o* competed for acceptance. The compound 'komput/il/o' emerged as the dominant term.

Given Esperanto's extremely flexible word-formation system, it is possible to form specialized terms through the use of this system, independently of the methods mentioned above. But up to now Esperanto has tended to follow ethnic-language models, particularly in the natural sciences.

The various requirements imposed on terms by their creators either reinforce or undermine their applicability[45]. Such requirements include:

- an idea as the basis of a term,
- link to a field,
- link to systems within the field,
- precision to be applied as needed,
- (reversible) disambiguation[46],
- transparency of meaning,
- concision (linguistic economy),
- internationality,
- ease of pronounciation.

Additional requirements, specific to Esperanto, include *internationality* and *conformity to system* i.e. conformity to the *Fundamento de Esperanto,* Zamenhof's description of the grammar of Esperanto, established in 1905 (see [20]). Selection of criteria for terminology formation should conform with the norms of Technical Committee 37 (ISO/TC 37)[47].

Terms in Esperanto are almost always based on individual proposals published in texts or dictionaries, discussed, tried out in practice, and finally accepted into the language and its specialized dictionaries, where they may stabilize or, in due course, be eliminated from use.

Various methods for the discussion of new proposals for specialized vocabulary have been applied. From 1968 to 1981, Rüdiger Eichholz stimulated discussion through his *Slipara Vortaro*[48]. On small slips of paper (A-7 format) he presented specialized terms in German, English and French. He also added the Decimal Classification number and, where possible, a line drawing. On the basis of the received reactions from his readers across the world, he published an Esperanto translation of the German dictionary *Bilder-Duden*, known as *Esperanta Bildvortaro* [55], based on the second edition of the *Bilder-Duden* of 1958 (Mannheim: Dudenverlag). In 2012 there appeared a much enlarged and newly edited edition of the *Bildvortaro*. One third of it was derived from the material compiled by Eichholz, while two thirds were newly edited and added by Petro De Smet and Jozefo Horvath[49]. This new

Esperanto edition was based on the sixth German edition, *Duden – das Bildwörterbuch* (Mannheim: Bibliographisches Institut & F.A. Brockhaus AG, 2005).

In the early 1990s, Eichholz went over to a new computer-based mode of discussion, publishing his extensive *Pekoteko* [56], a work that recorded the international discussion of individual terms through the exchange of diskettes. This method was later replaced by the more convenient and effective mode of web-based discussion.

EFFORTS TO COORDINATE TERMINOLOGY WORK

It was in 1911 that the first principles were developed for the creation of specialized vocabulary in Esperanto [57, 58]. In the 1950s the terminology centers of the *Internacia Scienca Asocio Esperantista* and the Esperanto Academy, the principal language-cultivation institution for Esperanto, attempted to advance and expand terminological work, but not to a degree that we could rightly call standardization of the kind undertaken by national standardization institutions.

In an effort to achieve better results, UEA founded its Esperanto Terminology Center in 1987 (TEC/UEA Rotterdam)[50]. The center collaborated with *Infoterm*[51] and *TermNet*[52], the principal worldwide terminological agencies. With the direct or indirect support of TEC, conferences and training seminars were organized and instructional material was published, for example the *Terminologia Kurso* and essay collection of Jan Werner [59, 60] and a handbook for the creation of terms, *Terminologia Gvidilo* [61]. Recently, efforts have again been made to improve the quality of terminology work through the Internet[53]. Thus, UEA in 2010 renewed its contact with *Infoterm* (Vienna) and joined[54] the *ISO/Technical Committee 37*.

Specialized bibliographies, libraries and archives record theoretical studies and current and former practice in Esperanto [62].

PLANNED-LANGUAGE IMPULSES FOR TERMINOLOGY WORK

Efforts originating in the 16th and 17th centuries to create a priori (philosophical) universal languages, based on the classification of all known knowledge, take their place in the search for the "perfect language" which should in turn facilitate "accurate" and "precise" thought. From such efforts derived the impulse to, among other things, develop nomenclatures and classification systems [63]. Esperanto and other planned languages had a direct effect on the development of terminology science, particularly in the work of Eugen Wüster (1898-1977). We can regard his work in Esperanto and in lexicography as preparation for his founding of terminology science[55].

Another example is the Soviet interlinguist, the Latvian Ernest K. Drezen (1982-1937), who was from 1921 to 1937 the leader of the Esperantist Union of the Soviet Republics (Sovetrespublikara Esperantista Unio). He led the team that translated Wüster's principal work into Russian [64]. He was also active in terminology science, among other things as a member of the terminology commission of the All-Soviet Committee on Standardization [65; p.16]. Drezen developed the idea of introducing into ethnic languages an international terminological code (*terminologia ŝlosilo*), based on Esperanto [66], which Wüster accepted and further developed, but never completed [67].

We should also mention the German engineer and Esperantist Alfred Warner (1931-), who collaborated with Haferkorn, maintained contact with Wüster in the period 1966-1997, and after that led the work of the German terminology-standardization institute DIN[56] (see [68; pp.84-99, 69; pp.85-97]).

CONCLUSIONS

If the speakers of an international planned language like Esperanto wish to aid in the exchange of knowledge and experience among speakers of different languages and play a significant role as promoters of their language as an official means of international communication, the language must possess the potential for specialized expression. The results so far have shown that Esperanto is completely suitable for such expression and is clearly useful in international specialized communication in a growing number of fields. If international political relations and economic forces ever bring about an objective need for just and rational linguistic communication, the experience of Esperanto shows that such communication is fully realizable even in specialized fields. Through systematic and end-directed language planning, particularly with regard to terminology, it is possible, given our experience thus far, to adapt the language to future needs for such expression.

REMARKS

[1] "… die Gesamtheit aller sprachlichen Mittel, die in einem fachlich begrenzbaren Kommunikationsbereich verwendet werden, um die Verständigung zwischen den in diesem Bereich tätigen Menschen zu gewährleisten."

[2] On planned languages, see the monographs [14, 70, 71] and their references, and also the volumes [72-74].

[3] "Eine lediglich poetische Literatur, ohne wissenschaftliches Schrifttum, ist geschriebener Dialekt, keine vollwertige Literatur."

[4] Věra Barandovská-Frank [75; pp.17-20] mentions the following fields in which Latino sine flexione texts have appeared: astronomy, biology, ethnology, interlinguistics, culture, linguistics, literature, mathematics, medicine, pedagogy, psychology, sociology, and technology.

[5] http://www.idolinguo.com (this and all other sites last visited on January 12, 2015).

[6] http://www.interlingue.org.

[7] The catalogue is now available at http://www.interlingua.com/libros.

[8] On its beginnings see [69; pp.43-52].

[9] The fullest bibliography of periodicals in Esperanto to have appeared so far covers the period from the beginning of the language to the year 2006 and contains 14 143 titles [76].

[10] See https://scienca-revuo.info/issue/archive.

[11] The journal began publication as *La Monda Lingvo-Problemo* (*LMLP*, 1969-1977). On *LPLP* see: https://benjamins.com/#catalog/journals/lplp/main.

[12] Edited from 1974 to 1977 by Ulrich Lins, from 1983 to 1990 by Ryszard Rokicki and as of 1992 by Detlev Blanke. The bulletin is also available on the Web: http://esperantic.org/en/communications/ipi/archive.

[13] See http://www.interlinguistik-gil.de/wb/pages/bulletin-inti.php.

[14] New publications are mentioned in the new publications section of the journal *Esperanto*, organ of the Universal Esperanto Association, Rotterdam.

[15] The 2014 KAEST conference, for example, had as its principal topic "Libraries and Archives: How to Protect Our Heritage?" Discussion is continuing at bibliotekoj@googlegroups.com.

[16] The catalogue, "Trovanto," is available at: http://search.obvsg.at/primo_library/libweb/action/search.do?dscnt=0&scp.scps=scope%3A%28ONB_aleph_esperanto%29&tab=onb_sondersammlungen&mode=Basic&vid=ONB.

[17] https://www.mla.org/bibliography. On the MLA Bibliography, see [77].

[18] http://www.teleskopo.com/index.htm.

[19] http://www.cb.uu.se/esperanto.

[20] http://lingvakritiko.com.

[21]"An Academic Journal on Planned and Artificial Languages. Universitata revuo pri planlingvoj kaj artefaritaj lingvoj": http://riviste.unimi.it/index.php/inkoj/index. Texts appear in Italian, English or Esperanto.

[22]http://eo.wikipedia.org/wiki/Vikipedio:%C4%88efpa%C4%9Do.

[23]At the end of 2014 a DVD was published with the complete Esperanto-Vikipedio (27 October 2014), containing 204 259 articles and with links to the current Vikipedio (http://www.ikso.net).

[24]http://io.wikipedia.org/wiki/Frontispico.

[25]http://ia.wikipedia.org/wiki/Pagina_principal.

[26]http://ie.wikipedia.org/wiki/Principal_p%C3%A1gine.

[27]http://epo.wikitrans.net.

[28]http://eo.wikipedia.org/wiki/Meta-Vikio.

[29]http://eo.wikibooks.org/wiki/%C4%88efpa%C4%9Do.

[30]http://eo.wikiquote.org/wiki/%C4%88efpa%C4%9Do.

[31]http://species.wikimedia.org/wiki/%C4%88efpa%C4%9Do.

[32]http://eo.wiktionary.org/wiki/%C4%88efpa%C4%9Do.

[33]http://eo.wikinews.org/wiki/%C4%88efpa%C4%9Do.

[34]See Scienc-Teknika Esperanto-Biblioteko, STEB ĉe http://www.eventoj.hu/steb.

[35]See http://www.esperanto.net/veb/org.html, which mentions more than 40 organizations.

[36]Cf. [78-83].

[37]Cf. http://kaest.ikso.net.

[38]On word formation in Esperanto see also [84].

[39]On the earliest efforts see [85-87].

[40]See also the first such overview by Haupenthal [88].

[41]http://www.eventoj.hu/steb.

[42]Cf. http://www.uea.org/teko/terminaro_ekde_1980.html.

[43]https://sites.google.com/site/esperantoporun/dokumentoj/generalaj-dokumentoj/rekomendita-terminaro.

[44][89].

[45][32; pp.51-55, 69; pp.101-150].

[46]Reversible disambiguation = one idea should correspond with one term, and one term with one idea.

[47]http://www.iso.org/iso/iso_technical_committee.html?commid=48104 (terminology and other language and content resources).

[48]In his introductory work to general terminology science and terminological lexicography, Wüster alludes to examples in the *Slipara Vortaro* [90; p.206].

[49]http://eo.wikipedia.org/wiki/Bildvortaro [91].

[50]On TEC's operations and achievements, the problems associated with it, and prospects for the future, see [69; pp.151-219].

[51]Internationales Informationszentrum für Terminologie / International Information Centre for Terminology, Wien. / Internacia Informcentro pri terminologio: http://www.infoterm.info.

[52]Terminology Network, Wien (international network of terminology institutions): http://www.termnet.org.

[53]See, for example, http://esperanto.net/tec.

[54]On recent developments see the article by Mélanie Maradan, *Esperanto aktuell* 3/2010, 15-16. Maradan, a specialist in translation and standardization, serves as representative of the Universal Esperanto Association for its relations with Infoterm and ISO/TC 37. As of 2013 she is a member of Infoterm's board.

[55]On Wüster see [68; pp.62-99, 69; pp.59-97].

[56]DIN = Deutsches Institut für Normung (German Institute for Standardization).

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CAN COMPLEXITY BE PLANNED?

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ABSTRACT

The long accepted complexity invariance of human languages has become controversial within the last decade. In investigations of the problem, both creole and planned languages have often been neglected. After a presentation of the scope of the invariance problem and the proposition of the natural to planned language continuum, this article will discuss the contribution of planned languages. It will analyze the complexity of Esperanto at the phonological, morphological, syntactic and semantic levels, using linguistic data bases. The role of the L2 speech community and development of the language will also be taken into account when discussing the endurance of the same level of simplicity of this planned international language. The author argues that complexity can be variable and to some extent planned and maintained.

KEY WORDS

CLASSIFICATION

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INTRODUCTION

In the case of natural languages, complexity invariance is mainly discussed in terms of innate language faculty and cultural influences (Hudson in [1]) in a context where pidgin, creole and planned languages have often been excluded. One example of an analysis of the complexity of creoles is McWhorter [2], who claims that "the world's simplest grammars are creole grammars." Chomsky posits an innate language capacity, and therefore the existence of a universal grammar. This assumption implies an equal level of complexity among languages, which differ only in their parameters. The cultural approach supposes the basic equality of cultures, therefore their equal complexity. Sampson is right in considering this approach to be ideologically motivated [1]: equal potential does not mean equal complexity.

But what is complexity? There are basic problems in how to define complexity and how to measure it; different authors have taken different approaches to its definition. Is it absolute or relative? Is the difficulty of learning a language a measure of complexity? What is the relation between complexity and regularity, transparency or computability? Can the complexity of a given language change? If languages can change, their subsystems can become simpler or more complex. How do we account for the results of the processes of complexification and simplification?

This paper investigates the planned language Esperanto in order to answer these questions. Since this study is an overview of different linguistic levels, only a few selected features will be examined. My goal is to illuminate how the simplicity and regularity of a planned language can undergo some changes, but still remain at a relatively low level of complexity while used in an L2 speech community.

COMPLEXITY

Complexity is often advanced as an intuitive notion without concrete measurement and is mainly treated at the grammatical level. A compensatory balance between complexity in morphology and syntax is often inferred. Nevertheless complexity's range encompasses different levels of linguistic structure and use, from phonology to pragmatics, and involves the following fields:

- phonology (number of phonemes, their clusters, tones, etc),
- writing system (ideograms or alphabet) and orthography (sound–letter mapping),
- morphology (number of morphemes, their variability, number of rules controlling their combinations, compositionality, and so on),
- syntax (e.g. configuration, complexity of structures),
- lexicology (polysemy, phraseology),
- pragmatics (high or low context language, degrees of politeness).

We have excluded the question of writing system and orthography from the discussion of complexity, though these features can constitute a difficulty in language learning and in natural language processing, especially in speech synthesis (see [3]). The Chinese writing system is a bottleneck in mastering the language but it gives an insight into word meanings, and determines the linguistic worldview.

The absolute complexity of a given language embraces all of these fields, and a comparison of different languages can be carried out if similar measures are used for the languages to be compared.

Hengeveld and Leufkens [4] use "the amount of overt formal material and its depth" to define *(absolute) complexity,* according to McWhorter [2], leaving the question of "the difficulty of acquiring a linguistic (sub)system" to *relative* complexity.

Transparency, defined as "the degree to which a language maintains one-to-one correspondence between units at different levels of linguistic organization" [4] is also useful for characterizing linguistic systems. It is obvious that low complexity and high transparency make a language easy to learn.

In the following discussion, we will analyze complexity by examining (1) the number and transparency of rules working on a given linguistic level and (2) their productivity vs. lexicalization. Difficulty of learning will also be mentioned although this depends not only on the complexity and transparency of the given language, but also on the relation of the learner's first language to the language in question.

INVARIANCE OR CHANGES OF LANGUAGE STRUCTURES

The invariance hypothesis, accepted by both descriptive and generative linguistics in the twentieth century, is encountering criticism and rejection in the twenty-first (e.g. [1, 5]). One of the earlier opponents of the idea is Tauli [6]. From the basic claim that every language can express everything, it does not follow that all languages have the same level of complexity. It is not obvious that the existence of a human language faculty would lead to equal complexity in their expression. There are two basic tendencies which contradict this claim:

- on the one hand, languages can become **more complex** during their development – in accordance with the needs of their users [1];
- on the other hand, structures can become **simpler** and irregularities can diminish due to expanded contacts, richer social networks and also more L2 learners [5].

For the first point, a conservative or etymological orthography is an example; for the second, the fact that new verbs follow fewer paradigms. Irregular verbs belong to the older layer of a language (e.g. in English, German, French) and many of the lexical affixes are no longer productive in different languages.

In Hungarian noun to verb (N > V) derivation, only the suffixes *-Vz(ik)* and *-Vl* are productive (*internetezik* 'use the internet*', chatel* 'to chat'), and for professions *-(Vs)kOdik* (*nyelvészkedik* 'deal with linguistics') [7] but historically there are many more. Various verb tenses and the synthetic passive voice disappeared in Hungarian during the 19th century, so complexity in this regard diminished. Only some lexicalized passive forms have survived (such as *megadatik* 'is given'), but another form (gerund + copula: *nyitva van* 'is open') has replaced it in some cases. Nothing compensated for this simplification.

Therefore it can be concluded only that different languages have the same *expressive power*. Equal degrees of complexity then is as much a myth as the naturalness of ethnic languages. Changes in languages are continuous, and can result in more or less complexity. Cultural, historical and political changes are reflected in language, mainly in vocabulary, but also in pronunciation and pragmatics. The use of English in the United States, in a different cultural and political context than Great Britain, resulted in American English, which differs in a number of ways from British English. And this is the same for the other varieties of English. After the collapse of Yugoslavia, owing to the political will of its speakers, the Serbo-Croatian language was divided into the Serbian and Croatian languages and their actual development is divergent. Interventions in the life of languages occur regularly. Simplification of writing systems occurred in Korean, Turkish and Japanese among other languages.

L2 speakers of English contribute to simplifications in EIL (English as an International Language). Jenkins [8] declares that non-native speakers of English, who outnumber native speakers, already play a greater role in the development of that language. Thus, simplification is a real tendency, as [5] suggests.

Creoles are also simpler than ethnic languages [2]. They came into being as pidgins, that is as L2-s. Their grammar is extremely simplified – a characteristic that is maintained in their use as a mother tongue.

Esperanto was created as a simple contact language (as Lindstedt [9] characterizes it) by Ludovic Zamenhof (first published in 1887 [10]), and functions in international contexts as a non-native language for most of its speakers. The small number of native speakers of Esperanto are not regarded as establishing norms [11]. Their language use is similar to that of their parents; therefore simplicity of Esperanto is maintained at the stage of nativization.

NATURALNESS AND LANGUAGE PLANNING: THE NATURAL – PLANNED LANGUAGE CONTINUUM

Natural languages and planned (also called artificial) languages do not form a dichotomy, but rather a continuum, because there have been different kinds of interventions in the life of almost every language. Figure 1 (based on [12]) shows the grade of artificiality (or naturalness – depending on the starting point) of selected languages.

Ideal natural language								Completely planned language
Japanese Korean	Hungarian	Norwegian Indonesian	Modern Hebrew	Interlingua	Esperanto	Volapük	Solresol	Program language

Figure 1. Grade of artificiality/naturalness of selected languages.

Codified languages already manifest some artificiality because of the regulation of orthography and grammar (normally carried out by academies or similar language planning institutions). Language planning happens within ethnic languages at different levels, and also includes the planning of new languages. Its strategies include
- simplification of orthography (in many languages);
- regulation of grammar;
- standardization and modernization of vocabulary (e.g. the Hungarian language renewal in the 19th century, and also current terminological activity for many languages);
- revitalization of languages (Modern Hebrew);
- creation of a standard language on the basis of existing dialects (New Norwegian [*Nynorsk*], Indonesian);
- planning languages on the basis of existing languages and generalizing their features (e.g. Volapük, Esperanto, Ido).

As early as 1974 Tauli considered the planning of new languages in this line and therefore saw interlinguistics as a special branch of the theory of language planning [6; p.66]. He declared: "The ideal situation would be that all people all over the world who need to communicate with the people who have different mother tongues can learn the same interlanguage as a second language." This is the basic goal behind Esperanto. Tauli is in favor of a constructed interlanguage simply because "the defects and especially the complexity of an ethnic language, which demand more time to master, make it less appropriate than a constructed interlanguage". But, he concludes, the choice of the interlanguage is a political problem.

It should be mentioned that Eliezer Ben Yehuda who carried out the revitalization of Hebrew was a contemporary of Zamenhof who created Esperanto. Their language planning methods were similar and their work grew out of the same historical background [13].

Sanskrit is a very old example of the planning of a natural language: Pānini carried out its codification in his grammar around 300 BCE, and it became generally accepted as normative. Its invariable rules have been transmitted down to the present day, and Sanskrit is still widely used nowadays, mainly as a non-native language in India [14].

ESPERANTO AS A NATURAL (LIVING) LANGUAGE

BASED ON ROMANCE AND GERMANIC LANGUAGES

The basic vocabulary of Esperanto comes from existing languages, namely from the Romance (some words are taken directly from Latin) and Germanic languages, taking into account their use in several languages. These (Greek-Latin based) *international words* also occur in other European languages. The meanings of the original words are reduced to the main meanings. Sometimes the original word was split into several words (e.g. *tablo* < En, Fr table, but *tabelo* for table as a figure < De Tabelle, and *tabulo* for blackboard). For the principles of Esperanto etymology see [15].

This process can be considered as *decomplexification*. The same thing happens with loanwords borrowed by ethnic languages (compare the reduced meanings of *hardware* and many other words related to informatics in other languages).

On the other hand, Zamenhof worked out a simple and regular derivation system which can be considered as a ***simplification and generalization*** of the existing complicated derivation systems in different languages. The agglutinative forms in Esperanto always follow the same pattern; in other languages there are different rules or a lack of some forms as the following examples show:

Eo: bela – bel*eco*, inteligenta – inteligent*eco*, moderna – modern*eco*, natura – natur*eco*,
En: beauti*ful* – beauty, intelligen*t* – intelligen*ce*, modern – modern*ity*, natural – natural*ness*,
De: schön – Schön*heit*, klug – Klug*heit*, modern – Modern*heit*, natürlich – Natürlich*keit*,
Hu: szép – szép*ség*, okos – okos*ság*, modern – modern*ség*, természetes – természetes*ség*,
Pl: piękny – piękn*ość*, mądry – mądr*ość*, nowoczesny – nowoczesn*ość*, naturalny – naturaln*ość*.

The derivation adjective → noun by means of a suffix is common for the above languages, but there are different forms in English, two possibilities in German, and a regular form in Polish and Hungarian (the difference of -*ság/ség* is due to vowel harmony). Nevertheless the Polish *piękność* means 'beautiful girl' and not 'beauty'.

Esperanto is different in that the process can be generalized for every form as long as there is no semantic restriction, so *kvinsteleco* can be formed while speaking about the 'five star quality' of a TV-program or a hotel, but there is no similar form in English, German or Polish.

FUNCTIONING AS A NATURAL LANGUAGE

Esperanto is a planned language in terms of its birth and a natural language in terms of its current functioning and development [16-19]. Liu has also demonstrated by quantitative analysis that Esperanto is structurally a normal human language [20]. It is a sign system not only with well established morphology and syntax (see subsections *Morphology* and *Syntax* in this article), but also a natural tool for expressing thoughts and feelings in communication among people with different first languages in various settings. It is also a means of identification – as is shown by its many original literary works. The difference with other languages is that the Esperanto speech community is voluntary, non-ethnic and non-territorial [21]. Because of the last feature, it can be compared to minority languages in diaspora [22].

Additionally, Esperanto is the mother tongue of about a thousand people (see above). They are the so-called *denaskaj esperantistoj* 'native speakers of Esperanto' (see also [11, 18]). They are characterised by bi- or multilingualism and the use of Esperanto mainly at home.

PLANNED SIMPLICITY

The goal of Zamenhof was to provide a simple and regular language without exceptions, which would be easy to use for people with different language backgrounds. The *First Book* of Esperanto, a small pamphlet [10] (1887 in Russian, Polish, German, French, 1889 in English) contains an introduction, 16 basic grammatical rules, a basic vocabulary with fewer than one thousand word roots and some sample texts. Zamenhof explained his basic principle:

> I established rules for the formation of new words, and at the same time, reduced to a very small compass the list of words absolutely necessary to be learned, without, however, depriving the language of the means of becoming a rich one. On the contrary, thanks to the possibility of forming from one root-word any number of compounds, expressive of every conceivable shade of idea, I made it the richest of the rich amongst modern tongues. This I accomplished by the introduction of numerous prefixes and suffixes, by whose aid the student is enabled to create new words for himself, without the necessity of having previously to learn them.

Zamenhof relinquished ownership of the new international language and handed it over to the speech community ("An international language, like every national one, is the property of society, and the author renounces all personal rights in it forever" appears on the inside of the front cover in the First Book). In order to conserve simplicity and stability, the basic rules and vocabulary of Esperanto (*Universala Vortaro*) with the Exercises (*Ekzercaro*) contained in the *Fundamento* (1905) were agreed to be *netuŝeblaj* 'untouchable'. At an early stage in the development of the language, Zamenhof presented Esperanto with model texts which can be considered as a first corpus, a basis for further developments [23].

If we analyze the 127-year history of Esperanto, however, some changes can be demonstrated to have occurred (see further in the text), some displaying simplification, but some showing complexification. The vocabulary is growing according to the needs of the modern world. The ethnic languages have manifested many changes at the grammatical level during their long history, and have experienced huge cultural changes. According to Sampson [1], in the history of a language, complexity can increase, but in the age of globalization, a language used in international contexts tends to avoid this trap.

The simplicity of Esperanto can be maintained because of its international use: Esperanto is a L2 or even L3 or L4 for almost all its speakers, and most people learn it as adults. Trudgill [5] also claims that complexity decreases as a function of adult learning, as is the case with EIL.

What follows is a brief examination of the different linguistic levels of Esperanto, a comparison with ethnic languages (for the place of Esperanto among ethnic languages from the point of view of language typology see [19]) and an analysis of the tendencies of change.

PHONETICS AND ORTHOGRAPHY

Esperanto – with 27 phonemes – is well within the range of an average-sized sound inventory of natural languages (31 in [24]). The **5 cardinal vowels** (a e i o u) are the most commonly encountered in the world (with different variants, present in more than 80 per cent of all languages), and can be easily distinguished. By way of comparison, Hungarian has 14 and German 17 vowels.

The **22 consonants** (b ts tS d f g dZ h X j Z k l m n p r s S t v z) – although frequent – contain voiced–unvoiced consonant pairs which are close in pronunciation; therefore their distinction is not easy for every speaker. Their pronunciation is stable, Zamenhof [25]

suggested pronouncing every sound separately. Nevertheless, coarticulation can change them in rapid speech. Still, there is no need for context-sensitive rules for the pronunciation. The letter–sound transformation is regular [3].

Later development of the language has tended to slightly reduce this sound inventory through the marginalization of the velar fricative ĥ, and its substitution by the velar plosive k (e.g. ĥemio > kemio).

The **regular stress** falls on the penultimate syllable. There are no tones. Prosody rules were not defined, therefore prosody patterns have little or no influence on meaning. Yes/no questions begin with the particle *ĉu* (similar to the Polish *czy*).

The **regular orthography**, i.e. the nearly exact mapping between sound and letter, offers a high level of simplicity and transparency (compared to English, for example). Every phoneme is written/coded by one and the same letter, which is why there are five consonant letters with diacritics. The semi-vowel ŭ [w], the 28th letter, functions almost exclusively as part of the two diphthongs of Esperanto: *aŭ* as in *aŭto* and *eŭ* as in *Eŭropo*.

The pronunciation of a letter is realized by the same sound, though coarticulation can sometimes produce changes (*ekzemple* [egzemple] 'for example'). The different allophonic realizations of the phonemes rarely produce misunderstandings (for the phonetic processes see also [26]). Jansen found no opacity in the phonological system of Esperanto, which supports the idea that Esperanto is "an easily speakable and understandable language" [27].

MORPHOLOGY

Characteristic of Esperanto is the use of bound morphemes as lexical elements; only the grammatical particles and closed classes of other elements – such as numerals and pronouns – are free morphemes. An Esperanto word normally consists of one or several **bound lexical morpheme**s and a word class ending:

> **N** tabl- -o = tablo 'table', san- -o = sano 'health'
> **Adj** natur- -a = natura 'natural', san- -a = sana 'healthy'
> **V** parol- -as = parolas 'speak', san- -as = sanas 'be/is healthy'
> **Adv** rapid- -e = rapide 'quickly', san- -e = sane 'in healthy manner'

Declension of nouns and adjectives operates with two cases, the nominative and the accusative (marked by the ending *–n*), and the plural grammatical suffix **–j:**

> tablo**jn** 'tables+Acc'

English (apart from some pronouns) and isolating languages do without cases. Polish, on the other hand, has seven cases with different realizations (according to the gender, animacy and phonetic properties of the stem). Hungarian nouns can have up to one thousand forms. The following is just one example of such Hungarian complexity:

> barátoméval – barát- -om- -é- -val
> friend+my+that+with 'with that of my friend'

Conjugation operates with three tenses and three moods; verbs are not marked for person or number. The verbal paradigm can be summarised as follows:

> Indicative mood: parolis, parolas, parolos 'spoke, speak(s), will speak'
> Conditional mood: parolus, 'would speak'
> Imperative: parolu! 'speak!'

Compared to agglutinative languages such as Hungarian, Esperanto shows a high degree of simplicity. The morphological complexity of Esperanto is also low because of its **invariable**

morphemes, which have clear-cut functions and are therefore always applicable when there is no semantic restriction.

The root (normally a bound morpheme) represents the notion, and a word class ending is needed for its realization in a given word class. The primary realization of a stem is often the same as in its source languages. This phenomenon leads some Esperantologists to posit a so-called grammatical character of stems – a view that is rejected by others (detailed discussion in [28]). However the basic meaning of the root does have an influence on the derivation.

The **agglutinative word formation** is regular and productive. About 40 affixes contribute to the formation of new words whose meaning is related to the stem. This morphological process reduces the investment of time needed to learn the vocabulary. From the root *lern-* 'learn' the following, among others, can be derived:

> lern*ant*o 'pupil, learner', *ge*lern*ant*oj 'school boys and girls', lern*ej*o 'school', lern*em*a 'diligent', lern*il*o 'learning tool', lern*igi* 'make learn', lern*ebl*a 'learnable', lern*end*a 'required to be learned', lern*ind*a 'worth learning', lern*aĵ*o 'study material'.

This is similar to Hungarian word formation. But Hungarian goes back even more, and the root *tan*, approximately 'study', appears in *tanul* 'learn' and *tanít* 'teach', *tanár* 'teacher', *tanuló* 'pupil', and in many compound words:

> *nyelvtan* 'study of language = grammar', *számtan* 'study of numbers = mathematics', etc.

The isolating Chinese language also has compounds similar to Esperanto (examples from [23]):

> vesper+manĝo (evening+meal) = vespermanĝo (dinner)
> wan+can (evening+food) = wancan (dinner)
>
> fer+vojo (iron+road) = fervojo (railway)
> tie+lu (iron+road) = tielu (railway)

But Chinese has a much more synthesized structure:

> *dian*hua = 'electric speech' = telephone
>
> *dian*nao = 'electric brain' = computer

Piron [29] considers Esperanto an agglutinative language with isolating features because of some basic features it shares with Chinese. Esperanto affixes can be used as lexical roots (*ilo* as instrument or *ejo* as room) which is not true for affixes of agglutinative languages. The independence of affixes – not contradictory to the basic principles of Esperanto – is an interesting result of its language development.

Considering the number of derivational morphemes, the morphological structure of Esperanto words is relatively complex, but transparent. The agglutinative structure is not the simplest system, but when it is transparent, it is accessible to logical thought, therefore easy to learn also for speakers of Asian languages (see [23, 30]).

SYNTAX

The clear-cut endings of word classes (as above) in Esperanto make its **syntactic structure transparent** (also Liu [23] considers it more explicit):

> *la turisto longe rigardis la faman bildon.*
> The tourist 'for a long time' looked (at) the famous picture+Acc.

Only the possible use of the accusative for a temporal adjunct can disturb the transparency:

*la turisto la tuta**n** tempo**n** rigardis la fama**n** bildo**n**.*
The tourist the whole time+Acc looked at the famous picture+Acc.

Syntactic functions are expressed by the nominative (subject), the accusative case ending (direct object), and by prepositions (other complements and adjuncts):

*Maria parolas **pri** la filmo **en** la salono **kun** kolegoj.*
Mary speaks about the film in the room with colleagues.

The **word order** is basically free, though corpus research shows a strong tendency toward SVO order [31, 32]. The order Adjective + Noun is normal, but Noun + Adjective can also occur, although it is marked:

la facila lingvo internacia
the easy international language

Agreement in case and number extends to adjectives linked to nouns (faman bildon).

Jansen [27] also mentions the more complex – but transparent – syntactic structure, when agreement contributes to differentiation in number:

brunaj kato kaj hundo (a cat and a dog, both brown)
vs. *bruna kato kaj hundo* (a brown cat and a dog)

In the English equivalent ("brown cat and dog") either the cat alone or both the cat and dog might be brown.

Subordinate clauses are right branching and they do not have time agreement.

Jansen [27] considers the lack of marking of the object role in the case of clauses as an example of non-transparency, but the object role is unambiguous because of the semantics of the verb, e.g. *diri* 'to tell' which is transitive. Compare:

diru al la patro la novaĵon! 'Tell the news to father!' and

diru al la patro ke li foriris! 'Tell father that he's left!'

In some languages a simple morphology is balanced by complicated syntax. In the case of Esperanto, however, the basic syntax is also relatively simple and transparent. The use of an accusative ending permits free word (constituent) order. Different syntactic structures can be used because of the flexible structure of the language and are acceptable in the speech community.

SEMANTICS

Semantic complexity prevails in English, compensating for the rudimentary morphology, so that English semantics is the most intricate part of the language: words have many meanings, and polysemy and idiomatic expressions are major complicating factors. Hungarian has a rather transparent, but very complicated morphology while the syntax and the semantics show an average level of complication.

While the initiator of Esperanto, Ludovic Zamenhof, based his language on the Romance, Germanic, and Slavic languages, he reduced complex meanings of the source language to their main meanings in the process of adapting these words, in order to have a non-ambiguous system. For other meanings, he borrowed other words (see the example of table > tablo, tabelo, tabulo, p.229 in this article).

Different meanings of words could be difficult to understand for users of different native languages and cultural backgrounds throughout the world. The prototypical meanings can be understood in an international context. This is also the case for English as an international language.

There was no precise definition of word meanings at the beginning, but the *First Book* (1887) and later the *Fundamento* (1905) offered translations into five languages – French, English, German, Russian and Polish – for Esperanto roots.

Nevertheless some ambiguity cannot be avoided at the semantic level:

a) the linguistic system, the economy of words, combined with the fact that Esperanto words conserve their similarity with the original words, may produce ambiguity. So, the word *kolego* based on French, English, German etc. words (collègue, colleague, Kollege) could be misconstrued as containing the augmentative suffix *-eg* attached to the basic word kolo 'neck'. Only context would establish the difference:

> *Petro havas kolegon* 'Peter has a *colleague* / big neck'.

Puns and word games making use of this kind of ambiguity are common in Esperanto.

b) if a language is used in a speech community the process of metaphorical usage inevitably begins. Saussure's suggestion (in [33]) that meanings would change in various ways has proved to be true. Consider the metaphoric use of *donkey* 'stupid' or *pig* 'dirty' or 'obscene':

> *Vi azeno / porko!* 'You donkey / pig!'
>
> *La preleganto tuŝis la problemon.* 'The lecturer touched the problem.'

A language begins its autonomous semantic life when it becomes commonly used. Nowadays Esperanto has cases of polysemy, metaphors, many synonyms and a (rather transparent) **phraseology** (described by Fiedler [34, 35]). Phraseology can be taken over from ethnic languages, for example *nigra merkato* 'black market' or be born within the speech community, for example *eterna komencanto* 'eternal beginner' or *ĝisosta esperantisto* 'to-the-bone Esperantist'. One word can even incorporate a whole situation, e.g. *ellitiĝi* 'get up from bed' (el- -lit- -iĝ- -i, *lito* 'bed'), *alvali* 'go to the valley' (valo 'valley').

The **compositionality of Esperanto** due to its morphological character is a determining factor at the semantic level, and makes it treatable also for computational processing [36]. The meaning of a derived word is normally regular, as in the case of the suffix –*il*, an instrument or tool:

> manĝi 'to eat' > manĝilo 'tool to eat', i.e. a piece of cutlery
>
> muziko 'music' > muzikilo 'tool for music', i.e. (musical) instrument
>
> skribi 'to write' > skribilo 'writing implement',

Similarly the suffix *-ant* creates the person doing the basic activity expressed in the root:

> lernanto 'pupil, learner', leganto 'reader', vizitanto ' visitor', muzikanto 'musician', manĝanto 'the person eating, eater'.

Even longer words used to be created (though this is less common today) such as *malindulino* 'a woman not worthy of respect' (mal- -ind- -ul- -in- -o).

Nevertheless it can be noted, that some derived words – beyond their general meaning – are lexicalized with particular meanings, for example *tranĉilo* 'tool to cut' especially refers to a knife. This shows the influence of the speech community.

Non-predictable meanings of direct verbal forms also occur (through a change of the noun ending to a verb ending) – a phenomenon that is very common in English (without formal change): *biciklo > bicikli* 'to ride a bicycle, to bike', *betono* 'concrete' *> betoni* 'to concrete', i.e. to provide something with concrete and *loko* 'place' *> loki* 'to place', i.e. to put something in a place. These meanings are normally unambiguous, but in the case of *loki* the meaning 'to be at a place' can also occur. Jansen [27] considers such semantic indeterminacy to be the price that is paid for freedom in word building.

In sum, the semantic complexity of Esperanto is lower than that of its source languages, but not its expressive power. The high degree of compositionality creates more possibilities for word creation than are present in ethnic languages, and the words so created are easily understandable also for speakers of Asian languages (cf. [23]).

This productivity and flexibility is characteristic of the linguistic picture/worldview of the planned language Esperanto [12]. Semantically related words are also often morphologically related, which facilitates learning words in the same semantic field. The mental lexicon of Esperanto speakers is deserving of further research.

PRAGMATICS

A language in international use by people with different cultural backgrounds can only be a low context language. In Esperanto there are no complicated politeness forms, and solidarity prevails among speakers, which results in a familiar level of interaction. There are no T/V forms among pronouns, and the personal name is the most common form of address. Nonetheless, the forms *sinjoro* and *sinjorino* 'sir, Mr' and 'ma'am, Miss, Mrs' can be used for more official contacts. The use of titles (such as *sinjoro profesoro*) is limited.

CONCLUSIONS

The investigation of planned languages with speech communities can provide another approach for examining complexity variance. As a language that came into existence as a result of conscious planning, Esperanto is meant to be simple and regular, i.e. with a low degree of complexity and a high degree of transparency compared to ethnic languages which have undergone many changes throughout their history. These are basic conditions for ease of learning and for the chance to spread as an international language. As for simplicity, it compares with pidgin and creoles, although there are differences in their origins and structures (see detailed comparison in [37]). McWhorter [2] may be right in suggesting that creoles have the simplest known grammars. Esperanto was aimed to be logical and precise; therefore some structures are relatively complex, although transparent.

The original language project of Esperanto, published in a concise pamphlet in 1887, matured into an autonomous linguistic system which continues to develop in an international speech community. Some changes – both simplifications and increases in complexity – have occurred and continue to take place in the language due to its use in a speech community. Therefore the sociological approach of Trudgill [5] can be applied to Esperanto as well.

Under the external Romance appearance (of the basic vocabulary) there is a more logical and generally accessible system [29] with relatively low complexity. The productive compositionality provides Esperanto with a simple, flexible, transparent and powerful tool to maximize its expressive possibilities. On the other hand, the frequency of use in a community can result in the lexicalization of some forms. The current Esperanto semantics are the result of ongoing negotiation in social interactions by speakers and through literary works.

The maintenance of relative simplicity in Esperanto is certified by the untouchable *Fundamento* (at the grammatical level), and also by its international use by second language users. This supports the theory of Trudgill, that the complexity of languages decreases as a function of acquiring adult second language learners.

Research on the ongoing development of Esperanto and on the mental lexicon of Esperanto speakers could reveal much about how a number of linguistic processes take place.

ACKNOWLEDGMENTS

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ESPERANTO PHRASEOLOGY

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ABSTRACT

The contribution deals with the phrasicon of Esperanto, i.e. the inventory of idioms, phrases, proverbs, catchphrases and other items of pre-fabricated speech that are stored in speakers' mental lexicon. On the basis of origins, Esperanto phraseology can be classified into three groups: First, many phraseological units have entered the language through various other languages. This group includes classical loan translations especially from the Bible as well as ad-hoc loans introduced by speakers from their mother tongues more or less spontaneously. Secondly, there is a group of planned, i.e. consciously created, phraseological units. They mainly go back to Zamenhof, the initiator of the language, who published an Esperanto Proverb Collection (*Proverbaro Esperanta*) in 1910. Thirdly, there are phraseological units which have their origin in the language and the cultural life of the speech community. The paper will show that the planned language Esperanto, with its agglutinative character, free word order and flexible word formation, possesses the prerequisites for creating stylistically appealing and catchy phraseological units. An analysis of literary and journalistic texts as well as oral communication in Esperanto reveals that its phraseology is widely used and that authors like to modify phrases and idioms according to the textual situation. The use of phraseological units proves that Esperanto is a living language. Phraseology can be considered a criterion for assessing the successful development of the planned language system from a project to a full-fledged language. It demonstrates the complexity of Esperanto culture.

KEY WORDS

CLASSIFICATION

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INTRODUCTION

Planned languages (also called 'universal languages', or '[artificial] world auxiliary languages') are language systems which have been consciously created according to definite criteria by an individual or a group of individuals for the purpose of making international communication easier [1]. Their number has probably already reached almost one thousand. The only planned language that has managed to effect the transition from a language project to a fully-fledged language is Esperanto, however. Its successful development is due to linguo-structural properties, but above all to extra-linguistic factors [2, 3]. Blanke [4, 5], who suggests a classification of planned languages according to their real role in communication, uses a scale of 28 levels to describe Esperanto's transition from a language project to a language, from the "manuscript" (level 1) to a "language with language change" (level 28). Blanke [5; p.57] considers the existence of expressive linguistic means, including phraseological units, to be a criterion of a developed planned language.

PHRASEOLOGICAL UNITS IN ESPERANTO

DEFINITION

There are mainly five defining characteristics of phraseological units (PUs) [6]: a) polylexicality (i.e. they have multiple constituents), b) (relative) syntactic and semantic stability, c) idiomaticity (as a potential characteristic), d) lexicalization (i.e. as ready-made units of the lexicon they are not created productively by the speaker/writer, but reproduced), and e) stylistic and expressive connotations. These features can be verified for the phraseology of Esperanto. Furthermore, the majority of PUs in Esperanto are characterized by euphonic qualities (e.g. rhyme, rhythm, alliteration).

As for b), their stability, we have to consider that this is a relative criterion, i.e., PUs are variable within definite constraints. In Esperanto, the range of variation seems to be larger than in ethnic languages. Structural as well as lexical variants are found, for example:

> *froti la manojn/froti siajn manojn/froti al si la manojn* ['to rub one's hands']
> *demeti/levi la ĉapelon* ['to take one's hat off/to raise one's hat']

They are generally accepted, due to the use of Esperanto as a foreign language in an international speech community. There is still a third type of variation – phraseological synonyms, where identical or similar contents are expressed by different expressions based on different images. Because of the various ethnolinguistic influences on Esperanto, the language is rich in synonyms. Compare, for example, the following Esperanto proverbs whose basic meaning is that 'a trifling cause may have a serious effect':

> *unu fajrero estas sufiĉa por eksplodigi pulvon* ('One spark is enough to make powder explode'),
> *pro najleto bagatela pereis ĉevalo plej bela* ('Because of a little nail the most beautiful horse perished'),
> *ofte de kaŭzo senenhava venas efiko plej grava* ('A trifling cause often has a very important effect'),
> *unukopeka kandelo forbruligis Moskvon* ('A one-kopek candle burnt Moscow down'),
> *de malgranda kandelo forbrulis granda kastelo* ('Because of a small candle a great castle burnt down'),
> *unu fava ŝafo tutan ŝafaron infektas* ('One shabby sheep will mar the whole flock'),
> *unu ovo malbona tutan manĝon difektas* ('One bad egg spoils the whole meal').

CLASSIFICATION

There are different ways to classify phraseological units. The peculiarities of Esperanto as a planned language suggest a need for a classification of PUs on the basis of their origin. The following three groups can be distinguished [7]:

a) the quantitatively largest group is made up of those units that have entered the language through various other languages. These are loan translations, from Greek mythology and from the Bible, which today are some of the most widely disseminated proverbs (e.g. *Mano manon lavas* – cf. Latin *Manus manum lavat*). A unit such as *enverŝi oleon en la fajron* ('to add fuel to the flames') is known in European languages as well as in Chinese [8; p.93].

Furthermore, individual speakers more or less spontaneously introduce expressions from their native languages which may enjoy international currency (ad hoc loans). These may have the character of occasional formations showing striking similarities to their ethnolinguistic bases, as in the following examples[1]:

1) *en 1867 Usono aĉetis de Rusio Alaskon por 7,2 milionoj da dolaroj. Multaj opiniis, ke tio estis mono ĵetita al la vento.* ("Monato" 4/96, p.22; Russian author) ('In 1867 the USA bought Alaska from Russia for 7.2 million dollars. Many people thought that this was money down the drain [lit. 'money thrown to the wind']'; cf. Russian *бросать деньги на ветер*).

2) *tiu batalo levis sian kurtenon per akuzoj pri falsaj insekticidoj, semoj, cigaredoj kaj vinoj.* ("El Popola Ĉinio" 12/90, p.23) ('This battle began [lit. 'raised its curtain'] with accusations of false insecticides, seeds, cigarettes and wine'; cf. Chinese *kai mu*).

This group of phraseological units developed, first, because of Esperanto's position as a means of communication in a second-language community which is in turn in permanent contact with a diversity of ethnic languages, and, second, because of properties of its linguistic structure favouring the adoption of foreign lexical material. There are obvious parallels to language-contact phenomena in bilingual speakers, as they have been described for the phraseology of various European languages (see, e.g. [9-11] on the impact of English on Polish, Spanish and German). Due to the use of English as an international means of communication today, for example, *in a nutshell* with the meaning 'to say sth. in a clear way, using few words' has found entry into many languages (cf. Norwegian *i et nøtteskall*, Dutch *in een nutshell*, Icelandic *í hnotskurn*, Finnish *pähkinäkuoressa*, and German *in einer Nussschale*), and it does not surprise anyone that a loan translation is also known in Esperanto (*en nuksoŝelo*), as the screenshot from an Esperanto corpus (http://www.tekstaro.com) illustrates (Figs. 1 and 2). The influences on Esperanto are much more international than on other languages, however.

b) The second group represents a peculiarity of planned language phraseology: the conscious creation of units. The majority of such 'planned' proverbs go back to Zamenhof, the initiator of the language, who published a collection of proverbs, the *Proverbaro Esperanta* ('Esperanto Proverb Collection') [12] in 1910 on the basis of a collection listed and compared in Russian, Polish, German and French by his father, Marcus Zamenhof. It contains units such as *Ĉio transmara estas ĉarma kaj kara* ('Everything beyond the ocean/far away is charming and dear') or *Neniu estas profeto en sia urbeto* ('No one is a prophet in their own little town'; = is recognized in their own land), which are very popular with Esperanto speakers today. Analyses, however, reveal that only a small part of the 2 630 units in this collection (about 7 %) can be considered common knowledge in the speech community. This shows the limitations of planned processes in a functioning planned language [13].
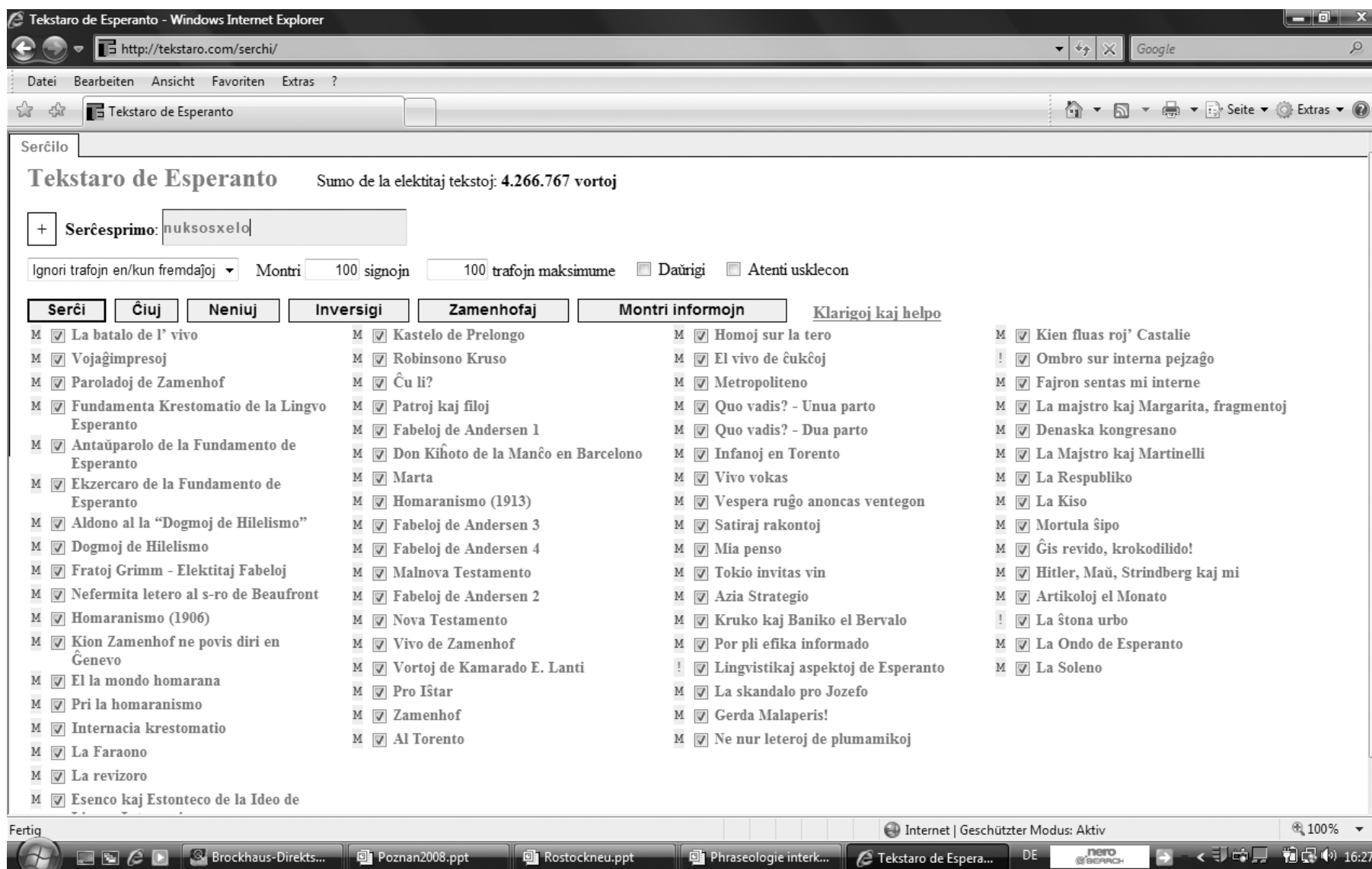
Figure 1. Screenshot from Esperanto corpus at http://www.tekstaro.com.

Tekstaro de Esperanto - Windows Internet Explorer

http://tekstaro.com/serchi/   Google

Datei   Bearbeiten   Ansicht   Favoriten   Extras   ?

Tekstaro de Esperanto   Seite ▾   Extras ▾

Serĉilo | Serĉo 1   ✕

Rezulto de priserĉo de la Tekstaro de Esperanto

Serĉis: nuksosxelo - ignoras trafojn en/kun fremdaĵoj - montras 100 signojn - montras maksimume 100 trafojn - ne uzas signetojn - ne atentas usklecon   Ŝanĝi

Suma nombro de trafoj: 6. La mendita maksimumo estis 100.

1 trovo en *Ombro sur interna pejzaĝo*

nĉis sin perrande al ŝultro. Sopiro fermas min en nuksoŝelon. Pasio, tio estas la vorto. Mi timas ren

1 trovo en *Artikoloj el Monato*

s pli valora ol alia homo. Jen la homaj rajtoj en nuksoŝelo! Kiel afero de la fido!

> Do, tute principe — kaj por mi persone tio estas unu el la bazaj aferoj de mia fido je Dio — neniu homo el si mem, kvazaŭ herede, aŭtomate, denaske, l
> homo. Jen la homaj rajtoj en **nuksoŝelo**! Kiel afero de la fido!
>
> **Pli da kunteksto**

1 trovo en *La ŝtona urbo*

akvositeloj estas pli malplenaj ol du sekiĝintaj nuksoŝeloj. Ĉu mi ne ripetadas al vi knabinoj, ke n

3 trovoj en *La Ondo de Esperanto*

tablo, prilumata de pendlampo, plenas je ciferoj, nuksoŝeloj, paperetoj kaj vitreroj. Antaŭ ĉiu ludan
omo, tondilo kaj telero, en kiun oni ordonis meti nuksoŝelojn. La infanoj ludas je mono. La ludmono e
ĉi la kopekon. Ili trafas per manoj kraĉaĵojn kaj nuksoŝelojn, kolizias per la kapoj, sed ne trovas l

Internet | Geschützter Modus: Aktiv   125%

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Figure 2. Screenshot from Esperanto corpus at http://www.tekstaro.com.

c) The third group is made up of phraseological units which have their origin in the language and cultural life of the Esperanto community. These reflect communicative history, sociological characteristics, the speakers' collectively held ideals and aims, traditions, and Esperanto literature, as the following examples show:

> *esperanto – edzperanto* ['Esperanto – husband-provider/matchmaker'],

> *Ne krokodilu!* [lit. 'Don't be a crocodile!' = Speak Esperanto when amongst Esperanto speakers!; friendly admonition at Esperanto meetings as an expression of linguistic loyalty],

> *La nepoj nin benos* ['Our grandchildren/descendants will bless us' – a quotation from Zamenhof's well-known poem *La Vojo*]).

This type of PUs is especially interesting as these expressions can only be understood by Esperanto speakers on the basis of their sociocultural background knowledge. Therefore, they disprove the thesis that a planned language necessarily 'lacks culture' [14].

Since it is sometimes difficult to find out whether there is a model structure in one of the ethnic languages, the dividing lines between the three groups a), b) and c) may often appear indistinct.

CHARACTERISTICS OF PHRASEOLOGICAL UNITS

The grammar of Esperanto provides good opportunities to create pithy and catchy PUs, especially proverbs. Zamenhof, for example, made extensive use of a set of Esperanto correlatives, the so-called table-words. This is a closed subsystem that allows the completely regular formation of 45 pronouns and adverbs through cross-reference in a table [15]. Their use in proverbs results in parallel structures, including patterns such as *kiu(n) ... tiu(n), kio(n) ... tio(n), kie(n) ... tie(n), kiam ... tiam, kies ... ties* etc.:

> **kiu** *kaĉon aranĝas,* **tiu** *ĝin manĝas* ('The one who makes the mess [lit. 'prepares the gruel'] has to tidy it up [lit. 'eat it']'),

> **kion** *mi ne scias,* **tion** *mi ne envias* ('*What* I don't know doesn't make me envious'),

> **kie** *regas la forto,* **tie** *rajto silentas* ('*Where* power rules *there* the right is silent').

Another stylistic feature is emphatic word order. Syntactically, Esperanto belongs to the so-called SVO-type, to which the Romance, Germanic and Slavic languages belong. The existence of a marked accusative (-*n*) and various inflectional devices allows for great flexibility in word order. The most frequent type of stylistic inversion in Esperanto proverbs is the use of the direct object in front of the verb:

> **urson** *evitu,* **bopatrinon** *ne incitu* ('A bear avoid, a mother-in-law don't provoke'),

> **arbon** *oni juĝas laŭ la fruktoj* ('A tree one judges by its fruits').

As epithets are normally placed before the noun, a change of this order is felt as emphatic:

> *kapo* **majesta** *sed cerbo* **modesta** ('A majestic head, but a modest brain'),

> *amiko* **fidela** *estas trezoro plej* **bela** ('A true friend is the most beautiful treasure').

In addition, we find verbs and adverbials in front position (e.g. **Ŝiriĝis** *fadeno sur la bobeno* 'The thread on the bobbin tore off'; = something went wrong; **Ĉe tablo** *malplena babilo ne fluas* 'At an empty table conversation doesn't flow'). Even the expected order of auxiliary and main verb can be switched:

> *pri gustoj oni disputi ne devas* ('Tastes cannot be disputed'; unmarked word order: *oni ne devas disputi*),

> *kiu mordi ne povas, kisi ekprovas* ('The one who cannot bite tries to kiss'; unmarked word order: *Kiu ne povas mordi, ekprovas kisi*).

Finally, we can find a combination of different types of stylistic inversion:

> *azenon komunan oni batas plej multe* ('The common donkey is beaten most'; fronting of the direct object + inversion of epithet and noun),
>
> *murmuregas la urso, sed danci ĝi devas* ('The bear grumbles, but it has to dance'; fronting of the verb + inversion of auxiliary and main verb – *sed ĝi devas danci*).

The rhythm of Esperanto proverbs often reminds us of equivalents in other languages:

> *Aliaj tempoj, aliaj moroj* (*Other times, other customs*),
>
> *kiu groŝon ne respektas, riĉecon ne kolektas* ('The one who doesn't care of the penny won't get rich'; cf. German *Wer den Pfennig nicht ehrt, ist des Talers nicht wert*).

Whereas the fixed word stress on the penultimate syllable can impose a restriction on the creation of euphonic proverbs in Esperanto, the flexible and productive word formation system (with word-category suffixes) can be employed to make them stylistically impressive:

> *inter lupoj kriu lupe* ('Among wolves cry like a wolf'; lit. 'wolf-ishly', *-e* marks adverbs),
>
> *langa vundo plej profunda* ('A wound caused by the tongue [i.e. by words] is the deepest'; lit. 'tongu[e]-ish', *-a* marks adjectives).

Rhyme is the most conspicuous stylistic feature of Esperanto proverbs. The majority of rhyming proverbs are characterized by the traditional pure rhyme on the stressed penultimate syllable:

> *jen la tubero en la afero* ('Here's the knot in the affair'; = There is a snag to it),
>
> *ne ŝovu la nazon en fremdan vazon* ('Don't push your nose into so. else's affairs', lit. 'vase').

The characteristics described in this section make phraseological units, especially proverbs, pithy and catchy and assure their recognizability and memorability. It is because of these features that a mere allusion to a proverb is often sufficient to evoke the entire proverb.

THE USAGE OF PHRASEOLOGY IN ESPERANTO

PHRASEOLOGICAL UNITS AS TEXT CONSTITUENTS

A PU produces its full communicative effect only in a specific situational context. Extensive text analyses of different spheres of communication, including written and oral texts, illustrate the functions of PUs. They show that a PU is often much more than mere additional ornament enhancing a text. It constitutes textual meaning and develops textual coherence. This text-constituting function of PUs is based, more than anything else, on their complex structure. Since they are polylexemic (constituting word groups and sentences), isolated phraseological constituents can be reiterated to play a specific role in the text.

Sometimes a PU becomes the main element of the text structure. In the following example, an editorial in the journal *Esperanto* (6/2010, p.123), the phrase *esti en la sama boato* (cf. English *be in the same boat*) is of central importance to the message. It is used in the headline and in the final sentences of two of the paragraphs of the text. Furthermore it is playfully contrasted to another phrase, *Ni fosu nian sulkon!* (lit. 'We should dig our furrow', a traditional Esperanto motto), and, finally, the constituent *boato* ('boat') and other lexical elements from the same word field (e.g. *flosi* ['float'], *veli* ['sail']) are used in isolation to permeate the text and to intensify the metaphorical network. (Following the text the reader will find a literal translation.)

3) *Ni **estas ĉiuj en la sama boato** kaj devas noveme **kunveli***

Kiu laŭ vi estis la ĉefa problemo de UEA en la pasintaj 50 jaroj? Ĉu la puĉo en Hamburgo? Homaj bedaŭrindaĵoj. […] Ĉu la malfrue alvenantaj Jarlibro aŭ revuo ? Ni delonge lernis trateni tion. Ĉu la falanta membronombro? Jes, sed falas la membronombro ankaŭ en la landaj asocioj kaj en la lokaj societoj, kaj ne ekzistas specife universal-asocia solvo de ĉiunivela problem. Se ni problemas kune, ni solvu kune.

Por alproksimiĝi al la problemo, ni unue tuŝu la temon de Usono. […] Usono estas hodiaŭ tio, kio estis hieraŭ Francio. Esperanto rajdis sur franca ĉevalo ekde Bulonjo, kaj estis atentata; se hodiaŭ reaktuala alvoko al Esperanto estus veninta el la usona kontraŭkulturo, ni estus nun en bona pozicio, kiel… la rokmuziko industrio. […]

*Nun ekzistas potenco pli aktuala ol Usono: la reta mondo […] Malaperis la tradicia rilato inter la mono, la loka sindediĉo de maljunuloj kaj la energio de la junularo. Kaj ni ne sukcesis, en la reta mondo, instali funkciantan maltradician kunligon inter tiuj faktoroj. En tiu malsukceso, ni trovas nin **en la sama boato**, kiel la monda muzika industrio ; kaj ni devos lerni **kunflosi**.*

*Tio signifas iom ekskutimigi la retorikon de senlikva **fosado** (L estas likva konsonanto) kaj **sulkoj**, ĉar tiu retoriko respegulas tion, kio dividas nin kaj malhelpas solvon. En solida mondo de **sulkoj**, ĉiu emas rigardi sin mem la centro de la movado, ĝia plej grava parto. Ĉiu **fosas sian sulkon** kaj ne emas helpi **fosi** alilokajn **sulkojn**.*

*[…] oni devas iamaniere teni la Esperanto-movadon funkcianta kaj laŭeble kreskanta en Germanio, Usono, Japanio kaj samtempe loke kaj internacie. La demando estas, kiamaniere malplej dolore forlasi la **sulko-fosan** racion kaj kolektive fronti al la fakto, ke nun ni ĉiuj **estas en la sama, nova boato**.*

[…]

Sed ankaŭ en la nuna mondo, nur malrapide oni lernas lingvojn, aŭ konvinkas najbaron pri la lernindo de Esperanto, aŭ vartas instituciojn kaj festivalojn tra la jaroj.

*Por plufari tion efike, por pluirigi la **boaton** de Esperanto, por konvinki la mondon pri la bezono pri lingva justeco, ni bezonas ĉiujn **boatistojn** kaj ili devas kunlabori inter si, estimi unu la alian, helpi unu la alian. Internaciuloj, landuloj, lokuloj kaj retuloj, ni ĉiuj faras ion utilan. Neniu havas en sia poŝo la sekreton por triumfigi Esperanton, sed se tio eblas, tio okazos nur se ni kunlaboros.*

*Fiere kaj kunlabore konstruu kun ni movadon de homoj kapablaj **kunveli**. Ni **velu** antaŭen kun kredo, fervor', kiel kantas Grabowski.*

'We **are all in the same boat** and have to **sail together** in a new way'.

What was the main problem of UEA [= *Universala Esperanto-Asocio* 'Universal Esperanto Association'.] during the past 50 years in your opinion? The putsch in Hamburg? Human weaknesses. The late arrival of the Yearbook or the journal? We have long since learnt to cope with this. The decreasing number of members? Yes, but the number of members is falling in the national and local associations as well, and there is no specifically universal-association solution to an all-level problem. If we have a common problem, we should solve it in a common way.

In order to approach the problem, we should first touch on the problem of the USA. […] The USA today is what France was yesterday. Esperanto has been riding the French horse since Boulogne (= since the first international Esperanto congress in Boulogne-sur-Mer in 1905 – S.F.) and has gained attention; if today again a current appeal to Esperanto would

have come from the US counter-culture, we would now be in a good position, like […] the rock music industry […]

There is now a power that is more topical than the USA: the world of the Internet. […] The traditional relationship among money, the local commitment of older people and the energy of the young has disappeared. And we have not managed, in the world of the Internet, to establish a new non-traditional connection among these factors. In this failure we find ourselves **in the same boat** as the international music industry; and we will have to learn to **float together**.

This means to a certain extent to breaking out of the rhetoric of dry ('liquidless') **digging** (L is a liquid consonant) and **furrows** [= in the original a play on words: *flosi / fosi* 'float/ dig − S.F.], because this rhetoric reflects what divides us and hinders a solution. In a solid world of **furrows**, everybody tends to regard themselves as the centre of the movement, as its most important part. Everybody **digs** their own **furrow** and nobody likes to help **dig furrows** in other places.

[…] somehow we have to keep the Esperanto movement functioning and if possible growing in Germany, the US, Japan and also at the same time locally and internationally. The question is how to give up the **furrow-digging** approach while without causing as little pain as possible and collectively face the fact that we **are all in the same, new boat**.

[…]

[…] But also in today's world it is only slowly that we learn languages, convince a neighbour that it is worthwhile learning Esperanto, or foster institutions and festivals over many years.

To continue our work effectively, to drive **the boat** of Esperanto forward, to convince the world of the necessity of linguistic justice, we need all **boaters** and they have to cooperate with one another, respect each other, help each other. Those working on the international, national, local levels, on the Internet, we all do something useful. None of us has the secret in their pocket for the triumph of Esperanto; if it is possible, it will only happen if we work together.

Build up a movement with us, with pride and cooperation, of people who are able to **sail** with us. Let's **sail** forward with faith and fervour, as Grabowski sang.')

As this example illustrates, phraseological units can perform a structuring function: Proverbs and catchphrases are often found in recurrent positions, especially at the beginning and at the end of paragraphs. In an initial position a PU can provide a core reference for textual expansion. Authors like to take general truths expressed in proverbs as a starting point for their reports and arguments, as in the following examples: an article about youth riots in British cities, and an article about language instruction.

4) *Malstulta sezono*

Paul GUBBINS

Kiam vi legos ĉi tiujn vortojn, estos finiĝinta la tiel nomata stulta sezono. "Stulta sezono" nomas ĵurnalistoj − almenaŭ en Britio − la periodon, ĝenerale en aŭgusto, kiam mankas novaĵoj. […] *Tiam plenas ĵurnaloj, radio-programoj, per « stultaj », do malpli seriozaj raportoj. Tertremo : Arbo falinta.* […]

Tamen la ĉi-jara stulta sezono […] montriĝis oble pli malstulta ol en la pasinteco. Terglobe dominis novaĵ-bultenojn la ekonomia krizo. ("Monato" 10/2011, p.7)

('Non-silly season

Paul Gubbins

When you read these words, the so-called silly season will have finished. "The silly season" is what journalists – at least in Britain – call the period, generally in August, when newsworthy events are lacking. […] Then journals and radio programs are full of "silly", that is, less serious reports. Earthquake: A tree has fallen down. […]

However, this year's silly season […] turned out to be a whole lot more non-silly than in the past. All over the world the economic crisis was dominating the news.')

5) *La unua leciono*

Ĉiu scias la proverbon: "Unua paŝo iron direktas." Sendube la unua E-leciono havas eksterordinaran signifon por la futuro de la loka lingvoinstruado (*Internacia Pedagogia Revuo* 3/1995, p.14).

('The first lesson

Everybody knows the proverb: "The first step decides the direction." Without any doubt the first Esperanto lesson is of enormous significance for the future of the local language instruction.')

When PUs mark the end of a text or paragraph, they can have the function of a comment, as with the passage of Zamenhof's poem *La Vojo* in example 6), or they are used as an evaluative concluding signal, as in the book review in 7).

6) *Eĉ se oni devus labori vane dum kelkaj jaroj, ŝajnas al mi ke la rezultoj estos ĉiamaniere tre bonaj:*

"Eĉ guto malgranda, konstante frapante,

Traboras la monton granitan." ("La Gazeto" 6/1997, p.8).

(Even though we had to work in vain for some years, it seems to me that the results will be very good: "Even a little drop, constantly falling, pierces the granite mountain.")

7) *Ju pli oni legas aŭ aŭskultas tiun eposan verkon, oni pli kaj pli konvinkiĝas, ke ĝi estas gravega kontribuo al la monda literaturo. La temo estas universala, nome la situacio de la homaro en la tempo kaj en la kosmo. Ĝi estis parte inspirita de la verko* Cantos *de la usona poeto Ezra Pound, kaj ĝi memorigas min pri* Canto General *de la ĉiliano Pablo Neruda.* **Ofte grandaj mensoj simile pensas**. ("Esperanto" 3/2011, p.64)

('The more one reads or listens to this narrative poetry, the more one becomes convinced that it is a significant contribution to world literature. The theme is universal, it is the situation of humankind in time and space. It was partly inspired by the work *Cantos* by the US-poet Ezra Pound, and it reminds me of *Canto General* by the Chilean Pablo Neruda. **Often great minds think alike**.')

Another peculiarity of phraseological occurrences in Esperanto communication is the frequent use of metacommunicative signals, which can be interpreted as an expression of the developed linguistic consciousness of Esperanto speakers. The authors introduce a comment on the sayings and proverbs they use; or they apply inverted commas as a means of indication. By doing so, they want to signal that a following or preceding passage differs from the rest of the text and has to be understood metaphorically, e.g.:

8) *(…) Kiel vi vidas, mia nomo estas la lasta sur la tagordo.* **Kiel la germanoj diras***: La lastan mordas la hundoj. Do, verŝajne mi devos rezigni aŭ mallongigi mian prelegon.* ('As you see, my name is the last one on the agenda. As the Germans say: The last is bitten by the dogs. Thus, perhaps I will have to withdraw or shorten my presentation.') (Zagreb, 27 July 2001; oral example: German speaker)

9) *La dojeno de ĉina esperantismo, Laŭlum, kompendias la ĉinan klasikan beletron en Esperanto: la vastecon de lia temkampo montras ke la E-tradukoj de klasikaj ĉinaj verkoj ampleksas jam 7 000 paĝojn, sed ke tio egalas, lau ĉina diro, al "nur unu haro de naŭ bovoj".* ("Esperanto" 11/2010, p.231; The dean of Chinese Esperantism, Laŭlum, gathers together Chinese classical belles-lettres in Esperanto: the range of his thematic interests is such that the Esperanto translations of classical Chinese works already cover 7 000 pages, but that these correspond, as a Chinese saying goes, to only one hair of nine oxen.)

10) *La Akademio sub nova gvidantaro kompletigas unu jaron da agado, kaj kvankam eble estas tro frue por konstati ĉu "nova balailo bone balaas", certe montriĝis* (…) ("Esperanto" 12/96, p.213; 'The Academy under new leadership completes one year of work, and although it is perhaps too early to state whether "a new broom sweeps clean", it has certainly been shown […]')

THE CREATIVE-INNOVATIVE POTENTIAL OF PHRASEOLOGY

It can be observed that Esperanto speakers have an inclination towards innovative language manipulations and punning. Greetings such as *Salaton!* ('salad'), instead of *Saluton!* ('Greetings') or *Ĉu vi bone gedormis?* instead of *Ĉu vi bone dormis?* ('Have you slept well?') where the prefix *ge-* means the combination of male and female sex) can be often heard at Esperanto meetings; riddles such as *Kial ĝirafo neniam solas? Respondo: Ĝi havas kolegon* ('Why is a giraffe never alone? Answer: It has a colleague / long neck; *kol-eg-o* can be interpreted as 'neck' + augmentative suffix *-eg*) circulate in Esperanto beginners' courses. The dissertations by Lloancy [16] and Mel'nikov [17] provide a large variety of examples of this kind. According to Philippe [18; p.86)], linguistic creativity presents one of the driving powers of language change in Esperanto.

As regards phraseology, the high percentage of modified PUs should be mentioned here. For example, *Veni, vidi, vici!* ('coming, seeing, queuing') can be often heard at Esperanto meetings, when speakers stand in line at a cold buffet, for example. In journalistic texts, for example in headlines, authors like to alter set expressions and proverbs according to the textual situation, resulting in, for instance, extensions with additional lexical elements referring to the topics discussed in the texts:

11) *Voĉoj de krianto en **elekto**-dezerto.* ("Monato" 10/2011, p.8; 'Voices of a crier in the election-wilderness.')

12) *Nur rekta**metode** kaj ne flankiĝante.* ("Esperanto" 2/1992, p.37; 'Only by the direct method and without turning aside.')

The first text with the extension *elekto* deals with the election of the mayor of Tirana, the capital of Albania, while the second example alludes to a well-known Esperanto poem (*La Vojo*). The original line *Nur rekte, kuraĝe kaj ne flankiĝante* ('just directly, bravely and without turning aside') was changed to *Nur rektametode* ('by the direct method') in a text dealing with methods of language teaching.

In the same way, reading the title of a book review *Por ke romano estu klasika ...* ("Esperanto" 3/92, p.54; 'For a novel to be classic …') an Esperanto speaker will associate Zamenhof's famous slogan *Por ke lingvo estu tutmonda ne sufiĉas nomi ĝin tia* ('For a language to be international, it is not enough to call it so').

Furthermore, we find that titles of book reviews allude linguistically to the books they discuss, e.g.:

13) *Kredu nin, gejunuloj!* ('Believe us, young people'; "Literatura Foiro" 2/94, p.19; allusion to *Kredu min, sinjorino* ['Believe me, madam'], a classic of Esperanto literature)

14) *Ĉu li verkis sufiĉe?* ('Did he write enough?'; "GEJ-Gazeto" 5/81, p.35; allusion to a series of novels by J. Valano, whose titles share a similar construction, e.g. *Ĉu vi kuiras ĉine?* ['Do you cook the Chinese way?'], *Ĉu ni kunvenis vane?* ['Did we meet in vain?'])

Playing around with proper names is another popular device. In the example *Pli bone karoli piĉe ol paroli kiĉe* ("Esperanto" 4/91, p.73; 'Better like Karel Pič than talking kitsch') we find the modified version of the name Karel Pič, an Esperanto writer who was well-known for his deliberately abnormal language use. His first name becomes an adverb and his surname a verb in order to produce a chiasmus with *paroli kiĉe*. This example shows how far the manipulation of PUs can go. A phraseological basis is to be found only in so far as the reader remembers the formulaic structure, rhythm and rhyme as main characteristics of a proverb. As this example emphasizes, the linguistic characteristics of Esperanto, above all its agglutinative structure, free word order and flexible word-formation system, allow or even encourage particular creativity in everyday use.

It is, however, above all in literary texts that phraseological units are employed to evoke humour and that the connotative potential of PUs is most effectively demonstrated. PUs are used here to characterize literary figures (in the so-called linguistic portrait). Compare, for example, the slang expressions used by the protagonist in Trevor Steele's *Heroo de nia epoko* ('A Hero of our Time'; 1992), in contrast to the narrator's style in the last example:

15) *Kiel aŭtentika proleto li celis, ke liaj gefiloj ne devu "ŝovadi merdon", lia ŝerca aludo al la peza laboro de segejisto.* (p.66) ('Like an authentic proletarian he was determined that his children should not "shovel shit", his jocular allusion to a sawmill worker's hard work.')

16) *"Dolĉulino," li diris, ne flustrante, "se vi volas ĝisfreneze **ludi trajnon kaj tunelon**, venu poste al la Motelo Du Cedroj, ĉambro 9 kaj (...)."* (p.83) (' "Sweetie," he said, not whispering, "if you want to play train and tunnel till you are mad, come up later to the motel Two Cedars, room 9 and […]." ')

17) *"(…). Povra olda pisulo, li **kakis la lastan fojon**."* (p.85) ('[…] Poor old bastard, he shat for the last time.')

18) *Miaj gepatroj jam delonge vendis la butikon, iom loĝadis ĉe la vapore humida marbordo, kaj **transiris al sia Kreinto**.* (p.78) ('My parents had sold the shop, lived for a time on the humid coast, and passed to their Maker.')

In his novel *Kredu min, sinjorino!* (1950), Cezaro Rossetti tells the story of a successful travelling salesman who is extremely eloquent, but not very particular about the quality of the products he sells. This is reflected by the protagonist's language, especially by his playful distortions and parodies of proverbs:

19) *Neniu jam bedaŭris renkonti Martin Vernon: vi vidos. Per la vortoj de Julio Cezaro, kiam li ĉarpentis la Trojan ĉevalon: Veni, vidi, vici, - la mondo estas nia ostro, kaj ni elprenos la perlon!* (pp.95-96) ('Nobody has ever regretted meeting Martin Vernon: you'll see. In the words of Julius Caesar, when he made the Trojan horse: Veni, vidi, vici, – the world is our oyster and we will take the pearl out of it.')

20) *Eĉ Kolumbo ne konstruis Amerikon en unu tago, sed detaloj estas ja nur detaloj: ne zorgu.* (p.97; 'Not even Columbus built America in a day, but details are only details: don't bother.')

In addition, the author chose proverbs as subtitles to announce the contents of individual chapters of his novel:

21) *Ne gutas mielo el la ĉielo.* (p.21) ('Honey doesn't drop from heaven.')

22) *Virina rideto pli kaptas ol reto.* (p.77) ('A woman's smile catches more than a net.')

23) *Petro rifuzas, Paŭlo ekuzas.* (p.79) ('Peter refuses, Paul uses.')

24) *Plej bone ridas, kiu laste ridas.* (p.203) ('He who laughs last, laughs longest.')

25) *Du botoj faras paron.* (p.226) ('Two shoes make a pair.')

An impressive example of a linguistic portrait based on proverbs can be found in Jorge Camacho's satire "La Majstro kaj Martinelli" (1993). Here the protagonist Georg Silber wants to gain literary glory with the help of the devil, also known as Professor Emèric Orszag. The latter makes extensive use of proverbs:

26) *Koncerne Kamaĉon, longe ŝtelas ŝtelisto, tamen fine li pendos, ĉar kiu kaĉon aranĝas, tiu ĝin manĝas, kaj kiu havas malican celon, ofte perdas sian propran felon!* (p.16) ('With regard to Camacho, though a thief steals for a long time, finally he will hang, as the one who prepares the gruel has to eat it, and he whose goal is malice often loses his own skin!').

As is typical of a satire, this linguistic portrait is greatly exaggerated and grotesque. The overuse of proverbs, which can be interpreted as a symbol of "experience in any situation" or "a monopoly on wisdom", provides a sharp contrast to the protagonist's elitist language use.

CONCLUSION

Research into Esperanto phraseology reveals many of the fundamental characteristics of the nature and function of planned languages. Among these characteristics are (1) evidence of both conscious and spontaneous factors in their evolution, (2) empirical data concerning their dynamic and independent development on the basis of a linguistic norm, and (3) an analysis of cultural features reflected in the languages. The development of phraseology proves to be an important criterion in establishing the transition from language project to actual language.

This investigation has revealed that Esperanto possesses a rich phraseology. This is due to the fact that this planned language has established a sufficiently large and differentiated speech community that uses it as an efficient means of communication in various spheres. The phraseology of Esperanto shares with other phraseologies the attribute of uniting both universal and culturally specific components.

REMARK

[1] Examples are numbered consecutively throughout the text.

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MACHINE TRANSLATION AS A COMPLEX SYSTEM, AND THE PHENOMENON OF ESPERANTO

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ABSTRACT

The history of machine translation and the history of Esperanto have long been connected, as they are two different ways to deal with the same problem: the problem of communication across language barriers. Language can be considered a Complex Adaptive System (CAS), and machine translation too. In fact, there are multiple agents (both natural and artificial) involved, interacting with one another and committed to achieve a common goal, i.e., the machine translation task. The main characteristics of language as a CAS are also shared in machine translation, especially if we consider the example-based, statistical approach, which is nowadays paradigmatic and unavoidable. In fact, control is distributed, there is no ideal representing agent (intrinsic diversity), there are perpetual dynamics in performance, adapted through amplification and competition of new examples from the crowd of users. On the other hand, Esperanto, being a living language, can be considered a CAS, but of a special kind, because its intrinsic regularity in structure simplifies the task of machine translation, at least up to a certain level. This paper reviews how Esperanto has enhanced the development of human-machine communication in general and within machine translation in particular, tracing some prospects for further development of machine translation, where Esperanto could play a key role.

KEY WORDS

CLASSIFICATION

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INTRODUCTION

The myth of the Tower of Babel is rooted in the foundational construction of the very idea of Europe, as shown for instance by Eco [1] and Steiner [2]. In the most common interpretation of this myth, multilingualism is a curse inflicted by God on humankind because of its hubris, namely its proud willingness to employ its intelligence. One of the most evident manifestations of the use of human intelligence is technology; and the Tower of Babel – the highest tower built on earth and with the aim of being as powerful as God – has become its symbol. Traditionally, there are three different linguistic responses to the myth of Babel: first, the quest for the primitive, perfect language of the ancient pre-Babel times, from which all others descend, i.e., the *Ur-Sprache*; second, the planning of an international auxiliary language on a rational or logical basis – however this is defined – so as to be easily grasped and utilised for practical purposes, from scientific communication to commerce; third, the improvement of the technical means for translation. The first response led scholars to compare ancient languages and hence to form the basis of historical linguistics with the emergence of proto-Indo-European studies. One of the most interesting results of the second response was the Esperanto phenomenon, while machine translation was the third response – an answer developed in contemporary times. In short, Esperanto and machine translation can be considered different and parallel responses to the same question at the same time, with some interesting intersections. In this paper, I will analyse them from the perspective of Complex Adaptive Systems (CAS). First, I will ask why it makes sense to consider natural languages and the activity of translation in such a framework. Then, I will instantiate the two case studies – Esperanto and machine translation – from the perspective of CAS. Finally, I will add some reflections on their intersections, along with some considerations that apply to both.

NATURAL LANGUAGE AND THE ACT OF TRANSLATION AS A COMPLEX ADAPTIVE SYSTEM

In a position paper by Beckner et al. [3] the five authors argue that natural languages are appropriately understood as CAS, given that their key feature is adaptivity. For the past several decades, complex systems have been regarded as a way of modelling non-trivial phenomena, reinforced by specific mathematical theories appropriate to the area of application (for recent advances in the life sciences, see [4]). In particular, they have proved to be useful in situations where the human factor is crucial, such as in economic simulations, life sciences or psychology. It is surprising that only in recent years has the notion of complex systems been applied to natural languages. In this regard, the volume edited by Ellis and Larsen-Freeman [5] on language as a complex adaptive system fills an important gap in the literature. We should note that the contributors to this volume take a *socio*linguistic approach to natural languages, following the tradition of cognitive linguistics. In particular, they address languages that are alive, sustained by a network of agents (in systemic terms) that form a speech community where each agent is a speaker (in linguistic terms). That said, it soon becomes evident that natural languages are indeed adaptive systems, in which previous behaviour influences current and future behaviour. Proof is offered by the fact that no living language is static. In other words, every living language is subject to change, and is therefore an *adaptive* system.

The behaviour of agents of a linguistic system can be described as a collection of utterances, i.e., regular production of signals in a given medium of the given language [6]. This collection is produced either in spoken or written form – or signed, in the special case of sign languages. The production of utterances, where usage-based patterns can be identified, is the main level of analysis. Within these patterns, grammatical constructions can be identified,

forming the locutionary face, as well as intention (the illocutionary face) and the taking up – or not – of intention in the real world (the perlocutionary face; see [6, 7]). However, these three faces are not enough to give a full account of a given language. In fact, speakers feed languages through utterances in various ways, also according to variables peripheral or external to the system, such as social prestige or physical circumstances. This variety of elements is the source of complexity in the adaptive system under investigation (for more details, see [3]). Accordingly, a human language is not only an adaptive system but also a complex one – in short, a CAS.

The act of translation adds a meta-level of complexity to the levels just explained. First, at least two different languages are needed for a translation to happen; this is a truism, but it illuminates the fact that two autonomous CAS's, the source and the target languages, are involved in the process of translation. But their intertwinement is not straightforward. On a locutionary level, translators are faced with a production of utterances belonging to the source language. In particular, they have to identify the grammatical constructions involved so as to find the usage-based corresponding patterns in the target language. Sometimes, this correspondence does not exist in the target language; in such cases, the translator must simply invent corresponding patterns: a well-known example in Italian is the compound *grattacielo* for the English 'skyscraper'. The act of identification is the perlocutionary face of the system, governed by the intention (the illocutionary level) of the translation, which guides translation choices. Intentions are limited by external factors: the genre of the text is part of its purpose, i.e., the instantiation of the intention of the original writer in the text itself. For example, the translation of a legal document for the United Nations is different from the translation of a newspaper article, which is again very different from the translation of a poem. In the first case, the choice of grammatical constructions will be strict, allowing the translator to choose mostly from a formulaic, highly conventional language. In the second case, that of the newspaper article, a higher degree of freedom will be available. Finally, in the third case, the translation of a poem would have to consider aesthetic factors, such as rhythm and rhyme – factors less pertinent to the other cases. Therefore, the ideal translator would be a full inhabitant of both speech communities, a perfect bilingual speaker, whose utterances could easily switch from one language to the other. Of course, such a translator exists only in some Platonic world of ideas.

ESPERANTO, A FULLY HUMAN LANGUAGE, COMPLEX AND ADAPTIVE

Is Esperanto a linguistic CAS? If so, does it present special features, if set next to natural languages? In order to answer to these questions, we must proceed backwards, checking all the properties of a linguistic CAS one by one in this special case. We will follow the order of those features as presented by Beckner et al. [3].

Distributed Control and Collective Emergence. A living language exists at least at two levels: the agent-speaker and the network of agents, i.e., the speech community. In linguistic terms, an idiolect (the language variety belonging to a single speaker) is controlled by the agents distributed in the network through their interactions, where there is no global coordination among individuals. We can rightly ask if Esperanto, being a planned language, is controlled by a single entity: it is well-known that the language was launched by Ludwik Lejzer Zamenhof in 1887 through the publication of a book, containing a basic grammar, the essential dictionary and some texts. Indeed, the influence of the works and ideas of Zamenhof, especially in the early period of the Esperanto life, was very strong [8]. However, one of the reasons why the language successfully survived the death of its initiator was exactly his far-sighted language policy and attitude: he was perfectly aware that his creation did not belong to him anymore. At the moment of publication in 1887, it became the

possession of any human being who wanted to use it: it was not under copyright, but in the public domain. To become alive and stay alive, Esperanto needed no central authority to coordinate globally its agents' behaviours. This does not imply that special groups of agents cannot influence the behaviour of others in a language considered as a CAS; this is the role of language academies, for example, modelled historically on the example of the Italian *Accademia della Crusca*. Esperanto also has its own language academy *La Akademio de Esperanto*, with similar functions. However, Esperanto can today be considered as defined by the emergence of the utterances of its speakers, collectively considered. This distributed control is evident, as agents-speakers are spread across the world and gather together for conferences, congresses and other fora, nurturing and fostering the language itself.

Intrinsic Diversity. The perfect monolingual speaker of a given language is an *Idealtypus*, an ideal type – in other words, a purely fictional character used to represent a uniform variety of the language under analysis. In cognitive linguistics, where the emphasis is put on concrete language use by real speakers, this convention is never used. In reality, each agent of a language as a CAS is different from the others, as shown by numerous sociolinguistic studies. This is particularly evident in the case of Esperanto, where no monolingual speaker exists; in other words, every Esperanto speaker is at least bilingual, and his or her linguistic repertoire influences the use of Esperanto as well, since he/she is in most cases an L2. Also, there are no significant structural differences that set native speakers apart: Esperanto as an L1 does not constitute a distinctive variety [9].

Perpetual Dynamics. In the literature of Esperanto studies, we still lack a serious scholarly study of the diachrony of Esperanto. However, every Esperanto language expert facing a text written by Zamenhof or the pioneers quickly finds some forms that are no longer in use by the contemporary community. One of the most evident examples is in the construction referring to the language itself: the pioneers wrote of a *lingvo internacia,* modelled on the French *langue internationale*, while in contemporary Esperanto people tend to talk about an *internacia lingvo,* the word order reflecting the English construction 'international language'. There is no doubt that the CAS of Esperanto is perpetually dynamic.

Adaptation through Amplification and Competition of Factors. Adaptation is the result of a complex dynamic of factors sometimes in direct competition with one another. In the case of languages as CAS's, a particularly evident field is the competition between different constructions introduced for the modernisation of the corpus. For example, in the Italian language, the English word 'computer' – intended with the modern meaning of computing machinery, i.e. non-animated agent who computes – was adapted as *elaboratore elettronico* and *calcolatore elettronico* when the first computers were built in Italy in the 1950s. Afterwards the borrowed term *computer* entered Italian usage, and in contemporary Italian it is now the standard form. Analogously, after some years of competition, *komputoro* and *komputero* are now archaisms, while *komputilo* is the default term in Esperanto.

Nonlinearity and Phase Transition. Change in complex systems is often nonlinear: a difference in a small set of parameters can lead to a major change in the overall system. In the case of language development, dramatic changes have been observed in many cases. For example, the transition from Old English to Middle English was the linguistic face of an external major variable, namely the invasion of Britain in the early Middle Ages by different populations, and in particular by the Normans [10]. Another example of phase transition in the case of languages is grammaticalization [11]. In Esperanto, many grammaticalizations are simply inherited from Standard Average European: for example, the use of *piede*, 'foot', in Italian with a PLACE meaning, such as *ai piedi della collina*, 'at the foot of the hill', is also attested in Esperanto and registered in the monolingual dictionary as *ĉe la piedo de la monto.*

Genuine internal grammaticalizations occurring within the complex Esperanto system are relatively few. One such instance is the particle *ekde*, meaning 'since' or 'as of' (*ekde mardo*: as of Tuesday, since Tuesday). This particle is grammaticalized by combining the punctuative *ek-* and the preposition *-de*. According to the online monolingual corpus *tekstaro.com*, it is not recorded in Zamenhof's collected works but is already in use by Eugene A. Lanti, a leading figure of the left-wing Esperanto movement in the 1920s. Today it appears in any textbook for learning the language. The most important phase transitions in Esperanto, from a sociolinguistic point of view, are the two World Wars: however, for ideological reasons, the strong normative and conservative pressure of the speech community did not facilitate nonlinear changes, since emphasis was put on the belief that the Esperanto language should be "easily grasped" by anybody, regardless of that person's linguistic repertoire. On the other hand, Esperanto is not alone among human languages in this regard: many minority languages share the same normative and conservative pressure aimed at preserving the status of the language. In a certain sense, a phase transition is a luxury available only to strong languages.

Sensitivity to and Dependence on Network Structure. The internal structure of complex systems is rarely flat, at least in real-world cases: some connections are stronger than others. Languages are no exception: the study of social networks shows that the strength of the connections between agents-speakers belonging to a given network-community have an effect on the dynamic, putting some constraints on language change and variation. Again, there is still no deep analysis of the social network of the Esperanto community in these terms; nonetheless, personal observations show that some agents in the network act as innovators and others as traditionalists, to the point that most sensitive speakers adapt their linguistic behaviour, particularly their lexical choices, if such agents are present in the interaction.

Change Is Local. In an adaptive system, change never starts globally and uniformly within the system; on the contrary, a given area is subjected to change, and that change spreads across the whole system only later, if at all. Languages are CAS's that reflect the societies to which they belong: in every human society, there are some groups that lead innovation and change, while other parts are more conservative; sometimes innovations succeed in spreading the word (literally!), sometimes not. In the case of Esperanto, a leading role is played by newspapers and journals, and has been since the time of the first one, *La Esperantisto*. That journal was crucial, for example, in spreading the term *Esperantisto,* Esperantist, across the other languages spoken by Esperanto speakers. Nowadays the word appears in the dictionaries of many languages across the world to indicate an Esperanto speaker or an Esperanto enthusiast (sometimes there are enthusiasts who do not actually speak the language, and there are Esperanto speakers who do not embrace the ideology surrounding the language, but that is another question). In recent years, the sociolinguistic situation of Esperanto has become more fluid because of the intensive use of information and communication technologies by Esperantists themselves; the Esperanto Wikipedia is an emerging point of reference for changes, with strong tendencies to innovation.

In sum, Esperanto, as a living language, can be examined like any other living human language in terms of complex adaptive systems.

WHY MACHINE TRANSLATION SHOULD BE REALLY ADAPTIVE

The experience of the Second World War led a group of American scholars and intellectuals to the idea that in the post-war world a priority in the agenda of scientific research should be finding a means of tackling complexity in a manageable way, in particular using 'computing machines', as computers were called at the time, which had proved so useful during the war. For example, Vannevar Bush [12], understanding that information flow would be crucial for

the advancement of knowledge, focussed the attention of his colleagues on hypertexts, which eventually inspired the foundation of the World Wide Web. Warren Weaver, a mathematician, was one of those scholars. In 1948 Weaver published an article in which he recommended that scientists should start to address complex problems in order to contribute more actively to human welfare; what he called 'organized complexity' corresponds to the notion of complex systems presented above. For Weaver, one of the evident examples of organized complexity was the task of translation. Hutchins [13] reports that as early as 1947 he wrote a letter to Norbert Wiener about possible ways to mechanize the task of translation. Later, Weaver was asked to write a memorandum [14], where he suggested considering the text in the foreign language to be translated as a code to be deciphered, applying the algorithms so successfully used during the Second World War. Hutchins [13] also posits the influence of Rudolf Carnap, the father of logical positivism, as Weaver considered the written language as "an expression of logical character".

The memorandum was put to concrete use only in the 1990s – in the IBM Laboratory for the project Cantide [15]. At that point, the needed computational power and corpora of linguistic data in digital form were finally available. Following disillusion at the poor performance of the purely rule-based machine translation systems in vogue in the years 1980, the emerging usage-driven paradigms of machine translation, based on examples and statistics, heralded a revival of the field at the turn of the millennium. As argued before, translation adds a new level of complexity, as at least two linguistic complex adaptive systems are involved. In the case of machine translation, the general idea is to capture the linguistic knowledge of the locutory level of the languages involved by means of translation pairs linking constructions across languages. The usage-driven paradigms mimic the behaviour of professional translators by tracking their past behaviour, collected in parallel corpora of construction translation pairs called 'translation memories'. In the most sophisticated models, a morphosyntactic tree of the construction is also provided [16].

The reliability of the machine translation of a usage-based system is based on the size of the translation memories forming the parallel corpora: in principle, the larger the corpora, the better the translation. However, after more than twenty years of consistent practice in this field, it is clear that parallel corpora are crucial but insufficient. In fact, encyclopaedic knowledge of the world, even if at the periphery of the linguistic CAS, becomes central in machine translation. The kinds of errors made by human translators and by translating machines are quite different. One of the best known unsolved problems is that of named-entity recognition and normalization. To give a simple example, the sentence *Green Day don't like Bush* refers to a punk band, Green Day – and therefore this name should not be translated, since *giorno verde* in Italian (for instance) does not make any sense, while Bush is not a *cespuglio* (bush) but rather a former President of the United States. Furthermore, since more than one U.S. president has been called Bush, the time of publication of the sentence is also relevant. The periphery of the language systems, consisting of pragmatic conventions, social rules, leading proper names and shared knowledge, becomes central to the translation task and constitutes the most compelling challenge to machine translation. This difficulty lends reason to the centrality accorded by cognitive linguists to social interaction as a driving force of languages as CAS's. Such interaction is retained and retrieved by usage-based machine translation systems only as a collection of memories. For this reason, the adaptivity feature of machine translation systems often requires human agents: what is difficult for machines is often trivial for humans. Contemporary usage-based machine translation systems achieve adaptivity through a constant relation with the people using them: the result is a new CAS, which should more properly be called computer-assisted translation, rather than purely machine translation.

MACHINE TRANSLATION AND ESPERANTO: SOME INTERSECTIONS

The intersections between machine translation efforts and the history of Esperanto are not many in terms of absolute numbers; nonetheless they are not without interest. From an anecdotal perspective, it is interesting that Norbert Wiener was well aware of Esperanto for family reasons, his father having been a schoolmate of Zamenhof, the initiator of Esperanto, in Warsaw [17]. Moreover, as a young man Rudolf Carnap attended an Esperanto congress, in the year 1922 [18]. Carnap later studied Ido (an offshoot of Esperanto), impressed by the regularity and logic of its word formation. But the intersections go beyond anedoctal evidence. Let us take a look at the most important instances where Esperanto has intersected with machine translation projects, setting aside a few ephemeral experiments that have been proposed over the years.

From a historical point of view, Esperanto is older than machine translation. It was used by a renowned pioneer of *mechanical* translation called Petr Petrovich Trojanskij. This Soviet scholar and engineer published a Soviet patent in 1933, rediscovered only at the end of the past century, thanks to work by Hutchins (e.g. [19]). A prototype was operational in the years 1938-1942. It used the final morphemes of Esperanto to tag grammatical character to the stems of the source language: *-o* for the nominative nouns, *-j* for the plural, *-n* for the accusative, *-as* for the present tense of verbs, *-i* for infinitives and *-a* for adjectives. This part-of-speech tagging, carried out by a human agent, was intended to help the machine with the translation. A post-editing phase was foreseen, when another human agent would take the tags off the target language. Note that Trojanskij considered only European languages that formed the basis of Esperanto, among them Russian, German and French. In other words, Esperanto was used as a *tertium comparationis* between two natural languages, an intuition already present in the works of the father of Esperanto studies, Eugen Wüster [20].

This role as a grammatical geometry of other languages also lies at the heart of the biggest machine translation project involving Esperanto, DLT (Distributed Language Translation), officially launched by Witkam in 1983 [21] with a feasibility document addressed to the European Commission. DLT was conceived as an answer to the Fifth Generation Computers program in Japan [22]. A six-year DLT pilot project was prepared, with a sophisticated use of Esperanto as a pivot language between the translation source and the translation target, through a formalisation of Esperanto grammar, with some minor modifications, based on the concept of valency and dependency introduced by Tesnière [23]. The semantic problem of disambiguation was also tackled, using largely innovative techniques based on analogy [24]. These techniques acknowledged the need to consider linguistic forms in use a few years prior to the usage-based paradigms, based on statistics and translation memories. Such techniques became the new mantra of machine translation at the turn of the millennium.

At that time, a major change in perspective also occurred regarding Esperanto's role in machine translation. In the most recent systems, Esperanto no longer plays the special role of formalised pivotal language, but functions at the same level as other languages. The most widely used machine translation engine project today is undoubtedly Google Translate. On February 22, 2012, the Google team's official blog announced that Esperanto had been added as one of the Google Translate languages. It quickly performed as well as languages with analogous but much larger corpora: quality results were similar to strong languages such as German and Spanish, with corpora one hundred times the size of those for Esperanto. The development team was impressed: "Esperanto was constructed such that it is easy to learn for humans, and this seems to help automatic translation as well" [25].

Another important machine translation system using Esperanto is Apertium, a free and open source project run by a skilled team of developers and contributors, beginning in 2005 [26].

The starting point of Apertium is that the size of the parallel corpora cannot provide high-quality translations *per se*, while on the contrary a good combination of mild morphosyntactic analysis and transfer rules, rewritten for each language pair, controlled by a team of human collaborators, would be far more efficient. It is important to note that Apertium started in Spain, with Iberian Romance languages in mind, which are genetically and structurally similar. The system proved robust enough to allow for Basque and other non-Iberian languages to be added. The grammatical analysis is in principle not so very dissimilar from Trojanskij's, but contains explicit morphological information as well as explicit rules about word order. Language pairs are often taken from existing translation memories available in the web, but they are always reviewed by the community surrounding the project, to maintain a high standard of quality. There is no pivot language or other metalinguistic level of analysis.

To assess the quality achieved by state-of-the-art machine translation systems and Esperanto, let us take the opening of a newspaper article from *Le Monde Diplomatique*, which has an official Esperanto edition (Table 1). A human translation is compared with machine translations by Google Translate and by Apertium (test carried out on May 28, 2014). The title of the English translation of the article, by Serge Halimi, is *Europe's Brutal Discipline* (the French original apparently is not available on the web). The machine translations in the target language Esperanto were derived from the English human text.

In Table 1, italic bold are the English words that were left untouched because the machine translation system could not solve them, while certain word clusters were underlined to emphasise some interesting phenomena. Interestingly, Google Translate did not solve the very common word *gets*, while on the other hand Apertium was fooled by the British spelling *specialising* (if changed to the American spelling *specializing*, it translates that word as *specialiganta*). This small example shows that statistical systems like Google Translate can easily overcome spelling differences, while on the other hand they can fail to solve *gets tougher* as a single construction because it is not very frequent in the parallel corpus. Meanwhile, Apertium translates the phrase as *akiras pli fortan* (lit. "achieves more strong") which does not make much sense. The sensibility of the human translator completely changes the construction of the entire phrase, and that construction is rendered with *akriĝo* (lit. "getting sharper"); the same is true with *federan ĥimeron* (lit. "federal chimera") for *federal fantasy*, while both machine translations stick with a direct translation, *fantazio*.

An important point of difference between the two machine translation paradigms is the treatment of grammaticality: statistical systems like Google Translate do not consider grammaticality very important, focussing on the idea that the reader is interested in meaning, not in grammaticality; while rule-based systems like Apertium consider ungrammaticality a serious weakness for comprehension. This difference is reflected in the internal structure of the two complex systems: Google Translate has a team of developers internal to Google with no direct connection to the users who propose corrections, whereas all agents who can modify Apertium at any level are in contact with a mailing list, wiki and other meeting places, so that the result is much more collective. Apertium seems to be more adaptive, as the human agents and the non-human ones are interconnected better than in Google Translate, where the rigid distinction between in-group (Google developers) and out-group (agents as users) does not permit a real collaboration to improve the system itself.

Readers familiar with Esperanto grammar will quickly note that Google Translate fails in noun-adjective agreement in number and case, while Apertium respects it far more. In truth, this distinction is not only a matter of grammaticality, but also of meaning and sense. In fact the Google translation of *there is a growing sense* is rendered with the almost opposite meaning: *ne estas kreskanta senco* means literally "there is no growing sense". Apertium also

Table 1. The quality of Esperanto translation of Google translate and Apertium.

English human text	Esperanto human text	Esperanto Google text	Esperanto Apertium text
Europe's brutal discipline. The European utopia is turning into a system for delivering punishment. As Europe's regime gets tougher, there is a growing sense that interchangeable elites are taking advantage of each crisis to tighten their austerity policies and impose their federal fantasy. This twin objective has the support of boardrooms and newsrooms. But even if you boost their ranks with German rentiers, a few Luxembourgers specialising in tax evasion and most of France's Socialist leaders, popular backing for the present "European project" isn't much greater.	La punmaŝino. La eŭropa utopio transformiĝas en punmaŝinon. Sampaŝe kun ties akriĝo instaliĝas sento ke interŝanĝeblaj elitoj profitas el ĉiu krizo por akrigi siajn politikojn de malabundo kaj por trudi sian federan ĥimeron. Tia celo vekas la aliĝon de la kontrolkonsilioj kaj de la redaktejoj. Sed, eĉ se oni aldonas la malmultajn germanajn rentulojn, kelkajn luksemburgajn nompruntantojn kaj la plej multajn francajn socialistojn, oni ne eksterordinare grandigas la popolan bazon de la nuna "eŭropa projekto".	Eŭropo brutala disciplino. La Eŭropa utopio estas igante sistemon por transdoni puno. Kiel eŭropa reĝimo **_gets_** pli malfacila, ne estas kreskanta senco ke interŝanĝeblaj elitoj estas utiligante ĉiun krizo streĉi siajn rigoreco politikoj kaj trudi siajn federacia fantazio. Ĉi ĝemelaj objektivo havas la subtenon de **_boardrooms_** kaj novaĵĉambroj. Sed eĉ se vi pelos iliajn rangojn kun germanaj **_rentiers_**, kelkaj **_Luxembourgers_** specialiĝas en impostevito kaj plejparto de la franca Socialista gvidantoj, populara subteno por la aktuala "eŭropa projekto" ne estas multe pli granda.	brutala disciplino de Eŭropo. La eŭropa utopio estas turnanta en sistemo por liveranta punon. Kiel reĝimo de Eŭropo akiras pli fortan, estas kreskanta senton ke interŝanĝeblaj elitoj estas utiliganta ĉiun krizon striktigi iliajn ŝparemecajn politikojn kaj trudi ilian federalan fantazion. Ĉi tiu ĝemela objektivo havas la subtenon de estrarejoj kaj redakciejoj. Sed eĉ se vi akcelas iliajn rangojn kun German **_*rentiers_**, kelkaj **_*Luxembourgers_** **_*specialising_** en imposta evito kaj plejparto de Francio-a Socialismaj gvidantoj, populara subteno por la nuna "eŭropa projekto" ne estas tre pli granda.

has some problems in disambiguation, as the Esperanto word *sento*, used in the same point, means "feeling, sensation".

CONCLUDING REMARKS

It would seem that in principle a combination of the two approaches to machine translation could avoid the most common errors in both; on the other hand, a mixed system increases the complexity of the system itself, with the risk, in the worst case, of augmenting both kinds of errors. In any event, it seems that in both approaches Esperanto can function as a source or target language with a considerable degree of regularity compared to other languages, even though no pivot language or explicit metalevel is utilized in either system. Perhaps this is a natural development for Esperanto – namely that it will function as a language like any others, and with good results: the more Esperanto is used, the stronger the result. Esperanto improves its own level of adaptivity when used in machine translation tasks, and at the same times its complexity grows.

ACKNOWLEDGMENTS

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GRAMMAR: A COMPLEX STRUCTURE.
A LINGUISTIC DESCRIPTION OF ESPERANTO
IN FUNCTIONAL DISCOURSE GRAMMAR

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ABSTRACT

Functional Discourse-Grammar or FDG is the latest development in the functional grammar that was initiated by the Dutch linguist Simon Dik (1940-1995). In this paper, the FDG architecture proper is described, including the role of the extra-grammatical conceptual and contextual components. A simple interrogative clause in Esperanto is used to illustrate how a linguistic expression is built up from the formulation of its (pragmatic) intention to its articulation. Attention is paid to linguistic transparencies and opacities, defined here as the absence or presence of discontinuities between the descriptive levels in the grammar. Opacities are held accountable, among other factors, for making languages more or less easy to learn. The grammar of every human language is a complex system. This is clearly demonstrable precisely in Esperanto, in which the relatively few difficulties, identified by the opacities in the system, form such a sharp contrast to the general background of freedom, regularity and lack of exceptions.

KEY WORDS

CLASSIFICATION

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INTRODUCTION[1]

In the authoritative monolingual dictionary *Plena Ilustrita Vortaro de Esperanto* (PIV) [1], under the headword *gramatiko* ('grammar') we find several definitions. The first is 'study of language rules' (*scienco pri la lingvaj reguloj*); under this definition, *ĝenerala gramatiko* ('general grammar') is described as the 'study of rules common to all languages' (*scienco pri la reguloj komunaj al ĉiuj lingvoj*). In second place in PIV we find the following definition: 'the sum of the rules that must be observed in order to speak or write a given language correctly' (*tuto de la reguloj kiujn oni devas observi por ĝuste paroli aŭ skribi difinitan lingvon*). We are most familiar with this definition in direct combination with the third definition: 'a book explaining these rules' (*libro klariganta tiujn regulojn*). In the present article I will limit myself to the first definition; in other words, I will address the structure of Esperanto in the context of a modern general grammar, Functional Discourse Grammar.

The study is structured as follows. First, I will provide a brief overview of Functional Discourse Grammar (FDG), which forms the theoretical framework I have chosen for my analysis. In the following section I will address the auxiliary components surrounding the study of grammar, i.e. in its first subsection the conceptual and in its second the contextual component, both of which are indispensable accompaniments of grammar itself. Then I will move on to grammar proper, addressing the entire layered structure with its four levels (interpersonal, representational, morphosyntactic, and phonological), and doing so by tracing an exemplary sentence in Esperanto through all four levels. In the following section I will look more deeply into the phenomena of transparency (in the first subsection) and opacity (second subsection), offering a few concrete examples from Esperanto grammar. At the end, I will offer some conclusions from the study and will be more illustrative and representative than exhaustive, with some inevitable simplifications.

FUNCTIONAL DISCOURSE GRAMMAR

Functional Discourse Grammar (FDG) – the direct successor of the Functional Grammar created by the Dutch linguist Simon Dik (1940-1995) – is the 'general grammar' described in the first PIV definition[2]. FDG is *functional* in the sense that it begins from the assumption that the properties of linguistic expressions are derived from the communicative goals that the speaker attempts to realize in interaction with other users. In its most extreme form, functionalism even goes so far as to deny the cognitive reality of linguistic structures and considers all linguistic forms as ephemeral manifestations intended to achieve a particular communicative goal.

In linguistics, functionalism contrasts with *formalism*, which is firmly linked to the hypothesis that there exists in all people an inherited mental structure directing human language whose underlying properties cannot be explained through directly observed linguistic phenomena. In its most radical expression, formalism is concerned only with this underlying linguistic structure, without reference to its usage in practice.

FDG, which proclaims itself as functional yet form-oriented, lies between the extremes of functionalism and formalism. It does indeed attempt to provide an explicit and formal description of the knowledge that is a prerequisite of the potential for linguistic communication possessed by humans. It attributes to the user of language a knowledge of the elements of language (lexical, syntactic, phonological, etc.) and of their applicability (to create discourse acts, sentences, intonation patterns, etc.). According to FDG, we can observe a relative stability of this knowledge across languages, such as will justify comparative study. Proponents of FDG believe that this knowledge results from long-term historical

development, which has retained appropriate forms in the repertoire of succeeding generations of language users over the centuries and eliminated less successful forms. The structures that users in a given period choose to encode their functional desires may vary from one language to another, but their variability is not unlimited. Limiting these structures is, above all, the variety of the functional desires themselves (extensive, but not unlimited) and the limitations of the human cognitive system. By way of illustration: across languages we display a strong preference for discourse acts with a single focus. This is true also of Esperanto: only in specific circumstances, for example in questions introduced by the correlative *kiu* 'who' in ***Kiu diris tion al kiu?*** 'Who said that to whom?', does one have two foci (in bold in this example). The details of this licence vary from language to language, and there are some languages which completely lack this possibility, even though a multiple focus might seem attractively economical. To study such differences and similarities, typological studies play an important role in FDG. Their aim is to uncover and describe, systematically and across languages, the limits of variability – an activity better known as the study of language universals and of universally valid implicational hierarchies.

Functionalism is a good candidate for locating the linguistic study of Esperanto within the framework of a general theory of human language. Its point of departure is human beings as observable and authoritative language users, inheritors of a historically developed awareness of linguistic elements and their application, and demonstrably capable of intercommunicating through language. If speakers of Esperanto fulfill their communicative desires through the language that they use, it follows that this language merits study and comparison with other languages. The submission of Esperanto to FDG in some sense signifies the submission of FDG to Esperanto, which in this role serves as a test bed for the theory itself. And precisely Esperanto, with its unique structure, could have something to contribute to the further development of the FDG apparatus.

In name, FDG is a grammar, but it would be more accurate to call it the grammatical component of a broader theory of human communication through language. FDG (see Figure 1) is a layered structure in which, level by level, all linguistic messages are formed. These sequentially ordered levels are the interpersonal, representational, morphosyntactic and phonological level. Above the grammatical levels lies a conceptual component; they are supported by a contextual component, and at the end we find the so-called output component. Before addressing the grammatical base itself, I will say a word about the two auxiliary components (the conceptual and the contextual). For purely practical reasons, however, I want to deal first with the output component, because in the context of the present article I will limit myself to this brief mention. The output component is the technical means of converting an already grammatically complete linguistic expression into an actual perceptible reality, i.e. as a phonetically perceptible sequence of sounds, or a visibly perceptible sequence of signs, or a visible and palpable sequence of writing. In the present text I will not be concerned with the articulation of phonological structures and accordingly will not address the output component in any greater detail.

Although the processes examined in FDG finish in the output component and although we customarily regard the spoken utterance or its written version as the final product that we wish to study further, it is important to emphasize that FDG aims to model not the speaker but the grammatical structure of human language. FDG is based on the assumption that a grammatical model is made the more effective to the degree that it resembles the processing that actually takes place in the human mind. In this area, Levelt's work [2] in psycholinguistics clearly shows that this mental processing originates in intention and ends in the articulatory production of language utterances.

CONCEPTUAL COMPONENT

Formulation

- Lexical items

- Pragmatic and semantic operators

Interpersonal Level

Representational Level

- Gramatical morphemes

- Morphosyntactic operators

Morphosyntactic Encoding

Morphosyntactic Level

- Phonological operators

Phonological Encoding

Phonological Level

GRAMMATICAL COMPONENT

CONTEXTUAL COMPONENT

Articulation
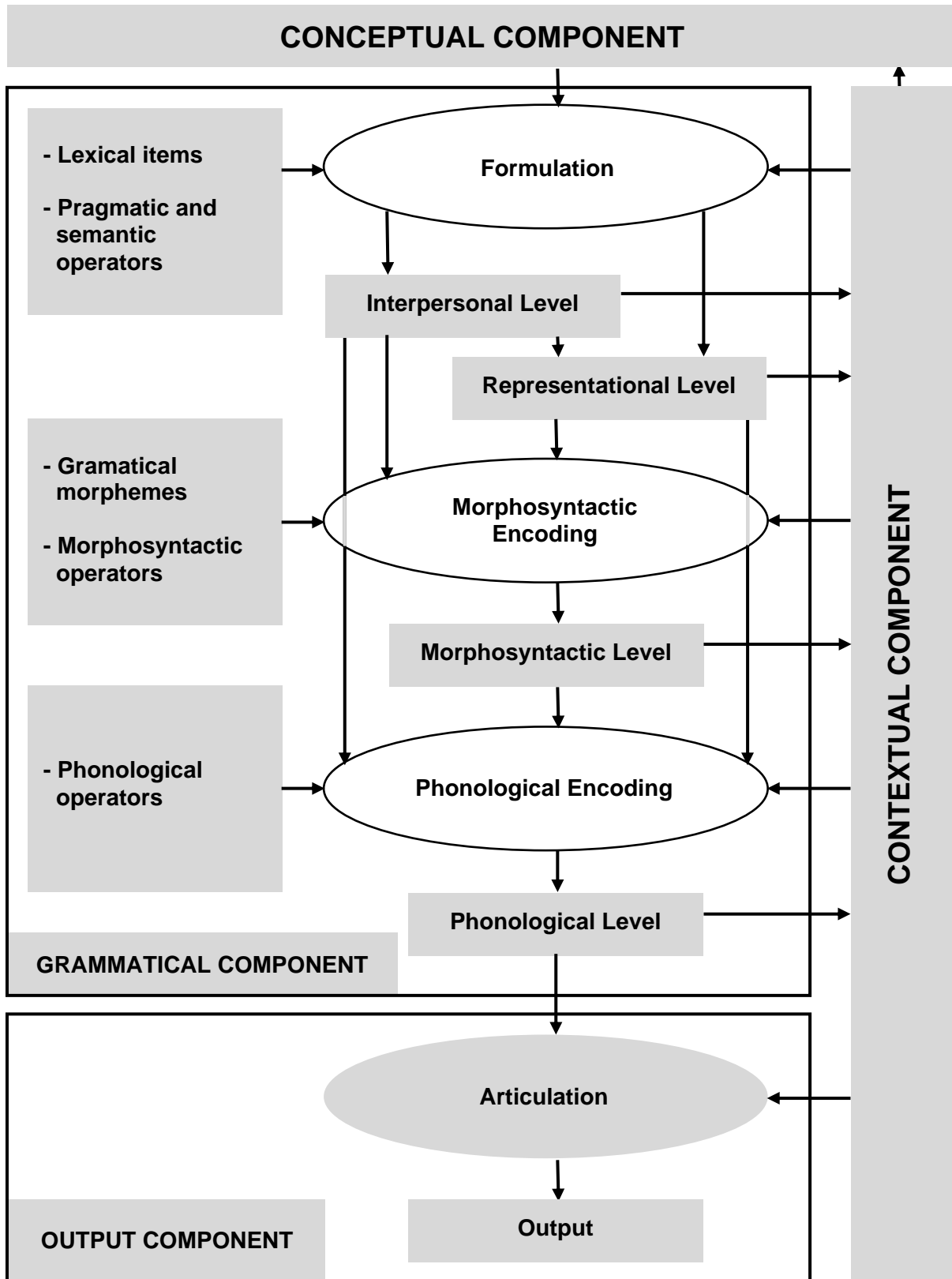
Output

OUTPUT COMPONENT

Figure 1. Overall structure of FDG^3. Inside the grammatical component: ovals are processes, flat rectangular boxes are levels of analysis or description and square boxes are pools of primitives (simple and complex stems, grammatical morphemes and words, operators).

THE AUXILIARY COMPONENTS

THE CONCEPTUAL COMPONENT

The communicative intent of the speaker originates not in the grammar itself but in the conceptual component, which provides the strategic design that the speaker plans to use to realize that intent. The conceptual component (at the top of Figure 1) consists of those elements that are indispensable for the intended linguistic intercommunication and which belong to our knowledge of the world around us. As part of the human system of cognition, this knowledge is universal and beyond language, so that the expressibility or lack of expressibility of given communicative intentions may depend on each individual language as it is learned by each individual in his or her own linguistic context setting. It is the conceptual component that activates a language-specific grammar, allowing this grammar to elaborate the linguistic message with its anticipated communicative intent.

Let us take an example. All human relations are characterized by some level of formality: hierarchical relationships among individuals exist throughout the world. They exist outside language, and they occupy a scale that ranges from complete informality, friendship or intimacy, to rigid formality or distancing. In Esperanto, this aspect plays no role in the choice of second-person pronoun, which remains *vi* in all circumstances, much as 'you' remains 'you' in English. Esperanto simply has no alternative (we will ignore the existence of the rarely used experimental form *ci*). But in Dutch we must choose between the informal *jij* and the formal *u*, in French between *tu* and *vous*, and so on. Even if we imagine the scale of formality as reduced only to this two-stage choice *jij-u*, *tu-vous*, the boundaries between the fields of usage of formal and informal forms do not need to coincide among Dutch, French and other languages and must be learned separately for each language in its own social context. If I wanted to intentionally offend someone whose authority or social status was much higher than mine, I could speak to that person in Dutch with the familiar *jij*; and, by the same token, if I wanted to address my eight-year-old grandson ironically or reproachfully, I could use the formal *u*. These are strategic decisions intended to direct communicative intent along a particular line that I have chosen; but Esperanto does not offer that option in a pronominal form.

THE CONTEXTUAL COMPONENT

The other auxiliary component, the contextual component (the righthand column in Figure 1), contains a number of more or less long-term items of information drawn from the communicative situation that concern those distinctions that *of necessity* or *as required by the grammar* are expressed in the language used. Examples of such information are the number and gender of the participants, and their social relations. In Esperanto one addresses one person or more than one person by the use of a single personal pronoun *vi* 'you', but in many languages two different forms of the singular and plural are required (in Dutch SG *jij* – PL *jullie*). A further example: to say to a boy that he is handsome (*bela*) or a girl that she is beautiful (*bela*) is possible through the use of a single adjective, but, again, in many languages two different forms are required, depending on the person's sex (in French: M *beau* but F *belle*, Italian: M *bello* but F *bella*, and so on). In such cases, we are not dealing with a strategic choice but with a requirement. Finally, the contextual component plays host to grammatical data about the just completed discourse that may be relevant to the discourse that immediately follows.

The contextual component can interact with all grammatical levels. I will give two examples of long-term information and two of anaphoric references to an immediately previous discourse. An example of long-term interpersonal information is the sex of participants in a communicative situation or their belonging to the inanimate sub-category: *patro* 'father' must

be referenced by the masculin *li, patrino* 'mother' by the feminine *ŝi,* and *libro* 'book' by the neuter *ĝi.* An example from the field of semantics is the following. In a coordination of the type 'A and B' in which one element is judged positive and the other negative, it is preferable to choose for A the positive (or the more beautiful, or the higher ranked) element, and so on. This (apparently universal) preference is clearly demonstrated in Esperanto [3]; its apparent systematization throughout the language would constitute an example of long-term semantic information in the contextual component, which in turn determines the syntax.

The other two examples concern anaphoric references. If someone says to me *Mi manĝis* njokki *hieraŭ vespere* 'Yesterday I had gnocchi (dumplings) for dinner' and I reply with *Ĉu* tion *vi manĝis?* 'Is that what you had?', I am referring to the (syntactic) direct object of the statement that I have heard. But when that same person says to me *Mi manĝis* nokki *hieraŭ vespere* 'Yesterday I had gnocchi for dinner' and I reply with *Ĉu* tio *ne devus esti* njokki? 'Shouldn't that be *njokki*?', I am referring to the phonologically questionable word.

Thus we preserve in the contextual component information also from the preceding discourse, and thus it plays a key role in the use of anaphoric references and in reflexives, to which I will return in the second subsection of section *Transparencies and Opacities*.

THE GRAMMATICAL STRUCTURE

We are now in the midst of grammar itself, which in FDG consists of three sequential processes (the ovals in the grammatical component, Figure 1). In the first process, known as formulation, we first create the interpersonal or pragmatic description level of the intended linguistic communication. On this level the speaker, guided by the conceptual component, expresses his/her intention to realize (for example) some statement, some question, or some order; gives structure to that intention, for example through focusing or backgrounding; and establishes the basis on which to create a predicate.

A significant problem in the treatment of the interpersonal level (IL) is the fact that, in order to make it clear I must use a comprehensible utterance, which on this level has still to come into being. For example, if I want to produce, without any specific emphasis, the question *Ĉu Esperanto estas lingvo?* 'Is Esperanto a language?', I can describe the pragmatic beginning of the three processes which finally lead me to this utterance through the discourse act in (1), which I have divided into an interrogative instruction and two subacts (abbreviations and symbols are explained in Table 1 in the Appendix):

(1)   **IL**: INTER / subact of reference / subact of ascription

In (1), INTER is the interrogative instruction by means of which the speaker provokes a response from the person addressed. It is one of the illocutions that exist in Esperanto. Some other illocutions are the declarative (in: *ĝi estas lingvo* 'it is a language'), and the optative (in: *ĝi estu lingvo* 'let it be a language'). The remainder of the discourse act is its communicated content, which consists of a subact of reference that evokes an entity (something the speaker wants to refer to; eventually, this will be *Esperanto*) and a subact of ascription that evokes a property (something the speaker wants to ascribe to the referent; eventually filled in by *lingvo*). The reader will immediately agree with me that without my previously revealing the intended final result (*Ĉu Esperanto estas lingvo?* 'Is Esperanto a language?') it would be difficult to accept that, beginning with IL in (1), after two further processes followed by the correct articulation we will reach precisely that result. The description in (1) is a reconstruction of a known result, which uses those instruments that FDG declares functional on IL and whose validity is confirmed by the internal coherence in IL, as that with the other levels of description, RL (2), ML (3) and PL (4). FDG, like any other grammatical theory, is a *model* of human language; the validity of the model depends on the validity of its constituent

elements as well as their sum. Thanks to the easier testability and validation of the other levels of description (2)-(4), the most abstract IL, introduced in (1), is indirectly confirmed and validated. To avoid distracting us from our main trajectory through the processes and levels of FDG, I will not attempt to examine the theory behind (1) in greater detail.

The second level of description attained in the process of formulation is the representational or semantic level (RL), which nonetheless comes after the interpersonal because semantics can be enriched by pragmatics but not the reverse. Here things begin to get somewhat clearer. Meaning content is given to the intended message, designating those semantic categories that are valid in the language in which I wish to express my intention (in this case Esperanto) and selecting simple and complex stems from the lexical pool (the upper pool in Figure 1). In order to designate the head of the subact of reference to which I wish to ascribe some property in (1), I select from the lexical pool the complex (derived) stem *esperant-* which I had formerly combined in the mental lexicon out of the stem *esper-* and the suffix *ant-*. In order to designate the head of the subact of ascription I select from the same pool the stem *lingv-*. The ascription of the property *lingv-* at the IL, is none other than what we realize on the RL through the predicate (to state something about something else, i.e. to state 'languagehood' about Esperanto). The representational description level therefore looks like the predication in (2):

(2)   **RL**: ↓ / on *esperant-*$_U$ / act-PRS the predicate built on *lingv-*

The arrow pointing downwards at the opening of (2) means that the interrogative illocution INTER is simply handed on, because it was already prepared on the interpersonal level. Its form will reappear in (3). The derivation *esperant-* and the stem *lingv-* still lack their endings, which correspond to their syntactic roles in the sentence. Further, the expression 'act-PRS the predicate,' in which I use the gloss PRS (present tense), has still to be developed, because it is on this level that we define the tense of the predicate which, in line with my intent, must be the present (*Ĉu Esperanto estas lingvo?*). The subscript 'U' attached to *esperant-* signifies that the derivation in question functions in a one-place predicate in which *esperant-* acts as undergoer.

The representational level is a lot more transparent than the interpersonal, but it still is an unfinished linguistic expression. To get close to such expression, we need a second process, namely morphosyntactic encoding. It leads us to the morphosyntactic level (ML), which is already very similar to the final result that we hear or read. The interrogative illocution INTER reappears here as the grammatical word *ĉu*, which always introduces a direct question. Because the derived form *esperant-* plays the principal role in a reference group (in fact, it plays the only role), it is given the ending *–o* and becomes the noun *esperanto*. In Esperanto, the predicate is a verb, which causes the verbalization *lingvas,* from *lingv-*, with the addition of the already anticipated present-tense ending *–as,* whose form comes from the pool of grammatical words and morphemes feeding the morphosyntactic encoding and from which *ĉu* is also retrieved (the second pool from above in Fig. 1). Because the predicate is a one-place predicate, the single argument (subject) *esperanto* does not receive the ending *-n*. The description in (3) shows the completion of our intended expression as far as the morphosyntactic level of description:

(3)   **ML**: ĉu / esper-ant-o / lingv-as

In (3) I have used dashes to show the morphemic division. It may surprise us, since the form *lingvas* ('language' as a verb) does not correspond to the majority of mother-tongue customs among speakers of Esperanto. However, these customs are not the deciding factor in the grammaticality or lack of grammaticality of the word *lingvas,* which is as good as the word *reĝas* 'is the king' in the sentence *Vilhelmo reĝas* 'William is the king' and is fully congruent with the hypothesis of the originally non-categorical nature of Esperanto stems (see the discussion in [4]). It is true that the word usage of stems is strongly influenced by the

semantic category to which they belong. *Lingv-* defines an entity, not touchable or palpable but nevertheless existing, locatable in space and audible or visible. *Lingv-* therefore defines *something,* and this *something* tends to manifest itself in its substantival form *lingvo,* less frequently in the adjectival form *lingva* or the adverbial *lingve* and rarely in some verbal form like *lingvi, lingvas,* and so on. speakers of Esperanto prefer to replace the regular expression *Esperanto lingvas* with *Esperanto estas lingvo,* undoubtedly because the use of the copula *esti* 'to be' accompanied by a predicative noun is the norm for speakers of such influential languages as for instance English, French and German.

Through the third process, phonological encoding, we reach the fourth level of grammar, the phonological level (PL). Here the morphosyntactic product receives a phonological form that is ready to be spoken or written. Words appear in it in the form of linked syllables which the grammar draws from the third pool from above in Fig. 1, which contains the inventory of producible syllables in Esperanto. Further, individual words here receive their accent, determined by a very simple rule in Esperanto: the accent falls without exception on the second to last syllable of each word. Having reached this point, I am now able to add the fourth level in (4):

(4)   **PL**: ĉu / es-pe-'ran-to / 'lin-gvas

Note the different arrangement of dashes within the phonological words compared with the morphosyntactic words and also the addition of prime symbols ''', conventionally immediately before a stressed syllable. With that one difference, I use the the same symbols as on the morphosyntactic level. The use of special phonological symbols is not needed because each written sign in Esperanto responds to a single distinctive sound unit (phoneme) and vice versa.

Phrases and larger units here receive their intonation, that is their characteristic melody within the phrase or sentence. Little research has been done on this phenomenon in Esperanto[4], and in the context of this article I will ignore the existence of a specific melodic curve which nonetheless accompanies the phonological expression of (4). As I have already stated, I will also ignore the question of the final articulation or individual pronunciation of the phonological expression, which falls outside the framework of the grammatical system, but whose written expression *Ĉu Esperanto estas lingvo?* appeared right before (1). Note that it reveals several extragrammatical rules: a sentence is begun with a capital letter and ends with a special sign known as a question mark to indicate that it is interrogative. Furthermore, for many writers the proper name *Esperanto* begins with a capital.

I have attempted to explain that in FDG the pragmatics at the IL, together with the semantics at the RL define the morphosyntactics at the ML, and that the three of them together define the phonology at the PL**.** The path is unidirectional: within a discourse act we move continuously downwards, and a linguistic element at any given level is preferably the continuation of some element at a higher level, which serves to justify it. If not, there would be gaps in the structure. The direct transition from one level to another, without losses and without additions, is called the *projection* from one level to another, and a perfect projection contributes to the transparency of a language. There are indications that transparencies in the grammar favor the learnability of a language (both L1 and L2) and that opacities (discontinuities) retard it.

TRANSPARENCIES AND OPACITIES

SOME TRANSPARENCIES

At the interface between the representational and morphosyntactic level I like to point to two important features which make the learning of Esperanto easy. In a fully transparent

language, only pragmatic and semantic information should determine the choice of formal units. Under such circumstances, all semantic units should be usable to form predicates, no matter whether they concern events, individuals or properties. This does indeed happen in Esperanto. Although stems indicating actions or states can be considered 'natural' candidates for the formation of predicates (*mi **far**-is* 'I do-PST', *mi **sid**-as* 'I sit-PRS'), also individuals (*mi **tajlor**-as* 'I tailor-PRS', i.e. 'I am a tailor'), events (***pluv**-os* 'it rain-FUT', i.e. 'it will be raining'), abstractions (*mi **koncept**-as* 'I concept-PRS', i.e. 'I conceive'), locations (*mi **hejm**-as* 'I home-PRS', i.e. 'I am at home'), etc. can function in that role. (All stems are printed in bold).

The second example concerns word-building. Since all compounding, affixing and inflection in Esperanto is realized by a concatenation of invariable lexemes and morphemes, fusing of boundaries between items does not occur. Each affix and inflection expresses one single function only and is realized either as a prefix or as a suffix. There are no discontinuities in the word-building processes or inflectional processes in Esperanto, and the language may be called fully transparent from this point of view. I will not give separate examples but would refer the reader to the paragraph above, which shows the tense operators PRS, PST, and FUT, which are realized morphosyntactically as *as, is* or *os* without exception, regardless of, for example, the person, number, or sex of the subject.

A minor example of transparency can be found within the morphosyntactic level, where Esperanto does not use dummy elements in positions for which there is no interpersonal or representational material. See the example above, *pluvos* 'it will be raining', which does not require an empty subject like English 'it'.

SOME OPACITIES

The first opacity might well surprise the reader because in reality it does not have to do with a link that is objectively lacking (discontinuity), namely the link between the contextual component and the grammar, but with the neglect of that link. The following example serves to underline the (underestimated) importance of this link.

In a reflexive structure the anaphoric reference and referenced refer back to the same participant in the communicative situation. We call this co-referencing. Typical textbook examples in Esperanto are *mi lavas min* 'I wash (myself)' and *vi lavas vin* 'You wash (yourself)', in which *mi*[*n*] and *vi*[*n*] are defined unambiguously. There is no doubt as to who washes whom since the washer and the washed are the same person. Quite different is a situation in which *ŝi lavas ŝin* 'She washes (her[self])', because this could indicate the presence of more than one female participant in the communicative situation. How, then, do we distinguish between a co-referencing *ŝi* and referencing to two *ŝi*-s, if we lack a means of marking the distinction? The response is well-known: *ŝi lavas ŝin* implies two different *ŝi*-s, because Zamenhof introduced the special form *si* for co-referencing (to the subject): *ŝi lavas sin*. And we find a similar distinction between *ŝi lavas ŝian bebon* (not her own baby) and *ŝi lavas sian bebon* (her own baby).

Use of the reflexive pronoun *si* undoubtedly has greater distinguishing value than the possessive *sia*. *Si* points directly to one among many selectable participants (in the broadest sense) in the communicative situation, and excludes the others. If S is the subject, V the verbal predicate and (O/A) an object or adjunct with a selectable *sin, pri si, por si*, and so on, the use of the form with *si* instead of a form with *li* 'he', *ŝi* 'she' or *ĝi* 'it' contributes to the disambiguation of (5) and (6), although (6) would remain formally ambiguous in the presence of more than two *ŝi*-s:

(5)   S V (O/A)≠S, for example: *Ŝi lavas ŝin.*   *Ŝi parolas pri ŝi.*
                                                            She washes her.   She speaks about her.

(6)　　S V (O/A)=S, for example:　　*Ŝi lavas sin.*　　　*Ŝi parolas pri si.*
　　　　　　　　　　　　　　　　　　She washes (herself).　She speaks about herself.

In fact, the context is essential for definitive disambiguation. If (O/A) is a nominal knowable object/adjunct, the disambiguation between (7) and (8) would have to be less pressing than that between (5) and (6), or that within (5):

(7)　　S V (O/A) (*not belonging to* S), for example: *Ŝi lavas ŝian bebon* (=*ne de si*).
　　　　　　　　　　　　　　　　　　　　　　She washes her baby (not her own).

(8)　　S V (O/A) (*belonging to* S), for example:　*Ŝi lavas sian bebon* (=*de si*).
　　　　　　　　　　　　　　　　　　　　　　She washes her (own) baby.

Compared to (6), in (8) the nominal participant *bebo*[*n*] 'baby' is added – an important further key to the disambiguation of the meaning of the complete expression in this context. In the contextual component not only the participants are directly knowable (and in (8) one more than in (6)), but also the social relations between them (more in (8) than in (6)) and the immediately preceding discourse. The communicative intent of the linguistic message cannot be found in the isolated syntactic structure of individual sentences. Every human language, therefore including Esperanto, is a complex system, and interpretation of the linguistic message requires consideration of all possible contributions from all subsystems, including those of the contextual component, as we have seen above. The morphological marking by a dedicated possessive reflexive *sia* turns out to be redundant (which is not necessarily bad), but difficult to master in syntactically complex structures.

I would like now to revisit the boundary between the representational and morphosyntactic levels where Esperanto reveals an authentic opacity in the form of a gap between the two. The word forms that can appear on the basis of the stem *lingv-* are not limited to *lingvo* 'language', *lingva* 'linguistic', *lingve* 'linguistically' and *lingvi* 'to be a language'; in Esperanto circles, for example, there is much discussion about *lingvaj problemoj* 'language problems' with two endings on each of the two Esperanto words. The distinction between singular and plural arises in the contextual component (a distinction registered there between singularity or plurality of participants necessarily activates the operator SG or PL in the semantics, which is expressed formally in the morphosyntax (by a zero element or through the ending *-j* imported from the pool of grammatical morphemes). The abovementioned plural word *problemoj* can therefore be analyzed as in (9):

(9)　　*PROBLEM*　the signifying part drawn from the stem *problem-*
　　　　O　　　　　the ending which marks the role of *problem-* as head of a reference group
　　　　　　　　　　　in *lingv-a problem-o* and in that way defines the noun *problemo*.
　　　　J　　　　　the ending which forms the plural noun *problemoj*.

The concept of 'pluralness' is expressed by the ending *-j* which in principle we can add to any noun and which we can write or pronounce, but such pluralization does not always make sense: if I take the nouns *mono* 'money', *oro* 'gold' and *glacio* 'ice' it is difficult to imagine what might be the meaning of the plurals *monoj, *oroj and *glacioj[5]. It is therefore evident that it is not substantivity that determines the possibility of pluralization, but some element in the meaning of the noun, namely its belonging to the category of countable entities. Thus one can easily say *unu problemo – du problemoj*, but less easily *unu oro – du *oroj*. More precisely, one could say either, but the latter would be sufficiently enigmatic – a fact that is caused by *or-* belonging to the category of non-countable entities. Accordingly:

- the countable character of the entity *problem-* allows its pluralization,
- the non-countable character of an entity such as *or-* makes it difficult,

- in theory, pluralization is prevented by a dependent (qualifying) semantic category, which is in no way concerned with the criterion of countability (for example *grand, grav* kaj *neglektind*) and which primarily manifests itself as an adjective in a modifying role (*granda, grava, neglektinda problemo*)[6].

In Esperanto, modifiers in a reference group can belong to any semantic category, for example *lingv-* in *lingv-a problem-o*: in this example, *lingv-* is used 'incongruously' with its entity status, which would prefer substantivity, as a modifier of the entity *problem-*, with which it defines the complex entity *lingv- problem-*, which is in turn encoded as *lingv-a problem-o*. Pluralization of this complex entity is possible thanks to the countability of the head *problem-*, to which the marker *-j* is attached in **lingv-a problem-o-**j**.* However, the form **lingv-a problem-o-j*, despite its sufficiency, is non-grammatical in Esperanto. The required use of *lingva**j** problemo**j*** instead of **lingva problemo**j*** is an example of a misprojection. The pluralizing *-j* added to the adjective is required by a separate rule that finds no justification in semantics, but constitutes a rule within the syntax. It is a so-called agreement rule, which abound in the languages known to Zamenhof, for example Latin, Greek, Russian, German, and French.

Finally, let me mention a case at the boundary between the morphosyntactic and phonological levels, which is interesting because it could illustrate the origin of what may later become an opacity. When the alignment of items in the clause, ideally defined by interpersonal or representational criteria only, is 'corrected' by phonological weight criteria, we are dealing with conflicting inputs, disrupting the full transparency of the language in this respect. In Esperanto, 'heavy' (multisyllabic) items tend to be moved to the end of the clause, and lightweight items are so mobile that they display a tendency to abandon their designated slots to move into positions more to the left. When submitting different groups of Esperanto speakers to tests involving their preferred placement of nominal and pronominal subjects and objects with respect to the verb [4], it appeared that the expression 'The student is reading the book' with the nominal O 'the book' *la libron* was built up as in (10):

(10) *La studento legas **la libron**.*
    The student is reading the book. ([4]; p.194, [4]; p.203) with a 100 % SVO score, whereas 'The student is reading it' with the light-weight pronominal O 'it' *ĝin* showed a decrease to 87 % SVO, complemented by 13 % SOV[7] as in (11):

(11) *La studento **ĝin** legas.*
    The student is reading it. ([4]; p.194, [4]; p.203)

Hence, morphosyntactic placement is indeed susceptible to phonological weight, though, for the time being, (11) is just an optional stylistic variant of *La studento legas ĝin*, which is still SVO. In other words, the opacity is not grammaticalized yet.

CONCLUSIONS

Let me summarize in a few lines what I have attempted to show. The operation of Esperanto grammar is not fully comprehensible if we isolate it from the two components that I have presented under the names conceptual and contextual components. Knowledge of the world, of one's surroundings, of society and of all the social interrelations that surround us, knowledge of the context with its participants and of the inventory of preceding discourse – these are all indispensable in allowing linguistic contact that makes sense communicatively and is socially acceptable. The operations of grammar are also not fully explicable if we separate one grammatical level from another and do not understand or consider possible gaps or discontinuities which can arise in moving from one level to another, or within one level. I have provided a few examples of powerful transparencies in Esperanto, among them

particularly the freedom to use any and all semantic categories to form predicates, and the rigorous 1:1 relation between form and meaning. I have attempted to clarify a few examples of opacities: lack of consideration of the role of the contextual component in the case of the reflexive which derives from co-referencing to a single participant, discoverable precisely in that component; number agreement between noun and adjective, and the impact of phonological weight on the ordering of elements in the syntax.

The grammar of every human language is a complex system. This is clearly demonstrable precisely in Esperanto, in which the relatively few difficulties, identified by the opacities in the system, form such a sharp contrast to the general background of freedom, regularity and lack of exceptions.

REMARKS

[1] For a list of abbreviations, see the appendix to this article.

[2] This introduction draws much of its inpiration from chapter 1 of [5], which is at present the most complete overview of FDG.

[3] Based on Hengeveld and Mackenzie [5; p.13], but simplified to the extent needed for this paper.

[4] Worth mentioning is [6].

[5] I prefer to use the term 'difficult' rather than 'impossible' because various languages offer various treatments of the plural; thus, for example, 'rice' and 'meat' can be pluralized in Italian (*riso > risi*, *carne > carni*), but not in Dutch (*rijst*, *vlees*). I am not aware of their entirely homogeneous use in Esperanto.

[6] This does not contradict the fact that the plural *grandoj* exists. In [4] I describe the custom among Esperantists of using, because of the lack of a separate affix, direct substantivization of roots of this type, i.e. *grando*, *belo*, etc. to create pseudo-derivations that define the semantic category of abstract entities.

[7] The SOV variant was by no means limited to L1 speakers of Romance languages who could be suspected of blindly copying native models like *l'étudiant le lit* in French, with the interposed clitic *le*.

APPENDIX

Table 1. List of abbreviations and symbols used in this article.

A	Actor; Adjunct	PL	Phonological Level
F	Female	PL	Plural operator
FUT	Future tense operator	PRS	Present tense operator
IL	Interpersonal Level	PST	Past tense operator
INTER	Interrogative illocution	RL	Representational Level
L1	Mother tongue	S	Subject
L2	Second language	SG	Singular operator
M	Male	U	Undergoer
ML	Morphosyntactic Level	V	Verb
O	Object	*	Ungrammatical form

ACKNOWLEDGMENTS

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THE TEACHING AND LEARNING OF ESPERANTO

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ABSTRACT

One of the first tasks faced by Zamenhof, the inventor of Esperanto (1887), was establishing its status as a living language, achieved in part by teaching the language to others, in part by translation and literary creation, and in part by forming a community of users. One of the earliest learners, Leo Tolstoy, emphasized its ease of learning, and both the early history of the language and contemporary experience show that the receptive and productive skills entailed in learning the language are unusually mutually reinforcing. In formal language-learning situations, students are able to reach an acceptable level of proficiency relatively quickly, allowing them to put the language to practical use. They are also able to learn on their own. Ease of learning builds confidence, so that Esperanto constitutes a good introduction to language study in general, even though the language is more complex linguistically than it may appear at first sight. The language also helps the learning of cultural sensitivity. In recent years, electronic aids to teaching and learning have proliferated and there are many resources available to the teacher and learner.

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INTRODUCTION: A LIVING LANGUAGE

In 1887 Dr L.L. Zamenhof published his first proposal for introducing a medium of communication that would challenge the accepted but inherently discriminatory hierarchy in relationships among languages and their speakers. Native speakers of a language have all the advantages in discourse over those who did not learn it from infancy. Speakers of minority tongues are disadvantaged compared to those whose thoughts and ideas can be communicated naturally in a language of world currency.

This challenge to the established order, launched from the unlikely source of a small volume authored by an eye specialist living in Russian-occupied Poland, raised from the very beginning a basic question that language scholars and the public in general have insisted on repeating to this day: "Is Esperanto a real language?" – followed by its corollary: "Can this language be taught and learned to a level of proficiency that allows its speakers free and untrammelled oral and written communication, not only across cultures, but in all areas of human thought and endeavour?" It then becomes incumbent on us to enquire whether the ability of these speakers actually parallels the apparent – though admittedly at times deceptive – ease with which individuals possessing native mastery of ethnic languages respond to each other. More significantly, could the desire to communicate lead committed speakers, whether or not they are self-aware of their own deficiencies, to gloss over instances of miscommunication, or else be satisfied with their interactions remaining at a level of comfortable superficialities without even realizing their relative lack of linguistic sophistication, not to mention cultural sensitivity?

The first instance of the teaching and learning of Esperanto was evidently when the young Zamenhof as a high school student introduced his friends to the idea he had actually been working on for some fourteen years prior to the appearance of his first book. This slender volume was published modestly with the title *Lingvo Internacia* under the pseudonym of "Dr Esperanto", meaning the doctor who was "hoping" that his idea would meet with acceptance by the public. Though it has been interpreted otherwise, that written outline by no means represented the actual genesis of the proposal being advanced by "Doktoro Esperanto". His design for an international language had been subjected to a limited but rigorous crucible experience during which its viability as a tool for spoken as well as written communication had been tried, tested and improved where he and his companions had found it wanting. Esperanto's origin could not be claimed to compare to the spontaneous self-assertion of language among early peoples when their very survival provided the motivation to develop and utilize the organs of speech and the capabilities available to them. In those cases, increasingly sophisticated levels of communication were enabled naturally and progressively through further cognitive development, enhanced by greater evolution of auditory comprehension and expressive speech ability. However Zamenhof's new potential tool for bridging language barriers was neither conceived nor experimentally evolved as a purely studious written construct. In this respect it can fairly be stated that Zamenhof's effort differed from almost all of the hundreds of isolated individual projects for creating a planned language initiated by philosophers and other intellectuals prior to the appearance of Zamenhof's *Unua Libro* in 1887 [1].

Languages typically have evolved autonomously with relatively little effective intervention by self-constituted authorities. Exceptions are those that have been directed in their development through more deliberate planning, as in the cases of the common languages of Israel and Indonesia. In virtually all instances, functionality for the exchange of information, concepts, ideologies and opinion has been paramount. Then follows the higher goal of

liberating the expression of human thought, feeling and aspiration through the medium of literature. Zamenhof was convinced that Esperanto would have no claim to credibility if it could not demonstrate its value through original writing that appealed to the highest sentiments of humanity, and he himself provided some of the first models in order to encourage others to continue in that line. No less important was the language's ability to render the finest of world literature with a precision in transparent reflection of the original text, not just in content but also in style. Effective translations into Esperanto should also evidence a power of linguistic expression not totally eclipsed by the levels achieved and recognized in other languages developed over hundreds or thousands of years [2].

Esperanto has established for itself a community of users who in some ways have identified themselves just as strongly with the language and its cultural context as those who defend and advocate for their own ethnic tongues. Yet this is not and could never be the kind of nationalistic stance which is regularly taken by such advocates. Those who see the value of Esperanto in their own lives naturally wish to witness a greater recognition of this grounded, viable contemporary expression of the concept of a truly neutral, global communication tool. Yet they are not seeing it primarily as an essential means for preserving their own identity and values or of Esperanto itself. On the contrary, it represents a clear and unclouded window on to other languages, cultures and peoples, and as such can enable a greater understanding of them. In this way it can bring the unique values of these "others" to a desirable level of appreciation in its learners, since through a common means of communication the first focus is almost inevitably on identifying with what they share with the "others": to the point where the negative connotations of the word and concept diminish, rather than subtly reinforcing linguistic and cultural divisions and boundaries. While encouraging all ages of learners to maintain ownership of their own linguistic and cultural heritage and its values, the teaching of Esperanto has a uniquely demonstrated potential to aid students in ameliorating prejudice towards other peoples and groups. Through linking with peers around the world, learners naturally enhance a sense of their own identity as citizens of a global community. This in turn tends to lead to less fear of the strange or unknown, and a greater willingness to interact with those who are different from themselves both at home and abroad.

LEARNING ESPERANTO

If we accept the premise that Esperanto is indeed a living language, one that would be hard to deny after over a century of active oral use and more than 30 000 registered publications, including the major world classics in Esperanto translation, then come the obvious questions. How has it been taught and learned over the years? With what purposes and goals? How effectively? Is the teaching and learning of Esperanto similar to the way a second language is typically taught, and are there or should there be fundamental differences?

From Zamenhof's time to today, there are clear indicators of very distinct answers to the last question. By the early twentieth century, the French publishing company Hachette and a number of others were regularly publishing textbooks and literature in Esperanto. By the second half of the century Linguaphone, Assimil and others [3] were producing recorded courses to facilitate audio learning of the language. Almost all of these, including *Secondary School Esperanto* (distributed by HarperCollins) [4, 5] and other typical texts, looked very similar to their counterparts for ethnic languages. In this century, Eurotalk publishes five different levels of its well-known computer-based courses in Esperanto. The template for each language presented in the Eurotalk series is basically the same. There continues to be little difference in how Esperanto is presented in these media compared to traditional languages and courses.

Historically parallel to these trends, however, an impressively large body of practice contradicts the supposition that "all languages are created equal" for the native speaker or the

learner. The final word has yet to be spoken on how children actually acquire language, with no one scholar's conclusions considered as definitive. Yet the widespread assumption that this acquisition is in almost all cases relatively effortless belies the fact that different features of languages require comparatively more or less time to master, the concept of "mastery" of a language being itself controversial. College teachers in the United States and certainly other English-speaking countries bemoan the stunning lack of spelling literacy in certain incoming native-speaking freshmen, not just in the student contingent from abroad. Even though there is a closer fit between the spoken and written forms of Spanish than English, native speakers are just as prone to egregious mistakes in certain features, with the *Real Academia Española* and its associated Academies in Latin America recently relaxing the rules on the necessity for written accents (one might suspect partially in response to the high level of uncertainty in their use along with the practical suspension of such niceties in texting and other informal interchange).

When we look at Esperanto, we find ourselves anecdotally in a whole different universe. Of necessity there are spelling conventions to be learned, and a relatively mild and totally regular system of diacritics to be internalized to hold the number of letters in its modified Roman alphabet to 28. Esperanto has been suggestively identified as the newest of the Romance languages, at least on the basis of certain identifiable structural features and the priority of its selection of vocabulary. This assertion has evoked protests from those who point to its unique systematization of word construction and relatively non-complex syntax, which two features appear to make it more accessible to Asian learners, as well as enabling the language to serve as a viable interlanguage matrix for machine translation.

The first well-known figure to be quoted on the subject of learning Esperanto was the great Russian author Count Leo Tolstoy. Since the first text for learning the language was the *Unua Libro* published for Russian speakers in 1887, it is not surprising that Tolstoy was one of the earliest intellectuals to become familiar with Zamenhof's proposal, and he was already writing about it in his diary as well as to a Polish friend in 1889. He found the idea to be "absolutely necessary" for the progress of humankind, and corroborated his conviction by relating that he had learned to read texts in the language in just two hours (in another statement, in three to four hours). The point here is that Tolstoy had done this entirely on his own with no instructor but the text he had been sent, as have hundreds of thousands of others who followed him. While Tolstoy did not have the time to become an active promoter of the language, he remained enthusiastic for at least one reason that many people have persisted in learning it even when not highly motivated to do so: the observation that one can make much faster progress than in any other language in the acquisition of any or all of the four associated skills, listening comprehension and reading (receptive), speaking and writing (productive). This fact alone has guaranteed the continuing attractiveness of Esperanto to a range of people of all generations, from polyglots to failed second language learners alike.

TRANSFERABILITY OF SKILLS

A further indicator of the distinct nature of the language Zamenhof gave as his legacy to humanity was the first of a series of events that would have significant impact on the spread of Esperanto as a new but elaborated *lingua franca* for the world. In 1905, there gathered in the northern French coastal city of Boulogne-sur-Mer 688 people from some 20 different countries, who filled an auditorium to listen to Zamenhof and verify their hope that communication in this new language was actually possible. Although for many this was the first time they had heard or spoken the language with others, they found themselves able to understand the person they had all come to hear, and could then put into practice with the other attendees at the first *Universala Kongreso* what they had learned through reading and, in some cases, substantial correspondence. The experience was a revelation, perhaps

according to accounts from the time even at a Pentecostal level, for many of those who had made the long journey from all parts of Europe and beyond. They needed confirmation of a renewed hope that had been dashed by the problems of an earlier attempt at a constructed language called *Volapük*. Unlike Zamenhof, its creator Johann Martin Schleyer did not have the humility to allow for the natural development of the language by its evolving speech community. The combination of his insisting on personal control and maintaining some features that made it challenging to use with ease sounded the death knell of his own project, though it actually enjoyed a sufficient degree of success that an enterprise of this sort was no longer viewed as either ridiculous or a totally unattainable ideal.

The communication phenomenon that was observed in Boulogne-sur-Mer, namely the ability to activate in spontaneous speech what one has learned only through grammatical study and reading, or at best with thinking and speaking directed only to oneself, had been far less in evidence at the first Volapük convention. For Esperanto, however, it was reinforced in my personal experience just a few years ago when I was visiting a university to evaluate a secondary certification program for new language teachers. I had hoped to meet personally with a student whose name I had seen in Internet correspondence, and whom I had contacted prior to the visit. Although we did not have the opportunity to get together, I was able to converse with him on the telephone for forty minutes. At the end of the conversation came the matter-of-fact but no less astonishing statement "As a language teacher you might be interested to know that this is the first time I have ever spoken to anyone in Esperanto". Unbelievable though that sounded even with my experience of the language, it confirmed both the historical record and what I had been deducing from the experience of other learners. This transfer among language skills does not routinely happen in the learning of other languages except in the case of highly talented polyglots, many of whom are able to activate in speech what they have learned through writing and study of a language's phonetic system. For the average adult learner, however, it has been verified by recent contemporary research and studies in language acquisition that an intensive and highly interactive mode in teaching is generally the most effective approach to developing fluency in a second language.

One more anecdote comes from direct personal experience. My two daughters were raised hearing me speak to them in Esperanto, and listening to stories which I read them out of Esperanto-language children's books from around the world. Their only other contact with the language was during occasional visits with other speakers and a one-week-long children's camp in Spain, where Esperanto was the only language of communication for all activities. These yearly events for children and young people raised speaking Esperanto, or having learned it later in school or from a friend or family member, are known as little congresses for children, *Infanaj Kongresetoj*. Later in their teens, for a couple of years my daughters accompanied me and my wife as a family when I was teaching Esperanto in the summer program of San Francisco State University in California. With no light trepidation, on my part as well as theirs, I enrolled them for the university credit that was granted by that program for the several decades of its sponsorship by SFSU. They listened (no problem understanding the other teachers and students), spoke (somewhat of a surprise since I had never insisted on their speaking anything other than English to me), and then did the necessary reading and written assignments, which were fairly lengthy. To this day it is hard for me to imagine how they picked up on the writing system since I had never given them any specific instruction in it. Unless someone was secretly providing them some training on the side (that would have been an achievement as I know my wife wasn't doing it!), it could have come only from their occasional silent following along with me as I was reading their children's books at night, or if out of interest they had happened to pick up the books at other times to reinforce what I was doing with them.

ESPERANTO IN THE SCHOOLS

All these experiences have a specific bearing on the teaching and learning of Esperanto, for several reasons. The first is that Esperanto can clearly be acquired to a near-native level of fluency by children who are exposed to competent speakers as they are growing up, even when in a different language environment and if those speakers evidence less than a native level of proficiency. As an extension of this in a primary or elementary school situation, children can learn to communicate with the teacher and each other, and subsequently with classes from many areas of the world, even if the teacher is not very experienced in the use of the language. This may happen in just a few months, or even weeks, depending on how intense the program is and how much actual practice the students are getting. One of the greatest values of teaching Esperanto at the primary school level is that even small children can forge ahead with their creative use of language, unimpeded by the teacher having to correct them for exceptions to the rules. No exchanges like "I goed to the store with daddy yesterday" – "Oh, you went with daddy to buy something?" No need for correctives such as, "No, a cow has calves, not puppies, and a cat has kittens". In Esperanto, when one knows the suffix for "offspring" (-id-, "katidoj"), it applies universally to all living things, so guessing is much more likely to bring the reward of success. When one's progress is clearly evident and readily experienced, this in itself is a motivating factor to keep the student's interest. Most students in the United States find language learning laborious and not very productive, hence the conclusion that Americans are "not good language learners". In the college where I teach, 80 % of U.S. freshmen need to return to classes in first-year language, even with up to four years of experience in high school.

Despite the technological advances which can truly support and enhance the experience of learning another language, it is a challenging goal for students meeting a one-year language requirement to perform at the level of meaningful conversations on everyday topics of interest. College students in the United States will rarely experience the satisfaction of achieving this outcome. They typically remain at the Novice level of proficiency in their first year (comparable to A1 on the CEFR scale), and only a few reach the ideal goal of Intermediate (A2). However, an A2 or Intermediate rating is a reasonable and expected outcome of the effective teaching of Esperanto in a class situation within the first semester of instruction. It was achieved by some beginning learners who were tested by a trained ACTFL Oral Proficiency Interview (OPI) evaluator at the close of the three-week intensive summer program at San Francisco State. This result was replicated in classes offered by the School for International Training (a division of World Learning) in Brattleboro, Vermont, where for two years all students were pre-tested and post-tested to OPI standards. Linguistically experienced students would often go beyond this level of achievement and progress through several levels on the ACTFL scale, e.g. from Novice High to Intermediate High, a rather remarkable achievement for a three-week program, however intensive [6].

It is often claimed that Esperanto can be learned four or five times as fast as an ethnic language, and there is some evidence for this assertion, especially in the receptive skills. However, attaining the fluency and accuracy that characterize a "distinguished" level speaker (ACTFL), a "4" on the DLR scale or a "C2" in the CEFR, is by no means a routine achievement for the average speaker of Esperanto. Many seem content to remain in the CEFR "B" range, ACTFL Intermediate-Advanced, 1-2 on the ILR five-point scale. It seems likely that the relative paucity of intermediate and advanced courses offered regularly to adepts of Esperanto contributes to only the most dedicated learners being able to approach native-like ease of expression with no pattern of errors, evidencing a mastery of its phonology, structure and a wide-ranging choice of vocabulary.

When the target language is Esperanto, however, and communication has been established with students their age from another country, this communication has been shown to foster in young people of all ages empathy with their peers elsewhere, and interest in more contacts with other cultures (and quite frequently interest in learning more languages). Exchanges of information among learners of different native languages can occur within just a few weeks at any level [7].

BEYOND THE CLASSROOM

This more authentic, less classroom-bound learning is of course facilitated by Skype and other forms of audio and video transmission that make use of the Internet, and planned group encounters of young people for truly experiential learning result in friendships across countries and continents extending beyond the experience itself. I was privileged to be an invited observer at one instance of such gatherings for high school students who are able to communicate in the language and wish to develop their skills and contacts further. *Euroscola* brings together in Strasbourg on an annual basis several hundred 16-18 year old students from all 27 European Union Member States to work together in a multilingual European Youth Parliament. Some 40 students from five different countries and schools where they were learning Esperanto spent an intensive week together, while taking part in the *Euroscola* activities designed to promote a stronger sense of European identity. When not in the Parliament sessions, they also took classes both to strengthen their knowledge of Esperanto itself, and to put it into practice through substantial guided discussions on the assigned topics of the gathering. Their own teachers and others from as far as Ukraine served as rotating instructors, giving them a truly multicultural learning experience. In their spare time, as they got to know their companions in more informal settings, they were naturally free to practice other languages they were learning with native speakers of those languages who were part of the group. My interviewing of these students revealed that they truly valued the uniqueness of their experience during this week. Esperanto had not necessarily become for them either a guiding purpose or a transcendent ideology for their lives; rather it was the practical and pragmatic means by which they had expanded their knowledge and limited sense of identity, in order to feel a broader sense of friendship and camaraderie, one that transcended national and linguistic boundaries as well as misconceptions about those different from themselves.

These days, many young people plan for their own intercultural travel experiences. One of my own students spent 17 months in Europe, for a total expenditure of less than $6000 including air fare, travelling to youth conferences in Esperanto that focused on the environment and other topics of current concern and interest to her and the others attending. Between conferences, she stayed in the homes of Esperanto speakers across Europe, where she was welcomed free of charge under the aegis of the *Pasporta Servo*, which encourages young people and others to take advantage of such opportunities for intercultural learning beyond the confines of just a single country and language environment. The ethical sense of mutual respect, appreciation and care for others within the Esperanto community provided a safe environment and support structure for a young woman travelling alone.

As described earlier, one of the stronger claims for the value of Esperanto instruction as a first non-native language in primary and secondary schools is the motivational advantages of relatively rapid learning and early contact with other speakers who are studying it at the same time in different countries. Beginning in 1956, such contacts were facilitated by French-speaking teacher Marcel Erbetta, from Switzerland, who over the following years collected student work from schools in 21 countries, copying it, and redistributing it several weeks later, in the form of a magazine issued always in 25 copies and sent to each the schools who had contributed to his "Seeds in the Wind" or *Grajnoj en Vento*. These publications included accounts of visits abroad and other activities, with one enthusiastic group reporting that they had

an experience of a lifetime in Yugoslavia, after a few days no longer thinking of themselves as in another country. Today, it no longer takes several weeks for students to communicate with each other. Classroom-to-classroom and person-to-person contacts are instantaneous and repeated as often as there is time to set them up and interest in preparing and pursuing them.

ESPERANTO AS AN INTRODUCTION TO LANGUAGE LEARNING

For those engaged in largely classroom-centred learning, the "Propaedeutic value of Esperanto" is the title of a Wikipedia article that details more than a dozen experiments in teaching Esperanto prior to a more standard second language in the school environment. The premise is that once a student has spent some time learning the international language, this experience facilitates the acquisition of a second language to the point where no time has been lost to that endeavour by the initial detour into Esperanto. While we still await a truly definitive controlled study involving at least several hundred students in different learning environments over a period of years, these experiments do point to a fairly consistent conclusion [8].

When, for instance, students take a year of Esperanto and then three years of a language such as French, it can be expected that those learners can reach a proficiency in French that is relatively comparable to the results obtained by a control group that did not study Esperanto and stayed with French for the full four years. Norman Williams, headmaster of Egerton Park School in Denton, England, presided over a 25-year-long program involving the controlled study of students who took Esperanto prior to French and those who didn't. He became convinced that the experiment had met with total success since he believed that his Esperanto students were consistently equal to or superior in French proficiency to those who had studied only French [9, 10]. J.H. Halloran, a researcher in psychology at the University of Hull who was invited to take an objective outside look at the program, did not sign on to all of the positive conclusions of Headmaster Williams. However, he did agree that the data showed students with lower language learning aptitude to be at an advantage in their French studies after taking Esperanto [11]. This is just one of the studies of Esperanto teaching and learning carried out over the years, several of which are summarized by Maxwell and by Fantini and Reagan [12, 13].

The fact that when people learn the first language after their own, the next one becomes easier and the third easier still, is such a widespread experience that I have rarely seen or heard it seriously questioned, except by those who count themselves among the "failed language learners" of this world. This situation already gives the claims of Esperanto some initial credibility without even adding into consideration the relative ease of learning that comes from its regularity.

HOW DIFFERENT IS ESPERANTO?

In the realm of methodology, has the teaching and learning of Esperanto followed the pattern of all other languages? Here again we see both a positive and a negative answer. Some teachers and textbook authors, including William Auld, a former president of the Esperanto Academy, tried to go their own way by insisting that the structure of Esperanto was such that a text and method devised to support it needed to be completely distinct from those used for teaching other languages [14]. Despite these attempts, the teaching of Esperanto has generally recognized that effective skill building needs to make use of the techniques that have been successful for the learning of other languages, while taking advantage of Esperanto's regularity and special characteristics. So Esperanto teaching has seen the cycles of methods and approaches that have characterized language instruction around the world. These are documented in the second edition of the 2005 publication *Manlibro pri instruado de Esperanto* edited by Katalin Kováts, so I will not examine them in detail here [15, 16]. The

grammar-translation approach was heavily in evidence historically as a means of learning Esperanto, and has not been completely abandoned even today.

However, one explanation for the success of Esperanto among Europe's working class as well as intellectuals between the world wars was the way it was taught to millions of learners over a period of decades. By the 1880s, Maximilian Berlitz and others had set the course for what would be known as the "direct method" in which only the target language is used for classroom work, including grammar explanations. By 1920 András Cseh had devised a method that enabled him to teach groups of people with diverse native languages using only Esperanto for conversation and the teaching of its grammar. Since he would often teach workers at night after heavy days in the factory, he kept his early classes lively and humorous, focused on what he termed "conversations" with heavy reliance on group response and no homework. He was invited to teach all over Europe and trained many others to follow in his method. While successful in motivating the learners, it did not necessarily free them from native-language interference to internalize Esperanto's authentic structural patterns, and provided simplified explanations of the grammar which could prevent some speakers from gaining a full cognitive understanding of how Esperanto differed from their native language.

This experience points to an interesting contradiction. Publicists for Esperanto had as their goal to present the language as a model system free from complexities, and Zamenhof found himself in the position of having to describe his language in terms of only "sixteen rules of grammar", under pressure to satisfy their insistent demands. However the problem with this approach is that all languages rest on complex systems, given that the expression of thoughts and ideas in clear and compelling forms for communication to others could never be characterized as a simple task, or one that didn't require a lifetime of refining. A teacher may decide to use a "direct method" to teach the target language, simplifying the grammatical relationships so that no difficulty appears to remain. Yet, like the proverbial elephant in the room, the complex internalized thought patterns of the learner's native language, or other acquired languages, are silently present in the classroom without the students being aware of their effect, unless these are overtly brought to their attention.

In actual fact, grammars of Esperanto are often no less extensive than those of other languages. It takes considerable explanation to describe the intuitive choices of competent speakers of any language, and to point out where interference from other languages can lead to significant mistakes in communication. If a language claims that it can express any concept in human thought, then the complexities of thought will inevitably lead to challenges in finding the clearest and most exact way to express what is in that thought. In kindness to their listeners or readers, all users of any language must be constantly alert to how they can communicate their meaning in the clearest possible way. This becomes crucial when the listeners and readers are from widely different backgrounds in the way they use their native languages. "False friends" or misleading cognates where similar words in the two languages have different meanings, or perhaps close but not exact nuances of meaning, are a very obvious pitfall. Yet many more mistakes are also made through the learner's assumption that there should be a one-to-one correspondence in meaning and usage between a word in one language and a word in the other. The learning of Esperanto cannot shortcut the complexities of any of these operations. Its relative flexibility in word order and lack of irregularities are still a great boon to the beginning learner, but it requires attentive observation, effort and a willingness to keep verifying one's assumptions to master even the regularities of syntax, structure, word formation and meaning. When this continual development does not take place, we see the not unknown phenomenon of the *eterna komencanto* or eternal beginner, one who rises to a level of personal comfort while oblivious to the effect of this position on those who value the development of a full range of expression so as not to limit the quality or clarity of the ideas being shared.

Teaching and learning are themselves complex processes, whatever the material being learned. Each teacher has a level of knowledge, and preferences in either conveying what is to be learned or in drawing it out of the students. Teachers choose how to balance skill-based and cognitive learning. Each learner has abilities and challenges, and teachers are becoming aware of the need to address distinct learning styles and levels of ability through differentiated instruction. Teaching a language through listening comprehension promises to be a challenge to a "visual learner" unless visual aids are provided, even with the teacher aiming to have all students become better auditory learners. Bringing the complex system of a language together with the complexities of teaching and learning at the individual level may seem to be a daunting task. It is, however, not one that leaves no hope.

There are many challenges and cautions to be aware of in evaluating the benefits of teaching and learning Esperanto. Not least of these is to be aware that the learning of cultural sensitivity is not an automatic corollary of learning a language. In the specific case of Esperanto, the fact that two people share for their communication the same language, one that is inherently non-discriminatory since both speakers have had to make the effort to learn it and are on the same psychological level, is clearly a great benefit. However, this linguistic compatibility may mask the need for training in sensitivity to the other cultures with which one is interacting, and to the individuals who are hosting those visiting their culture. Esperanto speakers are typically extremely tolerant of cultural gaffes, since that is a characteristic of their own idealistic culture. Yet this is no excuse for ignorance of appropriate behaviour when sojourning in another culture. It is therefore vital to prepare students when they visit the countries and homes of other speakers to initiate exchanges on what is appropriate and acceptable. Esperanto was designed to make relationships among citizens of the world more harmonious, thus contributing to resolving conflict on a personal and national level. This does not happen without an increase in conscious awareness of our own acculturated behaviours and their effects on others if we make no effort or show no willingness to adapt to norms that are different from our own.

In conclusion, we have seen some of the unique characteristics of Esperanto as a language, a developed bridge across cultures that becomes fully functional through experiences with speakers from backgrounds different from the learner's own. It is a language that seems to more readily provide success to those learning without a teacher, and whichever approach such learners take, there appears to be an advantage in the more ready transfer of knowledge and practice among the four skills than with other languages. The Internet portal *lernu.net* [17] has proved itself to be one of the most effective language learning portals in the world, to the extent that its developers have received awards and commissions to create similar sites for the learning of other languages. It provides extensive online materials, and can connect learners with tutors and others who will support their learning. Teachers of Esperanto have the incentive of becoming certified through the Esperanto version of the CEFR proficiency interview to determine their level of functionality in the language. These instructors may take advantage of publications and seminars offered around the world to guide them in the utilization of all the latest methodologies, including applications of technology. With the help of teacher training sessions, contemporary courses increasingly focus on communicative activities including situational learning. There is much progress to be made for the teaching of Esperanto to make a more definitive impact on the achievement of its objectives. Yet a foundation has been built that will enable further verification of its claims to bring a unique light to the goal of promoting greater understanding among the world's peoples.

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THE SCIENCE OF SYMBIOSIS AND LINGUISTIC DEMOCRACY IN EARLY TWENTIETH-CENTURY JAPAN

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ABSTRACT

Focusing on the early twentieth-century Japanese Esperantist and popular celebrity writer Miyazawa Kenji as an embodiment of a larger intellectual phenomenon of early twentieth century Japan, the essay delineates the scientific world view behind the Esperanto movement and corresponding internal logic that developed in the language movement's foundational years. It argues that Esperantism in Japan in its early years was not an isolated linguistic movement among a small number of leftist intellectuals, but part of a much larger intellectual, cultural, and social movement that reflected the particular scientific worldview of what I call 'anarchist science'. This worldview defied the conceptual bifurcations of 'modern vs. tradition' and 'nature vs. culture' in modern history. A history of its vision offers a fresh perspective on modern history, future visions of the past, and the historical meanings of Esperantism.

KEY WORDS

natural science, Miyazawa Kenji, symbiosis, Esperanto, linguistic democracy, childhood, anarchism

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INTRODUCTION

The regional train line that takes one through the bucolic northern prefecture of Iwate is called the '*Ginga tetsudo*' (the Galactic Railroad). The name refers to the local writer and Esperantist Miyazawa Kenji's most famous children's narrative, *Ginga tetsudō no yoru* (Night on the Galactic Railroad). Miyazawa wrote the story in 1927 in both Esperanto and Japanese. A widely viewed 1989 animated film based on the story paid homage to the spirit of Miyazawa's vision by incorporating Esperanto into the film in captions and in the animation. Infused with Miyazawa's knowledge of astronomy, the story takes the reader on a trip through the Milky Way itself, seen through the eyes of a child, and puts the reader in touch with the science of astronomy along the way. The name of the *real* northern railway line in Iwate infers that by travelling through this agrarian region, one will discover one's place in, and connection to, the unbounded and unseen galaxy beyond. This discovery can be attained only by openly imagining the universe from a child's perspective.

Miyazawa's home village of Hanamaki has adopted the Esperanto name 'Ihatov' as its second name for itself, broadcasting the word across the village homepage[1]. The Esperanto name was given to the region by Miyazawa, who is now among the most celebrated literary figures in Japan. A kind of Esperanto-Russian transliteration of 'Iwate' (formerly 'Ihate' in an older spelling), the word was created by Miyazawa as the name for the locus of the simultaneously fantastic and scientifically informed world of his writings. Firmly established as a place in northern Japan by Miyazawa's publications, the Esperanto name gives the area the allure of being directly tied to the limitless wider universe, and the animate and inanimate world beyond human society featured in Miyazawa's works. It appears to reaffirm the deep connectedness of northern Japan with the simultaneously fantastic and scientific intergalactic world of Miyazawa's literature.

Miyazawa not only wrote poetry and children's literature, but studied and taught Esperanto and immersed himself in chemistry, geology, biology and astronomy, seeking to improve local people's lives through scientific knowledge. Puzzled by his eclectic commitments and dazzled by the extent of his interdisciplinary pursuits, scholars have largely ignored Miyazawa's interest in Esperanto. While Esperanto perhaps evokes images of enthusiastic leftist eccentrics conversing in urban bookshops, the agrarian locale of Hanamaki where Miyazawa used and taught Esperanto does not correspond with that image. His interest in the language has been (mis)understood as having had no clear relation to his other commitments to literature and science. It is not Miyazawa, of course, who failed to fit himself into the modern disciplinary organization of knowledge, but it is we, as his observers today, in our attempt to understand his intellectual universe through existing modern academic disciplines, who have been unable to make sense of his thought and practice and the wider embrace of his work and life[2].

This article demonstrates that, beginning with his interest in Esperanto, Miyazawa and his brand of eccentrism were in fact very much products of the culture and thought of his times. Rather than presenting Miyazawa as a unique, isolated and eclectic intellectual, this essay places him instead as a metaphoric starting point, a guidepost if you like, to observe a much larger intellectual phenomenon. By so doing, it introduces a major intellectual source of the beginnings of the Esperanto movement in Japan in the immediate post-Russo-Japanese War (1904-05) period previously hidden from history. I argue that Miyazawa's Esperantism and that of many other key figures in the Japanese Esperanto movement were both rooted in and inspired a popularly embraced concept of the world closely tied to 'anarchist science'. Early twentieth-century anarchists embraced the latest scientific findings. They actively translated

and promoted scientific writings that inspired and supported their view of the world as symbiotic, democratic and non-hierarchical from its natural origins, and in so doing, succeeded in popularizing science by framing it in a manner that still has repercussions today in popular culture. They sought to construct a scientifically oriented community, with Esperanto as the medium.

Conceived as a language of idealistic eccentrics, the meaning of Esperanto in Japanese cultural history has been largely ignored[3]. This essay attempts to view its history through the lens of 'trans-disciplinary complex systems.' Esperanto was a 'system' in the sense that it implied an interlocked conceptual universe that linked various seemingly unrelated fields. By looking at Esperanto in this way, the essay argues that Esperantism was not an isolated linguistic movement among a small number of leftist intellectuals, but part of a much larger, intellectual, cultural and social movement that reflected the particular scientific worldview of 'anarchist science.' Miyazawa was an embodiment of this phenomenon – part and parcel of this larger culture of knowledge. This essay attempts to delineate this scientific worldview and the corresponding internal logic behind the Esperanto movement in its foundational years in Japan. It may be of timely significance to note that Esperantism was a cultural phenomenon that, after all, arguably more than any other internationalism(s) of the late 19th and early 20th century, brought the question of human freedom and equality in diversity into the forefront of a popular discourse and imagination to link Japan with the wider global humanity. At the heart of Japanese interest in Esperanto and scientific discovery was the debate about the very origins of knowledge and human capacity for understanding ('culture') itself. This epistemological questioning of the origins of human knowledge lay at the crux of anarchist critiques of Eurocentric civilizational discourse and its diverse practices.

THE CENTRELESS UNIVERSE IN POST-RUSSO-JAPANESE WAR JAPAN

It is to this dust, to these infinitely tiny bodies that dash through space in all directions with giddy swiftness, that clash with one another, agglomerate, disintegrate, everywhere and always, it is to them that today astronomers look for an explanation of the origin of our solar system, the movements that animate its parts, and the harmony of their whole. Yet another step, and soon universal gravitation itself will be but the result of all the disordered and incoherent movements of these infinitely small bodies – of oscillations of atoms that manifest themselves in all possible directions. Thus the centre, the origin of force, formerly transferred from the earth to the sun, now turns out to be scattered and disseminated: it is everywhere and nowhere. With the astronomer, we perceive that solar systems are the work of infinitely small bodies; that the power which was supposed to govern the system is itself but the result of the collisions among those infinitely tiny clusters of matter, that the harmony of stellar systems is harmony only because it is an adaptation, a resultant of all these numberless movements uniting, completing, equilibrating one another [1; pp.3-4].

The year 1905, with Japan winning the Russo-Japanese War (1904-1905), is usually discussed as a turning point when Japan began to be part of the elite group of Western nation states. After winning the war, at the height of the 'yellow peril' in the West, people in Japan had an unprecedented opportunity to engage with the wider world afresh. And the 'world' was watching with great anticipation what the 'champion of the coloured people' as some African American intellectuals labelled Japan then, would bring to the world [2; pp.3-4, 2; pp.6-29.]. It is hardly a coincidence that some historians begin the history of decolonization movements from 1905 because of the perceived significance of Japan's war with Russia in the colonized world [3].

At this critical moment in the history of Japan's engagement with the world, a very different kind of cultural turning point was observed. It first made its appearance as a linguistic

movement in Japanese popular culture. *Asahi News*, a major national newspaper, reported that Esperanto was one of the top two biggest fads in Japan of the year 1906. While observed as a popular fad, this trend was also joined by some of the leading and most recognized faces in cultural, political and intellectual life in the Japan of the early twentieth century.

With the appearance of Esperantism, the end of the war simultaneously marked a scientific turn. The well-known anarchist Ōsugi Sakae emerged as an important initiator of the Esperanto movement, helping to found the Japan Esperanto Association at this time. Ōsugi's turn to Esperanto at this critical moment in history coincided with his turn to science and anarchism. Well before Miyazawa, Ōsugi paired his interest in Esperanto with a deep interest in scientific knowledge of astronomy, evolutionary biology and animal behaviour. At the very moment that Ōsugi's readings of scientific writings on biological evolution inspired him to realize he was an anarchist, Ōsugi also advocated Esperanto and opened the first school of Esperanto in Japan in 1906.

Ōsugi himself recalled the perfect coinciding of his readings of evolution with the moment of his realization that he was an anarchist immediately after the war: "As I read [the biological evolutionary writings of Oka Asajirō] I felt as if I were gradually growing taller and as if the limits in all directions were steadily expanding. The universe that I had not known until now was opening itself to my eyes with every page. [...] There is nothing at all which is not changing." [4; p.47]. This discovery was simultaneous with his discovery of the scientific bases for modern anarchist writings. Ōsugi wrote:

> Anarchists begin by explaining astronomy in the introduction. Then, they explain the plants and animals. Finally, they discuss human society. In due course, I tire of books. I raise my head and stare into space. The first things I see are the sun, moon, and stars, the movement of the clouds, the leaves of the paulownia tree, sparrows, black kites, chickens, and then, lowering my gaze, the roof of the opposite prison building. It is exactly as if I were practicing what I was just now reading. As scant as my knowledge of nature is, I am constantly embarrassed. I think, "From now on I will seriously study nature."

> The more I read and think about it, nature is for some reason logical, and logic is embodied completely in nature. Further, I must admire nature greatly, for this logic must similarly be embodied entirely in human society which has been developed by nature [4; p.48].

Ōsugi, like Miyazawa, found a direct link between human society and the centreless nature of the universe and claimed that the interdependent relationship between humans and nature, or natural and human/social science, was such that it logically followed that humans had no choice but to harmonize society with the most advanced scientific knowledge of space, matter and the natural world. This devotion to scientific knowledge selectively interpreted by anarchists to represent the future of human society, is what I call 'anarchist science.' Ōsugi believed that human subjectivity and social relations ought to reflexively mirror scientific findings about the nature and 'logic' of the physical and natural universe around and within human beings.

Ōsugi was far from alone in this respect. Kōtoku Shūsui, a leading theoretical leader of anarchism and a supporter of the use of a non-hierarchical world language like Esperanto, also urged the alignment of social and political thought with scientific discoveries about the universe. Following the Russo-Japanese War, he called for a new direction in the progress of civilization toward unity between human society and culture on the one hand and the laws of the universe on the other. The universe Kōtoku referred to was the centreless universe without beginning or end, verified by the latest scientific findings, in which all energies interact and

evolve,. After Charles Darwin, "there will be no more debate about the beginningless and endless composition of nature," Kōtoku stated in his introduction to Darwin's theory that helped popularize ideas of evolution in Japan [5]. Kōtoku embraced what University of California astronomer Mark Davis has characterized as "negative discovery," the understanding[4]:

- that Earth is *not* the centre of the Universe,
- that the Sun is *not* the centre of the Universe,
- our galaxy is *not* the centre of the Universe,
- our type of matter is *not* the dominant constituent of the Universe (dark matter predominates instead),
- our Universe (seen and unseen) is *not* the only Universe.

For Kōtoku, the centre of the universe was scattered everywhere and nowhere at the same time. Kōtoku was quick to interlink cosmological knowledge and biological discovery with the temporal and spatial order of the human world. Many enthusiastically turned to the biological and cosmological sciences in this manner after the war. In the context of wide-ranging questioning of the ideology of Western modernity following the Russo-Japanese War [6], science became the vessel through which the "true nature" of human behaviour and society could be discerned.

In this anarchist understanding of human existence in the natural world based on astronomy and the life sciences, Esperanto came to be the language of choice. Based on the principle of universality of human knowledge and understanding, it was seen as the most scientific language. Many Japanese Esperantists believed that the language was designed to promote the multiplicity of cultures interdependently coexisting and evolving. This distinguished it in important ways from the international languages of English or French, for example, that essentially belonged to one or more particular culture(s) and, given power in the context of civilization discourse of the time, expanded as a part of political, economic and cultural imperialism – "linguistic Darwinism".

The critique of linguistic Darwinism was made possible through the anarchists' critical reinterpretation of Darwinism. Wide circles of critical public intellectuals came together in the post-Russo-Japanese War era, leading Sakai Toshihiko, an Esperantist, and Yamakawa Hitoshi to found the journal *Heimin kagaku* (The people's science) in 1907. The journal expressed anarchists' interest in the question of evolution for human society and its implications for the progress of civilization. Articles in the journal included "The History of Human Development," "The Evolution of Men and Women," "Ethics of the Animal World," and "The Birth and Death of Planet Earth." Japanese anarchist Esperantists found that if the animal world was ethical, evolutionary theory could no longer be characterized as the departure of human civilization from nature, but rather as the nurture and development of what was already inherent in nature.

There was never a 'little red book' that outlined the ideology of Esperantism. Nor were there any real intellectual leader(s) to speak of in this phenomenon. Even the Japanese Esperanto Association was just one of numerous hubs of Esperanto activity scattered across Japan, and many who studied and spoke Esperanto never became members of the association. Nonetheless, those who consciously participated in Esperanto did share a pattern of thought on evolution and the interworkings of nature. For them, sociability and cooperation among beings was the key to human progress and survival. Their interpretation of science inclusive of this planned language and their future vision of the human world very often centred on anarchist views of nature whether participants acknowledged it or not.

SYMBIOSIS AND MULTIPLICITY IN NATURE

Anarchist Esperantists translated and actively studied scientific writings, from Ilya Mechnikov's studies of microorganisms to the evolutionary theory of Charles Darwin and the detailed

studies of insects' lives by the French entomologist Jean-Henri Fabre, together with discussions of the natural and physical world by Peter Kropotkin, a scholar of physical geography and geology. They succeeded in conveying their interest to the Japanese public through their translations of these writers. Indeed, anarchist Esperantists played a leading role in the popularization of the natural sciences in Japan in the early twentieth century. Ideas of nature and the natural sciences were then applied to ideas of culture in early twentieth-century Japan.

Kropotkin, Ilya Mechnikov, Darwin, and Fabre might seem odd choices for the formation of a coherent pattern of thought, given that they were at odds with one another in their views on evolution. Kropotkin's work was read as much for its insights on biological evolution as for its contribution to civilizational theory. Both Mechnikov and Kropotkin belonged to a larger Russian school critical of Darwin, and Mechnikov began his scientific career by heavily criticizing Darwin for his Malthusian view of competitive nature. Fabre in turn disagreed with Darwin on religious grounds. Fabre concluded that the perfection or genius of such tiny beings as insects could have been achieved only by divine intervention. Mechnikov, meanwhile, was a firm atheist who maintained that evolution occurs without a divine plan. The apparent incoherency of their thought easily feeds the historiographical tendency to view Japanese interest in "Western thought" as similarly contradictory and random.

Despite the differences, the translation of their ideas in Japan following the Russo-Japanese War reveals an internal logic hidden behind their presence. Anarchist-Esperantists identified in their work an idea of progress based in science that was fundamentally at odds with the Spencerian idea of progress. With the help of natural science, they removed the distinction between high and low, subverted the centrality of the state in human progress, advocated the multiplicity of ever-changing cultures, and promoted voluntary associations for an interdependent world.

Little known to historians is the fact that the popularity of Darwin in Japan derived to a significant degree from anarchist Esperantists' translations. Darwin was made famous in Japanese popular discourse in a way that overturned social Darwinist understandings of the world. Their writings on natural science negated social Darwinism while promoting a new cooperative society based on natural tendencies for mutual aid gifted by nature.

Ōsugi and other anarchist Esperantists promoted Darwin's *Origin of Species* by incorporating both competition and cooperation in the struggle for survival that they identified as part and parcel of Darwinist evolutionary theory. They popularized the *Origin of Species* and promoted Esperanto while ignoring Darwin's second work, *The Descent of Man,* which applied evolutionary theory to humans. Containing Spencerian and Malthusian discussions of race and culture which Japanese anarchists would undoubtedly have found fault with, a section of *The Descent of Man* for example conjectured that the savage or "weaker" races would eventually die out or be absorbed through contact with the "civilized races" and through interracial and intertribal competition. Darwin himself adhered to a concept that equated race with culture – a view that would become widespread at the turn of the century[5]. The natural selection of species led Darwin to conclude that races, and therefore cultures, would be naturally selected out. This would lead to the extinction of the more "savage" people, physically, culturally and linguistically [7]. It was no accident that *The Descent of Man* went untranslated and was virtually unknown by ordinary Japanese. Instead they guilelessly paired Darwin's *Origin of Species* with Kropotkin's anti-Malthusian rereading of Darwin in terms of mutual aid and symbiosis, reflecting the originality of their translation practice.

Nobel Prize winner Ilya Mechnikov, whose writings emerged suddenly in a number of prominent Japanese cultural figures' works in the post-Russo-Japanese period, is emblematic of the interest in natural science in Japan during this time[6]. Mechnikov discovered the

symbiotic functions of the natural world from within the human body itself by examining the interrelations of bacteria and other microorganisms that thrived within the body. For Japanese anarchists, the human body discovered by Mechnikov was a body functioning in mutual interaction and interdependence with its environment and as a reflection of the cosmological universe. His understanding of multiple levels of "social" relations among organisms inside and outside the human body led him to reflect in his writings on how an understanding of humans' interdependent relations with the microbiotic world within them might prolong individual lives – findings which, many decades later, would contribute to American biologist Lynn Margulis's influential discoveries of the effects of cellular level symbiosis on the evolution of life [8, 9]. Margulis' work has been described by Richard Dawkins as one of the great achievements of twentieth-century evolutionary biology. She later co-developed with James Lovelock the controversial hypothesis of our self-regulating planet, Gaia, based on her understanding of microorganisms' interactions with their inorganic surroundings. Mechnikov examined microbiotic organisms as separate entities that were incorporated into the body in a symbiotic relationship over evolutionary time. From the perspective of Japanese anarchists, then, the presence of interdependent and symbiotic relations and of a cooperatively based world discernible from the internal workings of human beings themselves at the smallest microbiotic level of organic life, negated Malthusian assumptions about the struggle for survival promoted by capitalism and social Darwinism[7].

The most notable case of anarchists' popularization of scientific writings was their introduction and translation of the entomologist Henri Fabre. In Japan, Fabre's writings remain among the most popular and most widely read works for children and adults to this day. His observations of the lowly dung beetle drew widespread attention a century ago, and the Japanese have not let go since. Japanese translators of Fabre today are aware that the Fabre craze that has outlasted the twentieth century originated with Ōsugi Sakae's vivid translation in the early 1920s. Ōsugi's translation is still considered among the best available and has recently been reprinted, despite the fact that numerous other competing translations exist in contemporary Japanese [10]. Why did such leading Esperantists as Ōsugi translate Fabre?[8]

More than those of any other biologist, including Darwin, the translations of Fabre popularized scientific investigations of the biological world. Fabre's observations of the insect world seemed to verify a democratic view of non-hierarchical nature in which each species or form of creature had its own naturally or divinely endowed virtue, its own talent, specialized knowledge and ability. Fabre's dung beetle became a heroic figure in the genre of children's stories, as Fabre's exciting and minute descriptions of this little creature began to be read in much the same way and to the same degree of popularity as Mother Goose among English-speaking children, playing a similar role in teaching about moral human behaviour and relationships. Ōsugi's successive translations of Darwin's *Origin of Species* in 1914, Kropotkin's anarchist account of evolution *Mutual Aid* in 1917, and Fabre's study of insects, *Souvenirs entomologiques* (Entomological Remembrances), in 1922 reflected his belief in anarchism as the closest social expression of scientific discovery as negative discovery [11-14].

Confident of the naturally endowed intellectual, social, and cultural capacity of 'the people,' anarchists assumed that common people were capable of assimilating science into their thought and practices. The dissemination of Fabre's writings became an ideal means to further the integration of human life with the latest scientific findings on a broad scale. The simple language and narrative style used by Fabre, who attempted to make his findings accessible to youth, made his work a perfect means for Ōsugi to promulgate the latest scientific findings to 'the people'. With its accessible language and narrative style, Ōsugi's and other anarchists' translations of Fabre's work made it become a massively popular and

integral part of children's literature in Japan. It's worth noting that Fabre was virtually unknown in France, indicating the originality of Japanese translations of his work.

Ōsugi's translated volume of little creatures embodying the progressive practices of everyday activity and playing a part in a much larger dynamic environment has captured the imagination of children in Japan in a way no other children's literature could have. Sōbunkaku, the anarchist publishing company, published Ōsugi's translation of the first volume of Fabre's *Souvenirs entomologiques*, which was widely adopted by the public as the book marking Japanese childhood and given the popular and endearing nickname "*Konchūki*" (Insect Tales). Asuke Soichi had founded Sōbunkaku, becoming an influential publisher on whom Ōsugi and many others who shared similar notions of the future relied on to publish their writings. It would be Sōbunkaku who supported the blind Esperantist Vasilii Eroshenko by publishing his works. Before founding Sōbunkaku, Asuke worked as a travelling vendor who pushed a sweet potato cart he called Ippomaya, the scientific term for sweet potato [15].

Fabre's work is considered a precursor to ethology, the science of animal and human behaviour. He wrote about the natural intelligence and functioning of insects from the perspective of the insects themselves, earning the moniker "psychologist of the world of insects." Fabre's genius lay in his telling of the details of the beetle's life, and he imbued his tales with examinations of insects' astounding knowledge, or what he called divine "intelligence." His studies captured the various trials and tribulations that the clever dung beetles undergo, working together to make a pile of animal excrement many times their own weight into a workable ball that they can roll into an appropriate hiding place for long-term shared consumption. Without the natural virtue of the lowly beetle, the farms that rely daily on the transformation of the piles of dung from cows, pigs, sheep, and other farm animals into nutrient-filled soil for regeneration into healthy grass and crops could not exist. Esperantists would find an affinity in Fabre's portrayal of the dung beetle and his observations of the unique knowledge and talent arising naturally from within each species.

The turn to anarchist science on popular grounds interacted discursively with the modern Western construct of civilizational progress. When stripped down to its most basic intellectual foundations, that construct of Western modernity may be most simply understood as a movement away from "nature" and toward "culture." Ishikawa, a promoter of Esperanto, saw this development as the frightening product of the conception of nature as the enemy of civilization and the antithesis of human culture. He proposed instead to embrace boundless nature, leading to a deep connection of the limited human life to the limitless world of nature. If there were to be any progress in his own life, Ishikawa wrote, that progress was to aim at that idea of a human civilization deeply interconnected with nature [16]. It would not be a coincidence that Ishikawa promoted the spread of Esperanto among agrarian labourers in the countryside.

From cosmology to microbiology to the insect world, it was in this centreless world depicted by science that anarchists identified Esperanto as the single most relevant language expressive of this world. The language appeared to be the most scientific, was based on the principle of the universality of human capacity to know and understand reality, and was designed to promote the multiplicity of cultures that interdependently coexist and evolve. According to this view, the division between culture and nature in Western modernity would dissolve.

Esperanto has become inseparable from ecological movements, a particular tendency in Japan that has its roots in the pairing of anarchist science and Esperantism outlined here. It is a view that persists to this day. This article's attempt to understand the ties of early twentieth-century Esperantism with a particular notion of nature and the environment in Japan helps to solve the long puzzling pattern of the strong associations of Esperanto with environmentalism, a link that no other 'international' or 'national' language ever attained in modern world history.

THE LANGUAGE REVOLUTION AND LINGUISTIC DEMOCRACY

As we have noted, Japanese promoters of Esperanto understood humans to coexist in a mutually interdependent and symbiotic world, from the micro-level of cells within the body itself to the larger society of bodies in social context and contact. This borderless symbiotic understanding was critical to their adoption and development of Esperanto as the linguistic means to embrace linguistic democracy and the multiplicity of cultures.

The introduction of Esperanto occurred as an important part of the radical language revolution within Japan in the late 19th century and beyond. This movement sought the democratization of language through the vernacularisation of written text. Many men and women in the early Meiji period (1868-1912) participated in democratizing and modernizing Japanese by unifying the written and colloquial languages, a trend that occurred in many modern societies. Esperanto can be viewed in this historical context as a natural extension of language democratization. Japanese supporters sought to bring about language equality (later conceived as language 'rights') in the international arena by introducing a language that does not belong to any culture, at a time when culture and race were synonymous and races were ordered according to a hierarchical model of civilization. Futabatei Shimei, a major figure in the language revolution, a leading novelist known most commonly as the founder of the 'first modern novel in Japan' and father of the modern Japanese language, was one of the first to introduce Esperanto to Japan. He was also a translator of Russian literature. Readers of Futabatei's literary works and translations found a new modern sense of the "social" as a historically specific problem in need of a solution. Implicit in this consciousness was the possibility and necessity of change.

Futabatei had earlier constructed a modern Japanese language from a combination of Russian-language populist literature with Edo (Tokyo) commoners' vernacular language from the late Tokugawa period. His manufacturing of a written vernacular through literary translations from Russian was integral to his endeavour to transform society and its state of mind. Nineteenth-century Russian writers strove to reflect the situation of the Russian people realistically and critically with the expectation that their literature would transform society. They often relied on vernacular language to produce the sense of realism and immediacy that they needed, creating thereby a sense of situatedness in the immediate historical present [17; pp.100-102].

Futabatei's crafting of a new Japanese language out of Russian and Japanese colloquial dialects initiated the modern vernacular language movement in late Meiji Japan. The "people" who spoke this vernacular were neither an undifferentiated national or ethnic mass nor a coherent and undifferentiated class of proletariat, of the kind described by Marx and Engels. They were differentiated ethnically, as well as by gender, culture, individual talents, and other characteristics. Cultural differences were not primordially defined; they were in a constant state of flux through adaptation and contact with others. Futabatei, like many other speakers of Esperanto, did not see the progress of civilization in the rapid disappearance of small nations or peoples via capitalism in a social Darwinian struggle for national existence. Rather, progress lay in the cultural encounters of world societies and the constant change that ensued in a million different ways.

If literature and this ever-changing vernacular language were tools to shape subjectivity and redirect society, Esperanto was a tool to help shape a new world order based on the common people as the subject and vehicle of historical progress. Futabatei's introduction of Esperanto thus may be functionally superimposed on his construction of the Japanese language. For Futabatei, both modern Japanese and Esperanto were manufactured languages that mediated between the vernacular and the international spheres while dissipating hierarchy on the social,

ethnic, racial, and international levels. In writing a dictionary of Esperanto, a language perceived to be without a culture associated with any particular territory, ethnic group, or visible community, Futabatei had given expression in his language production to a widespread sentiment about the symbiotic nature of society at large that extended beyond the confines of the Japanese nation-state.

Speaking Esperanto was conceived as a levelling practice that promoted linguistic democracy and equality. It was this understanding that propelled Nitobe and ethnologist Yanagita to promote Esperanto as common language of the League of Nations. If language was culture, then culture could be exchanged via Esperanto for mutual gain rather than exchange by force. Japanese Esperantists thought of language as an expression of a particular culture, albeit one that is always forming and reforming. Although languages may change and interact with other languages over time, they were seen as expressions of different cultures that, each in different forms and in their own ways, contribute to others and whose existence and contributions to the whole were necessary for the advancement of civilization. Cultures form and re-form, exchange and change in a spontaneous manner.

Esperantists' expectation of equitable and non-hierarchical linguistic relations reached well beyond the category of the nation state to social relations on the local, everyday level. The above-mentioned Ishikawa Sanshirō founded with other colleagues the Nōmin jichikai (Farmers' Self-governing Association) in 1925 as a society that advocated self-sufficiency and improvements in daily life and promoted self-governing farmers' councils in rural Japan[9]. Its founding declaration stated that Esperanto would be encouraged as a levelling language to disseminate knowledge and enrich and develop culture in rural areas. Those who promoted a more democratic, equal society in Japan, many of whom were anarchists and embraced anarchist science, saw Esperanto as the language of democracy and the primary linguistic tool to transform society in a democratic manner.

For supporters of this idea, democracy was best expressed as a form of sociability that valued community *and* individual freedom to the maximum by nourishing each individual's own talent. One of the best articulations of this idea may be found in Ishikawa's writings. Ishikawa articulated democracy as "*sensa banbetsu*", rendering a new term for democracy as everyday practice by defining and retranslating the English term "democracy" into new Japanese terms. He broke the word up into multilingual component parts: the Greek *demo*, which he translated to mean indigenous and rooted, that is, 'the people' linked with the soil, and *kurashi*, which means 'everyday life' in Japanese – "*demokurashī*" [18]. Ishikawa also created another neologism for democracy: *domin seikatsu* (the life of people on the soil) [19-22]. Although *domin seikatsu* stirs up images of farmers tending the soil, Ishikawa was in fact referring to the organic rootedness of all people in their individual talent or virtue given them by nature. Ishikawa believed that each individual had a will (*ishi*) or subjectivity/virtue (*jitsusei*) that was unique to that person. This will, or talent, could be realized only through hard work and repeated practice. Ishikawa called this activity of work and practice *nenriki*, which is the energy or power everyone has to begin work on and realize his or her virtue. The resulting force that is created in realizing one's virtue he called *katsudō*, or active motion in society. "Freedom" (*jiyū*) was the possibility given to each individual to discover and realize his or her personal will and virtue gifted by nature, *ishi* and *jitsusei*. This freedom was the source of human development, which he called *sensa banshu* (one thousand differences, one million kinds). This realization of the plurality of individual development, the so-called million ways of participation in the human community, was what Ishikawa meant by democracy, *domin seikatsu*. Social hierarchy was the obstacle to the realization of this concept of democracy.

Democracy here echoed with 'anarchist science' and cosmological order as negative discovery, and the symbiotic functioning of microorganisms within the human body on the

micro level. Ishikawa saw democracy as an expression of what he called the "new cosmology" defined by the centreless universe. He described the "unity in multiplicity" that would lead to independence and equality in human society. For Ishikawa, the infinity that characterized the centreless universe dictated both the absence of an absolute subject of power and the limitlessness of possibilities for human interaction and cultural invention. Anarchism was an expression of infinity in human life, in which only relativity was absolute [21; p.201, 22; p.217]. Ishikawa linked democracy with rootedness in nature and the cosmos:

> From my very foundation, I am a child of the land, and I cannot be separated from the land. I rotate with the land as the land rotates, and with the land circle around the sun. I too circle around the sun, with the energy of the solar system, so I will be inseparable from its energy. Our lives emerge on the land, we cultivate and work on the land, and we return to the land. This is democracy [*domin seikatsu*]. [...] Rotation and revolution are nature's poetry. Natural rotation provides day and night. The revolution of the land provides the seasons, spring, summer, fall and winter. [...] Democracy is the truth-good-aesthetics of human life [*shinzenbi*] [18].

For Ishikawa, Miyazawa and others who promoted democracy in the rural areas of Japan, knowledge was universally accessible and Esperanto would serve as the tool to access that knowledge from beyond the hierarchically ordered knowledge production centred on the imperial and private universities in Tokyo, reaching out to other languages and sources of knowledge. Echoed by Miyazawa's later practices in Iwate, Ishikawa's Nōmin Jichikai promoted the expansion of universities, libraries, and research centres in rural areas as a means for common people to self-manage learning and the exchange of knowledge, thereby enabling local communities to become the locus rather than the periphery of cultural development. This scientific community was intended to help dissolve the dichotomies and hierarchical ordering of city vs. country, modern vs. traditional, development vs. stagnation created by notions of 'development'.

Allowing for the expression of nature itself, Esperanto would be a tool to develop connections to the wider world and facilitate the direct acquisition of knowledge and culture without mediation by the urban centres that monopolized political, cultural and social power. *Tanemaku hito*, or *The Sower*, an influential literary and cultural journal founded in 1921 in a northern rural village in Akita Prefecture, expressed and was itself an expression, of such ideas. It had the Esperantist subtitle *la Semanto,* and published contributions by well-known Esperantists and supporters of Esperanto like Eroshenko, Akita Ujaku and Arishima Takeo.

The ethnographer Yanagita Kunio, widely known for his studies of folklore and rural culture, also studied and understood Esperanto with a similar conceptual consciousness. He served on the Mandate Committee of the League of Nations in 1921-1923, where he sought to attain the League's recognition of Esperanto as an international language. Historians have described Yanagita as a cultural nationalist because of his interest in Japanese folklore. Yet behind this apparent cultural nationalism was Yanagita's linguistic and cultural democracy. Expressing the Esperantist ideal in Japan that culture belongs to everyone, Yanagita promoted not just Japanese culture in the League of Nations, but the right of all cultures and languages to coexist and thrive through Esperanto without disappearing under the rubric of 'civilizational progress' as defined by the West. Yanagita was unique in promoting non-assimilationist policies for the indigenous peoples of the former German colonies following World War I [23].

It was hardly a coincidence, then, that one of the leading and most recognized ethnographers in post-war Japan, Umesao Tadao, one of the founders and the first director general of the National Museum of Ethnology in Osaka, was also an enthusiastic speaker of Esperanto.

Umesao's teacher and mentor was in turn the internationally recognized primatologist Imanishi Kinji. It may be difficult to understand the intellectual ties between the primatologist Imanishi and his advisee Umesao. In fact, they shared a basic understanding of the integral relationship between culture and nature. Imanishi was very much a part of popular discourse on anarchist science. He closely studied the anarchist writings of Kropotkin on mutual aid to develop an understanding of culture in the animal world. His own research was a part of anarchist science[10].

ESPERANTO AS MATHEMATICS

Futabatei Shimei, who wrote the first Japanese introduction to Esperanto and an initial attempt at an Esperanto-Japanese dictionary, was confident about the human capacity to learn Esperanto because he understood its grammar as scientific, and thus universally understandable to anyone anywhere. Introducing Esperanto in his dictionary, he wrote that it was easy for *anyone* to study and learn: Esperanto was a very simple and strictly rule-based language, theoretically devoid of culture and grounded in 'anarchist science'. Futabatei claimed confidently that one could master the basic rules of the language in only a few days of study, for the language necessitated only a grammatical pursuit, not mastery of another culture. The book was advertised as introducing a scientific language that functioned much like a simple mathematical formula [25]. The use of this mathematical metaphor in the first Esperanto text in Japan placed Esperanto beyond hierarchical boundaries, setting the tone for how the language would be understood by future students and speakers. Esperantists understood that the capacity to absorb Esperanto was already present within the learner, rather than constituting external knowledge that someone needed to teach. Thus, to learn the language, the brain had to be stimulated to use what was naturally given from the start: it had to be nourished from within, rather than treated as a blank slate to be inscribed from without.

They believed that human brains were imprinted with that innate 'programme' from inception, comparable with the universal ability to understand mathematics. These notions of language and language acquisition found echoes in what the widely recognized American linguist and anarchist Noam Chomsky would call 'universal grammar' more than a half century later. Chomsky argued that the human brain contains the basic cognitive structures needed to learn any language: an inborn universal grammar. This inborn universal structure common to all human beings similarly allows mathematics and logic to be universally understood rather than being culturally relative. Chomsky believes that these structures within the brain are a reflection and an evolutionary product of the naturally arising geometrical, mathematical and physical patterns that surround us in the real world [25].

Such an understanding of Esperanto and the capacity to learn language reversed the notion at the time that the modern languages of European civilizations, or Japanese language in the Japanese Empire, were superior languages to be taught to the inferior as part of the progress of civilization. Yet how could Esperanto be considered an 'international' language in Japan? After all, it had the structure and grammar of European languages and would have looked like just another European language to many in East Asia, whose languages were not at all reflected in the structure and grammar of Esperanto. The creator of Esperanto, L.L. Zamenhof, had composed the language by taking elements from a number of Slavic, Romance and Germanic languages. In fact, if Esperanto had been seen as merely a European language like English and French, there would have been a fundamental incoherence between the universalistic idea of the language and the meanings assigned to Esperanto in early twentieth-century Japan. Far from being reduced to another language of Europe, the language was seen as a universally and equally understandable code for everyone – a *scientific* notion of language and of the universal natural ability to use and comprehend it. Once one acquired

the 'grammar' of the linguistic code, like mathematics, it could belong to anyone. The universality of Esperanto lay not so much in how many languages were integrated into this one language, but how much it reflected `mathematical` reasoning without the constrictions of human cultural geography.

CHILDHOOD AS THE SITE OF KNOWLEDGE

Why were so many Japanese Esperantists like Miyazawa intent on producing children's literature and songs, and why did they become interested in children's educational issues in the 1910s and 1920s? Moreover, why was children's literature linked in writers' minds with scientific discovery? Ōsugi Sakae, translator of Fabre's accounts of insect lives; Yamada Kōsaku, who wrote some of the best known children's songs of today and cofounded the Japanese Esperanto Society with Ōsugi; Eroshenko, the well-known writer of children's literature and the embodiment of youth; Akita Ujaku, another respected children's writer; Arishima Takeo, whose children's stories are still told today, and anarchist publisher Asuke who published Esperanto stories and children's literature – and finally Miyazawa, the most popular children's literature writer – were all Esperantists or strong supporters of the linguistic trend of Esperantism. How are we to understand the merging of Esperantism and the deep-seated interest in science with the devotion to children's education and literary production?

Childhood became a highly contested concept because it was in the child that notions of the relationship of nature to culture were manifested, thereby forming the basis for critiques of cultural nationalism and the nation state. The Japanese Esperantists believed that virtue and talent arose naturally in children as something to be nourished. They opposed the view of children as blank slates needing to be taught to become virtuous and devoted citizens of the nation state. Developing the citizen who would best contribute to the spontaneously arising transnational relations understood by Esperantists necessitated a free, democratic society that nourished a spontaneous virtue arising naturally and internally. It was this free, spontaneously acting individual – not the nation state – who was to be the core subject of 'international society.' With this understanding, the development of children's education became integral to the Esperantist agenda.

Participants in the Free Education Movement (*Jiyū kyōiku undō*) contemporary to Miyazawa, for example, saw childhood as a critical site of cultural progress. The movement left an important mark on the history of popular education and ideas of childhood. In Japanese, the word for "education" (*kyōiku*) is composed of two characters, 'to teach' (*kyō*), and 'to nourish' (*iku*). State intellectuals like Inoue Tetsujirō, who taught ethics at Tokyo Imperial University, advocated the teaching of national morals. Inoue believed that by implementing a nationwide educational policy to teach what was "good" and "bad" in accordance with national ideology, people's everyday conduct could be governed. The Free Education Movement reversed this understanding of education from an emphasis on *kyō*, teaching the individual how to be a member of *kokumin*, the imperial national subject, to an emphasis on *iku*, nurturing and nourishing a person's unique and naturally endowed talents and his/her spontaneous contributions to society. By shifting the emphasis to *iku*, education could maximize the nourishment of individuals and its progressive effects for the larger community. The moral community moved from the nation state to a borderless, nationless, amorphous 'people'. This echoed the idea of Esperanto as a language that could be learned by anyone, an idea that was embedded in the widespread practice of self-study of Esperanto in Japan. Indeed, the language was never taught in universities, but rather through self-study textbooks and radio shows, and occasionally privately organized classes and tutoring sessions.

If the Free Education Movement sought to nourish the child's natural abilities, talents and will to learn, the Children's Literature Movement saw the child as the source of knowledge

and enlightenment for adults. The best representative of this notion was the blind Russian youth Eroshenko, an Esperantist, who was a celebrity in Japan. While other Esperantists and supporters of Esperanto also wrote children's literature as part of this movement, Eroshenko not only wrote children's literature, but himself embodied the idea of the child as the source of enlightenment and knowledge for the adult.

The new Children's Literature Movement overturned the existing practice of writing stories for children that imposed adult activities like fighting wars and conquering foreign lands on child characters. The pioneering children's literature magazine *Akai tori* (The red bird), founded in 1918, played a major role in upending the prevailing culture of writing for children. *Akai tori* published children's stories written and illustrated by famous anarchists like Arishima, Akita, Ogawa Mimei, Takehisa Yumeji and the massively popular songwriter Kitahara Hakushū, a number of whom either spoke Esperanto or were at the forefront of supporting its ideals and its dissemination. These figures shared a practice of writing stories and songs for adults that, in the words of Kitahara, were written in the language of children and reflected their minds. By knowing the world as a child knows the world, adult minds could be opened to the original, innately possessed knowledge of virtue derived from nature. The Esperantist future was invested in childhood, from which adults could study and learn.

Kitahara Hakushū, probably the most famous writer of children's songs in Japan to date, believed that children in particular were able to grasp the true essence of things; he sought to draw out humans' innately creative potential through children's songs. He described the capacity to see and experience the world through a child's vision not only as essential to writing authentic children's songs but also as the source of creativity in adults. Echoing this sentiment in 1921, the Esperantist Akita Ujaku stated that although he had written his stories for children, they were also for adults who had a childlike nature within themselves. Beginning in 1919, Akita intensively produced children's stories, a number of which appeared in *Akai tori*. Harada Mitsuo, who was a part of this network with close ties to Arishima, Eroshenko, and others, founded the popular children's magazine *Kodomo no kagaku* (Children's Science) in 1924, a magazine that exemplified this merging of 'children' and science.

Eroshenko also began to write children's stories in this context, just as the popularity of children's literature among Japanese Esperantists came to the fore. Using predominantly children, animals, and the blind as the heroes of his stories, he echoed this current of juvenile literary production. Eroshenko seemed to give perfect expression to the peripheral spaces of children's and animals' worlds that were described in his literature in such a way that they preceded the psychological distinction of any and all borders, including the cultural distinction between East and West, subject and object, seeing and non-seeing, old and young, citizen and foreigner.

Echoing the larger children's literature movement, Eroshenko's children's literature was written for adults, albeit from the perspective of children and animals. These children's stories were widely promoted and financed by figures like Arishima and Akita and were published by Asuke's anarchist publishing company Sōbunkaku. Leaving an unmistakable if rare primary source for historians, the popularly read stories reflected and promoted ideas of childhood circulating in Japan at the time.

Eroshenko's attempt to portray the world from a child's point of view would seem to be a philosophical impossibility. Nonetheless, for many Japanese, the blind youth himself embodied the perceptiveness and natural virtues of childhood. The 1923 drama *Chiisaki gisei* (A small sacrifice), published in *Josei* (Woman), featured a blind boy who was remarkably similar to Eroshenko as the embodiment of innocence, a victim of the "adult's world." Artistic and creative, the blind young man listens to the nature that surrounds him and creates

a new world in his mind. It was no coincidence that Eroshenko was long portrayed and remembered in Japan as a blind youth who never seemed to age.

Eroshenko's embodiment of the anarchist-Esperantist imagination of childhood as blind to hierarchies of nation, class, ethnicity, and race had already helped make him very popular in Japan. Thousands of people at a time came to listen to him speak, sometimes in Esperanto, sometimes about the world vision of Esperantism, but always in a poetic manner. They wanted to catch sight of the man who was physically unable to see distinctions of race, ethnicity or nationality. Eroshenko often sang Russian folk songs, recited his own poetry, and drew his lectures from his many children's stories. One of his first speaking engagements was a lecture given in the Esperanto language. The talk was hosted by Ōsugi [26].

The Esperantist and liberal intellectual Hasegawa Nyozekan echoed the widespread belief that Eroshenko was free of hierarchical ideologies of race, ethnicity and nation:

> Eroshenko must be happy that he is blind. Whereas the poet who sees cannot not see the color or the form of man or object, the blind poet cannot see anything other than the man or object itself. Whereas the religious believer who sees cannot not see the color or the form of God, the blind believer does not see anything but God Himself [27].

MIYAZAWA AS PRODUCER OF ESPERANTIST CULTURE

Once anarchist science redefined nature, the concept of culture was turned upside down. Beginning with the Esperanto movement for a language without culture at the turn of the century, a number of distinctive cultural movements and intellectual developments followed one another to constitute the multifaceted conceptual turns in culture based on the anarchist idea of nature. Once science understood nature as functioning symbiotically, from the tiniest microorganisms studied by Mechnikov to the insects of Fabre's entomological remembrances, the turn-of-the-century concept of culture as race that was hierarchically ordered became unsustainable.

The Esperantist concept of culture was still modern in the sense that it stressed culture's irreplaceable role in human progress. However, "culture" was no longer limited to a select handful of Japanese elites who had attained civilised "enlightenment" in a rational, Christian, and Westernized self. Nor did it refer to the familiar hierarchisation of race as culture. 'Common people' became the subject and object of progress in this discourse. They thereby became the carriers of "culture" – not as natives in possession of an authentic and timeless national culture, but as those possessing the capacity to re-create and alter their surroundings in a cooperative manner for the mutual improvement of their lives. The dualism between the concepts of culture and nature that fed the idea of progress had disappeared. "Culture" was now the varied, creative expressions of each individual's virtue derived from nature. Thus, anarchist science inverted both the modern Western notion of civilization and the ideological foundations of the Japanese imperial state. The language of this revolutionary concept of culture was Esperanto.

Such varied cultural expressions as the children's literature movement, agrarian populist culture, and the People's Arts movement, developed in tune with the concepts of multiplicity, democracy, mutual aid, and symbiosis in nature. Though they lacked a conductor to harmonize them, the various cultural expressions nonetheless appeared as if they had been orchestrated. Anarchist-Esperantists overturned the meaning of culture and the cultured to meet the demands of symbiotic nature, producing shifts from high culture to popular, state to non-state, institutional to non-institutional, and sociolinguistic Darwinism to multiplicity and diversity of cultural development. Esperanto was the manifestation of this worldview and its new understanding of culture and the cultured.

Miyazawa Kenji arrived relatively late on the scene in the development of the discourse of anarchist science and the overturning of culture. His cultural practices were an accumulation and manifestation of the broader developments in anarchist science and culture that preceded them. Miyazawa was dedicated to the study and teaching of chemistry and other sciences. He taught chemistry, soil science and crop production at the county agricultural and forest school Gunritsu Hienuki Nōgakko, and continued to develop his understanding of the relations between the molecular world, geological history and human culture as an inseparable part of his literary career. Indeed, his literary career was an expression of his dedication to the natural sciences. Satō Sōnosuke, a contemporary who reviewed Miyazawa's work in 1924, wrote that he "made poetry out of geology, botany, mineralogy and meteorology" [28; p.166]. As literary scholar Gregory Golly describes it, Miyazawa's works embodied "the simple notion that organisms, entities and processes can and do exist independently of human knowledge and perception … in a narrative that asks us to consider what it means to occupy a world that has experienced (and continues to experience) its own history beyond reference to human subjectivity, but which is nonetheless profoundly connected to humanity" [28; pp.166-167]. In other words, Golly writes, he allowed the intransitive world to speak. Not content to keep understanding and knowledge of this world to himself, Miyazawa founded a group called the Rasu Chijin Kyōkai (Rasu Association of People of the Planet Earth) that sought to develop 'farmers' art' and "create a new beauty" that recognized the unity of "our own intuition" with the "proofs of modern science and the experiments of the truth-seekers" [28; p.169]. Thus, he sought to materialize and reflect natural and physical science in human art that was itself a product of intuition, a talent given by nature to anyone regardless of class, race, nationality, or gender. He linked the reality of the world of the farmer to the larger cosmos: "to live justly and strongly means to be aware within ourselves of the Milky Way Galaxy, to respond to that awareness." Echoing the anarchist belief that social relations ought to reflect an awareness of our existence as physical components of the universe, Miyazawa reminded his readers that "We are, to begin with, all shining atoms scattered through space" [28; p.169].

Miyazawa's writings practices and literature were solidly situated within a broader anarchist discourse of science and the resulting conception of culture. While local affairs and the nation state appeared to consume elites, public intellectuals and many of Japan's best-known historical figures, it was this spirit of boundlessness and interconnectedness that led Miyazawa to promote Esperanto. His practice of teaching Esperanto to farmers and educating them in the latest findings of astronomy, geology, biology, chemistry and agricultural science was part of a broader understanding of scientific knowledge as universally accessible and attainable, and of language, specifically Esperanto, as the tool to access, share and disseminate this knowledge.

At the height of the interest in children's literature and after his graduation from school, Miyazawa travelled to Tokyo to write children's literature. Returning to Hanamaki, he studied Esperanto and taught the language to local farmers, dedicating himself to the development of agrarian education, promoted artistic expression and scientific study among local farmers, and integrating the latest findings in biological evolution, physics, chemistry and astronomy into his children's writing in the 1920s and early 1930s. He conceived of farmers' art as a creative expression and a natural extension of their everyday life and labour. In turn, he called this art "the grand fourth dimension of art." Art was to be a "concrete manifestation of a cosmic spirit that interpenetrates Earth, Man, and Individuality" [29]. In the words of anarchist science, art was to manifest the unification of human social life with the cosmological laws of the universe. Accordingly, the local farmers of the Rasu Association organized by Miyazawa studied Esperanto along with agricultural science, cosmology, physics, biology, music, and art.

Ordinary Japanese have soundly embraced Miyazawa in the popular culture of the twentieth century. Today, the writer is memorialized in the Miyazawa Kenji Museum of Hanamaki. Reflecting his national 'hero' status, things 'Miyazawa' have become the local industry in Hanamaki. A constant flow of visitors comes to his hometown to pay homage to the long deceased writer. Their pilgrimage reflects a new kind of tourism that seeks not to look at the preserved past, a past that no longer exists, but to experience and absorb an alternative vision for the future that is very relevant for the present.

The village of Hanamaki promotes a sense of connection between the rural Iwate of the 1920s and 30s to which Miyazawa belonged, and the vision of the future that he imagined. The village's numerous museums and exhibitions on Miyazawa's life and works seek to transport the adult back to the child's world of exploration and the first-hand discovery of the real natural and physical world. Visitors to the various spatial recreations of Miyazawa's fantasy stories and visions in the parks and museums of Hanamaki are challenged by the town's local/cosmopolitan self-representation, which questions such bifurcations in modern history as 'cosmopolitan vs. vernacular', 'modern vs. traditional', and 'nature vs. culture' by asserting cosmopolitan transnationalism and, indeed, trans-Earthism, in the agrarian countryside. Thus the community embodies and represents Miyazawa and the Esperantism of an earlier era in the history of Japan.

REMARKS

[1] "Īhatōbu Hanamaki", http://www.kanko-hanamaki.ne.jp/en, accessed on October 28, 2014.

[2] Gregory Golly's chapters on Miyazawa in [28] offer persuasive insights into the literary writer, albeit as a singular intellectual in Iwate. I have little to add to Golly's wonderful elaboration of the place of science in Miyazawa's literature; rather my claim is that he was fully a part of a much larger trend introduced here in this article.

[3] For recent exceptions to this trend, see [29, 30]. See also the pioneering look at this topic in English [31].

[4] Davis is quoted in [32].

[5] For an account of the concept of culture as race, see [33].

[6] Yanagi Soetsu, a representative of the Shirakaba school and later the leader of the Mingei arts movement, echoed this trend in [34], in which he devotes the second half of the book to Mechnikov. Decades later, Ishikawa Sanshirō reviewed the significance of Mechnikov's scientific thinking for anarchism in [35].

[7] On the anti-Malthusian metaphor in Russian evolutionary thought, see [36].

[8] Ishikawa's translation of Fabre is in [16].

[9] On the Nomin jichikai, thanks go to Nadine Willems at the University of Oxford Faculty of History, whose Ph.D. Thesis focuses on Ishikawa.

[10] For a discussion of the influence of the science of Imanishi on contemporary primatology, see [37].

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HOW MANY PEOPLE SPEAK ESPERANTO?
OR: ESPERANTO ON THE WEB

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ABSTRACT

We suggest an updated estimate of the number of Esperanto speakers worldwide, based on the number of people in Facebook who indicate that they speak the language. A simple calculation accompanied by reasonable refinements leads to a number of approximately two million Esperanto users within the internet community alone, probably significantly more worldwide.

KEY WORDS

CLASSIFICATION

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INTRODUCTION

The internet revolution has had a huge impact on Esperanto, the international language created in 1887 by Dr. L.L. Zamenhof. A single event that perhaps best represents this revolution is the addition (in April 2012) of Esperanto to the exclusive club of languages in Google Translate. Other significant events are long-term processes such as the dramatic growth of the Esperanto community in social networks and the ongoing development of the Esperanto Wikipedia. In this article we present, perhaps for the first time, a scientifically controllable method to assess the number of Esperanto-speakers worldwide. Our method uses the number of Esperanto-speaking users of the social networks, in particular Facebook. We state the major assumptions and limitations of this method, compare the figures to those of registered users of web-based Esperanto courses, and finally check its validity by using it to estimate the numbers of speakers of several other languages, which, unlike Esperanto, do have an established census.

ANALYSIS AND RESULTS

Over the years, estimates of the number of Esperanto speakers have varied greatly, from a modest 100 000 up to 16 million. These estimates were based on membership statistics and on sales data of Esperanto textbooks [1]. The only way to determine accurately the number of people who speak Esperanto would be to conduct a world-wide census, which has never been done. The most comprehensive survey was performed by Sidney S. Culbert of the University of Washington, Seattle, USA. He conducted interviews in dozens of countries around the world and tested for "professional proficiency". Based on this survey, he estimated that Esperanto has about two million speakers worldwide.

In recent years, the Esperanto web-community has been growing rapidly. The internet has also provided us with more accurate tools to estimate the size of the Esperanto community. In lectures on Esperanto [2-4] we list several parameters to assess the strength of Esperanto in the Web: the number of hits on "Esperanto" in search engines such as Google, the appearance of Esperanto in social networks and learning platforms, and the growth of the Esperanto Wikipedia. The number of hits of the word "Esperanto" on Google often surprises unprepared listeners. The number of hits in 2014 approached 50 million, and it has been even higher (above 80 million hits) earlier (these changes probably depend on how Google counts hits).

In 2013 we published [5] a new method to estimate the number of Esperanto speakers in the world, based on social network statistics. The number of Facebook users indicating that they speak Esperanto is 320,000 (at the end of 2014). The current figure can be checked at the Facebook's Esperanto site [6]. This number is of the order of the number of users in Lernu.net [7], the most popular online learning platform for Esperanto: in 2013 Lernu.net reported 150 000 registered users [8] and between 150 000 and 200 000 monthly visitors.

In 2011 Facebook stated it had approximately 750 million registered users [9]. The current figure probably approaches one billion, but this number is likely to overestimate the number of real users, because it includes inactive accounts or deceased people. Thus a reasonable estimate might be that about 10 % of the world population uses Facebook. Combining this figure with the number of "Esperanto speakers" on Facebook, one could by simple extrapolation estimate that the number of Esperanto speakers throughout the world is 1-2 million (if 10 % of the world population uses Facebook, one has to multiply the Facebook number (e.g. 300 000) ten times to find the number of Esperanto speakers worldwide).

Of course, for a serious analysis one must consider additional factors, such as the fact that the number of people claiming to know Esperanto is probably higher than that of those who

speak it well (similarly only a fraction of the people registered in a language course end up as speakers of the language). However, this has also been the case in the past, when calculations of Esperanto speakers based on membership in Esperanto organizations did not take into account the fact that many members of such organizations might not speak Esperanto, even though, for various reasons, they had joined those organizations.

On the other hand, a large part (probably most) of Facebook users who do speak Esperanto do not indicate this in their accounts; so the true number of Esperanto speakers on Facebook may be bigger than the official one. A third refinement that must be taken into account is that the Facebook proportion may presumably be safely extrapolated only to that part of the world population which uses the Internet. The percentage of Esperanto-speakers in the population who do not use the Internet may be lower, since such people would have less resources to learn and use Esperanto, such as online courses and Esperanto websites. The percentage of the world population which uses the Internet was approximately 40 % by the end of 2013 [10], that is 2,8 billion people.

Let us assume that only half of the Facebook claims of competence in Esperanto are reliable, but on the other hand only a third of the Esperanto speakers who are using Facebook are aware of the option to indicate in their Facebook profile that they know Esperanto and have actually done so. With these numbers it is straightforward to calculate[1] that the number of people who speak Esperanto among those who use the Internet is approximately 2 million [11], and in the whole world's population it is probably significantly larger.

The most serious criticism of such an estimate is, as mentioned above, that supposedly not all people who indicate that they speak Esperanto are really Esperanto speakers – though they probably do have some knowledge of Esperanto. One way to assess the credibility of the number of Facebook users who claim to speak Esperanto is to test similar data for other languages; in other words, to attempt this method in order to find out how many people speak other languages than Esperanto, which do have established statistics. If the results obtained for those languages make sense, then the result for Esperanto is probably valid as well. For example, for French the Facebook number is 42 million out of an estimated number of 190 million speakers worldwide, while for German it is 23 million out of some 200 million. As a representative of small languages we may consider Hebrew; here the Facebook number is 1,3 million, about 15 % of the number of estimated speakers in the world (9 million). From these data it seems that the number of speakers of any language on Facebook is about 10-20 % of the actual worldwide number of speakers. Hence 300 000 Esperanto speakers in Facebook out of 2-3 million Esperanto speakers worldwide is consistent with the percentage appropriate for other languages.

However, taking a very different case – the fictitious Klingon language (a constructed language spoken by the fictional Klingons in the Star Trek universe) gives a number of 250 000 Facebook users who claim they speak it. This figure could probably be associated with the numbers of Star-Trek fans rather than with *speakers* of the Klingon language.

Finally, these data should be taken with a grain of salt, given the Facebook disclaimer on all language-pages: "This Page is automatically generated based on what Facebook users are interested in, and not affiliated with or endorsed by anyone associated with the topic."

SUMMARY

In summary, the Esperanto web community is probably much larger than some conservative estimates of Esperanto speakers, based on membership statistics, and agree with the most comprehensive survey attempted by "traditional" methods. The internet, and particularly

social networks, provide for the first time in history, a reliable method to assess the number of people who speak Esperanto or have some knowledge of it.

REMARK

[1]The calculation is as follows: $320\,000 \times 10 \times \dfrac{1}{2} \times 3 \times (40\,\%) = 1\,920\,000$

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ESPERANTO (S)EN PERSPEKTIVO? CROATIAN ESPERANTISTS ON THE INTERNATIONAL AUXILIARY LANGUAGE ESPERANTO

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ABSTRACT

To our knowledge, there is to date no significant number of sociological studies dealing with the Esperanto movement, and there are even fewer sociolinguistic explorations of the whole Esperanto phenomenon. Concentrating on the Croatian Esperanto movement, we conducted an extensive study of Croatian Esperantists' attitudes towards the structure of Esperanto, and their perception of the Esperanto movement and the overall Esperanto phenomenon – aspects still conspicuously missing in recent Esperantological research. This study offers invaluable insight into these under-researched interlinguistic areas, and also into the specific outlook of the traditional Croatian Esperanto movement.

KEY WORDS

CLASSIFICATION

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INTRODUCTION

More than 125 years have passed since Dr Ludwig Zamenhof 'crossed the Rubicon' and published the first grammar of Esperanto. 'Doktoro Esperanto,' as he signed himself anonymously when his long developed project was finally published in Warsaw on July 26, 1887, proposed to offer a cure for the treatment of international misunderstanding that had been a tangible problem since the Tower of Babel's confusion of tongues. However, as is widely known, Dr Zamenhof's invention ultimately did not succeed in bridging the international communication chasm and solving the perennial problem of *confusio linguarum.* It encountered various problems through the years: repeated proposals for the reform of certain language features; relatively slow growth of its language community; suppression, persecution and execution of Esperantists by Hitler, Stalin, and others; bans and a lack of support from governments and international bodies; faded interest in the language beginning in the second half of the twentieth century, and persistent criticism by language experts and non-language experts alike.

Although Zamenhof's expectations have not come to fruition, Esperanto still remains the sole eligible candidate for a neutral medium of international communication, and the only one which has managed to develop a significant worldwide language community. This community has kept the language alive, keeping it in contention as a neutral means of global communication at some point in the future, for the likes of which there has been no precedent in human history. Let us explore the actual position of Esperanto in today's world.

In the EU framework, even though the position of the English language seems entrenched for the time being, the shift from linguistic monopoly to 'oligopoly' seems to be achievable only through a neutral supralanguage. The most likely candidate for such a function is the international auxiliary language Esperanto, a constructed language which serves both as a bridge to other nations and as a retaining wall against an English-only scenario. Although many would dispute this function, according to Phillipson's [1] preface to the Esperanto edition of his well-known monograph *English-only Europe?*, 'Esperanto is a reality, not simply a utopian idea. It also symbolises idealism, passion for languages, and the principle of language equality that animates the activity of Esperantists. [...] Esperanto is in itself a challenge to English-only thinking' (translation by K. Puškar). In Brozović's [2; p.80] words, 'Esperanto seeks to become an *international* language, that is, the second language of every human being in all international relations, official and private, eliminating the rivalry between the so-called major and global languages for that function, and their forcing themselves on "little" languages. Put differently, it also seeks, in our view, the preservation of all ethnic languages, many of which are disappearing from the language stage on a daily basis' (author's italics and quotation marks) (translation by K. Puškar).

As is clear from previous text, Esperanto, unlike many other languages, plays a significant role in raising our consciousness about linguistic diversity and the deleterious effect on linguistic diversity of language mastodons such as English. In the Esperanto community there is a well-known saying: 'In your town or city speak the local language, in your country speak your national language, and in the world speak Esperanto.' In other words, the idea of Esperanto is to become an addition, not a substitute, that is, not to seek to replace natural languages, but to serve as their supplement to ensure neutral international communication. However, not everybody is confident that Esperanto would not replace natural languages once it approached a global role[1]. In Archibugi's [3; pp.544-545] view, Esperanto seems to be a useful instrument for pointing at language asymmetry, but not for correcting it: 'I do not advocate the use of Esperanto, but rather the idea that it is the responsibility of individuals and governments to remove the language barriers that obstruct communication.'

Apart from awareness of linguistic equality and inequality, there is, according to Fettes [4], a range of effects that Esperanto and its idea actually promote: 'Such experiences can transform students' perception of the world through the awakening of awareness and interest in other cultures, and lead to a reassessment of their own linguistic heritage together with the social practices and power relations in which it is enmeshed.' However, even though it has many positive traits, it is difficult to see the role that Esperanto might play in the world's linguistic future. According to Fettes [5], with the rise of the idea of linguistic equality, it seems quite possible that Esperanto will find a wider role. But, according to Blanke (in an interview with Ščukanec [6; pp.15-16]), that is actually difficult to foresee[2].

At any rate, in Moskovsky's (2009) view, 'Esperanto seems to hold a somewhat unique position among other artificial languages in terms of its popularity and number of users. It is also probably the only existing artificial language which in some (admittedly rare) cases was acquired as a first language' [8; p.1]. Indeed, among approximately 2 000 000 (unofficial) L2 speakers of Esperanto, there seem to be roughly 200-2000 (unofficial) native L1 speakers of Esperanto comprising the rich Esperanto community. It is important to note that no other constructed language, even in its heyday, has claimed as many adherents as Esperanto.

Also, as some studies have shown, Esperanto is a good and useful introduction to the study of other (natural) languages. In particular, Esperanto has been demonstrated to have propaedeutic value. According to research directed by Helmar Frank at the Institute of Pedagogic Cybernetics of the University of Paderborn, Germany, a knowledge of Esperanto makes the learning of other languages easier and helps develop logical thinking in children[3]. Other research suggests that one is able to express oneself more easily and more unambiguously in Esperanto than in other languages, proving in turn that Esperanto might be a better bridge language than natural languages.

Also, it is often claimed that Esperanto actually frees its speakers from the language handicap and language anxiety that in effect leave many speakers of natural languages tongue-tied. According to its proponents, Esperanto, because of its flexibility, gives its speakers the feeling that they are in fact speaking their own, and not a foreign, language. According to Pool and Fettes [9; p.2], '[a]n invented language (not necessarily Esperanto itself), designed as a global auxiliary language in which fluency can be achieved at low cost, might make the world interlingual. If it became customary to use such a language for all translingual communication, the burden of linguistic accommodation would be both small and equal for all. If the language retained its auxiliary status, bilingualism would become a near-universal condition.'

However, when finally officially accepted in the EU[4] because of its positive educational value, Esperanto would need a new educational infrastructure. According to François Grin [10], an economist commissioned by the French Government, if Europe adopted Esperanto, it would actually save 25 billion euros (US$ 28 billion) per year. Here it is clear that the market value of Esperanto has to be considerably increased if it is to be chosen by educational authorities for educational purposes.

Some studies of Esperanto address scepticism about the language on the part of non-Esperantists. One such case is ethnicist prejudice against Esperanto because of its simplicity. Such views equate it with Orwell's fictional creation, *Newspeak,* whose goal was to simplify and constrain thought processes. Esperanto is also criticised as a bastardised and hotchpotch tongue – imperfect in many aspects. Even though there is no sound basis to support such claims, emotional charge whenever a constructed language is mentioned seems unavoidable. In our opinion, this excessive criticism is not so much connected with irrational fears or underlying anxiety among non-Esperantists, as Piron [11, 12] exhaustively suggested, but with significant knowledge deficits concerning the idea and structure of Esperanto. Also,

psychological reactions to constructed languages seem to be particularly acute, because such languages are imagined to be completely flawless – in opposition to natural languages which are not. For some, it would seem that the search for a constructed language has always been a search for a perfect language.

In addition to widespread rejection of Esperanto by non-Esperantists, a fierce rivalry continues among major national languages, precluding the possibility that any one language might be unanimously chosen to become the official global language. For Esperanto to gain wide acceptance and the slightest chance to stay in the race for an international means of communication, it must overcome its century-long complex of linguistic inferiority. This can only be achieved by experienced Esperanto speakers, who often play a key role in how the language itself is perceived by others and how it is actually disseminated. Only by publicly emphasising its positive traits, in comparison to other languages, and the rich culture that it has developed in almost every country, can Esperanto aspire to be considered a serious candidate for an official international language. This study deals with Esperantists' perceptions of the Esperanto phenomenon; such perceptions play a vital role also in how non-Esperantists perceive it.

WHAT IS AN ESPERANTIST?

Before dealing with the study, we must first define an Esperantist. If we take a look at the meaning the term had approximately 100 years ago, we find that it tended to denote any active Esperanto speaker who was at the same time a member of a local or national Esperanto association or any international Esperanto organisation. Today, in a rapidly changing Esperanto movement worldwide, the term Esperantist only presupposes an active Esperanto speaker and supporter, whereas membership in an Esperanto organisation is no longer a necessity. Younger Esperantists join the Esperanto movement mostly by way of the Internet, particularly through language-learning websites (such as *lernu.net*), social networks (e.g. *Facebook* or *ipernity*) or any other means of digital contact. They express no strong need to belong to a conventional organisation. Because of the influence of the electronic media on Esperanto and the Esperanto movement, they may also have no need of a teacher or a formal language-learning context since they primarily teach themselves, making the known model of the membership-based Esperanto community increasingly obsolete. Therefore, since our study primarily deals with a specific population mainly belonging to the old model of the Esperanto community, it does not take into account attitudes of other Esperanto speakers and supporters, which would be interesting to compare with those of members of the traditional movement.

A STUDY OF ATTITUDES AND OPINIONS ON A NEUTRAL INTERNATIONAL LANGUAGE AMONG CROATIAN ESPERANTISTS

AIM

The aim of our research was to analyse the language attitudes of present members of the Croatian Esperanto-League (KEL, *Kroata Esperanto-Ligo*) towards Esperanto. The League has to this day maintained a stable and sizable language community numbering around 500 members. Since to our knowledge the Esperanto community has not been the focus of many studies [13, 14], we wanted to investigate unresearched aspects of this community. Such a study, we felt, might reveal insights into the issues facing the most widely used constructed language and its community, through the eyes of KEL members[5].

The research looked into the attitudes of present KEL members, Esperanto course attendees, and active and less-active Esperantists. Its goal was to determine who Croatian Esperantists

are; to explore common criticisms of Esperanto's structure as viewed by Croatian Esperantists; to gain an insight into the Esperanto movement; and to acquaint ourselves with the overall Esperanto phenomenon in an EU and world context. We looked at numbers in the aggregate: had our sample been bigger, we might have been able to distinguish attitudinal differences within the group[6].

METHOD

Participants

The sample comprised 108 randomly selected Esperantists living in Croatia. To be precise, 54 female and 54 male Esperantists voluntarily participated in the study, which was mostly carried out in the summer of 2010. Demographic characteristics of the sample are presented in Table 1.

On close inspection one can see that the sample was balanced in some characteristics. For instance, concerning gender, the study included an equal number (54) of female and male respondents. However, in terms of age, male respondents were slightly older (53,04 years) than female respondents (45,52 years). The average age is high (49,28 years) – which clearly demonstrates the social context of today's traditional Croatian Esperanto movement. Another important characteristic of Croatian Esperantists is their place of residence; according to the data obtained, Esperanto seems to be accessible only to people living in cities (55,14 %) and towns (40,19 %). There are virtually no Esperanto clubs founded in villages or smaller locations.

As far as participants' education is concerned, a significant share of Croatian Esperantists turned out to be highly educated, either having a university education or being on track to complete it (57,41 %). Here, one can only speculate on the reasons why people with less education are not more highly represented.

To set out the social context of the Croatian Esperanto movement clearly, it is of prime importance also to demonstrate it in linguistic terms – see Table 2. According to the study, Esperantists seem to be acquainted with 2,82 FLs besides Esperanto. Although it would be an exaggeration to call them polyglots, it is certain that they are very knowledgeable about other languages – female (3,28 %) more than male participants (2,37 %). However, on the basis of self-assessment, only 61,10 % of Croatian Esperantists claim advanced Esperanto language skills, slightly higher than advanced English language skills – 50,55 %.

In general, only 44,44 % of participants seem to be satisfied with their language skills, including their skills in Esperanto. Also, only 41,66 % of participants expressed a possibility of learning another FL. It is debatable if this is somehow connected with their self-perceived talent for learning FLs, which is notably low; only 38,83 % of participants consider that they have a talent for learning FLs.

Table 1. Demographic characteristics of the sample ($N = 108$).

Variable		N	Percentage, %
Gender	female	54	50
	male	54	50
Age	female	54	45,52
	male	53	53,04
	total	107	49,28
Place of residence	village	5	4,67
	town	43	40,19
	city	59	55,14

Table 2. Language characteristics of the Croatian Esperanto movement.

Variable		*N*	Percentage, %
FLs learned (without Esperanto)	female	177	3,28
	male	128	2,37
	sum	305	2,82
Advanced self-assessment of Esperanto language skills	female	33	30,55
	male	33	30,55
	sum	66	61,10
English language skills	female	48	81,48
	male	43	79,63
	sum	91	84,26
Advanced self-assessment of English language skills	female	29	60,42
	male	17	39,53
	sum	46	50,55
Satisfaction with their language skills	female	33	30,55
	male	15	13,89
	sum	48	44,44
Intention of learning other languages	female	26	24,07
	male	19	17,59
	sum	45	41,66
Talent for learning language/s[9]	female	25	46,29
	male	15	30,61
	sum	40	38,83

Questionnaire

Our instrument for eliciting data was a questionnaire consisting of four parts. In the first part, the participants were asked to provide basic biodata (age, gender, education, vocation, place of birth, place of residence, etc.). In the next part the participants were asked to provide a list of all FLs they had learnt, to supply information on the number of years of experience with the FLs, and to self-assess their competence in these FLs. Also, in the same section the participants were asked if they were satisfied with the acquired competence in those languages, if they had any intentions of learning other FLs, and if they felt they were talented for learning languages in general.

The following part contained a 33-item questionnaire accompanied by a 3-solution (YES, NO, and MAYBE) self-report scale of agreement which the participants were supposed to answer. The items were designed to provide an insight into participants' attitudes to the Esperanto phenomenon, serving very much as an opinion poll. Of 33 items, ten were related to the structure of Esperanto, six were reflective of the Esperanto movement, and the rest (15 in number) dealt with the overall Esperanto phenomenon.

The fourth and last part of the questionnaire elicited information on the definition of an Esperantist, on positive as well as negative sides of Esperanto, and on Esperantists' opinion of the success of Esperanto as a universal language and as a language of the EU.

Participants filled in the questionnaire either in presence of the interviewer or independently at home. The questionnaire completed at home was sent to the interviewer by email. From the latter it is difficult to find out how long it actually took for participants to complete the questionnaire. However, the filling-in in the interviewer's presence lasted approximately 20 minutes.

We should also note oral and written remarks related to the questionnaire itself. Most such remarks dealt with the 33-item questionnaire and the fact that it provided only three options

(YES, NO, and MAYBE). According to some participants, more options should have been offered, especially an option allowing the participant not to answer the question. Even though such a claim sounds justifiable, the options were devised in such a manner as to allow participants to decide either positively or negatively or to express their uncertainty with the MAYBE option.

Participants' reactions were mixed. Some participants expressed surprise at some questions, mainly mistaking the statements dealing with criticism of Esperanto as expressing the views of the researchers. Other participants expressed great satisfaction with the study because it addressed significant issues in the Esperanto movement.

RESULTS AND DISCUSSION

This section outlines the results of the study. We begin with demographics, moving on to linguistic issues, the Esperanto movement, and Esperantists' perception of both language and movement.

DEMOGRAPHICS OF THE ESPERANTO MOVEMENT

Our first hypothesis (H1), out of 40, claiming that *the Croatian Esperanto movement is primarily composed of older adherents* was significantly corroborated. Based on our individual observations, we assumed that because of the relative lack of popularity of Esperanto today, there are ever fewer (newer) Esperantists. According to the data obtained, the average age of Esperantists is 49,28 years, which is significantly high. One has to ask whether this is an indication of a moribund movement and community of speakers or the continuation of a trend. Research is needed to establish what attracted these Esperantists to start learning the language. Note also our caveat ("What is an Esperantist?") above, which suggests that the population of this study is not necessarily typical of Esperanto speakers as a whole.

In line with this hypothesis is our second hypothesis, (H2) *the Croatian Esperanto movement is primarily composed of highly educated people*. The relatively senior social structure of the movement consists to a great extent of people with a university degree (57,41 %). It can therefore be expected that people with such an education level would come across Esperanto in cities (55,14 %) and towns (40,19 %), where universities are chiefly to be found, which only confirms our next hypothesis (H3) that *the place of residence is connected with an Esperantist's knowledge of Esperanto*.

The study shows that Croatian Esperantists do not seem to be acquainted only with one FL – Esperanto. According to the data gathered, they are on average acquainted with 2,82 FLs besides Esperanto – which significantly corroborates our fourth hypothesis claiming that (H4) *Croatian Esperantists are multilingual*. Although 84,26 % of participants are also conversant with English, advanced self-assessment of their language skills is somewhat greater in Esperanto (61,10 %) than in English (50,55 %), which only to an extent confirms our next hypothesis that (H5) *Croatian Esperantists have greater self-assessment in Esperanto than in English*. Future studies should definitely compare the two languages, English and Esperanto, and determine with which participants feel themselves more at home and why.

STRUCTURE OF ESPERANTO

The study provided valuable insight into opinions on Esperanto's structure – see Table 3. Among Croatian Esperantists, the language is primarily perceived as inherently European (YES: 43,81 %; MAYBE: 28,57 %), which is probably due to the fact that Esperanto chiefly consists of an ʿinternationalʾ vocabulary, and which therefore significantly corroborates our hypothesis that (H6) *Croatian Esperantists perceive Esperanto as Eurocentric*. Since it is

largely connected with Europe and European languages, which are predominantly spoken by our participants, the study also indicates the belief that (H7) *Esperanto's vocabulary is easy to acquire* – 80 % of participants claiming as much. However, our next hypothesis, (H8) claiming that *there are too many neologisms and unnecessary synonyms in Esperanto*, was not confirmed, 76,19 % of participants disagreed. This can be interpreted in two ways: a) our participants have not been exposed to various registers of Esperanto at all, where they would most likely encounter neologisms, or b) the alleged profusion of neologisms and unnecessary synonyms has generally been overblown by Esperanto critics and, for that reason, it has not been noticed by Croatian Esperantists. Also, one can conclude that Croatian Esperanto speakers are quite aware of the language's 'imperfections,' but they, as an experienced language community, tend to accept them.

However, according to participants, there has not been sufficient Slavic influence on Esperanto (YES: 47,12 %; MAYBE: 27,88 %), due, no doubt, to Esperanto's predominantly Romance lexicon. This opinion only corroborates our next hypothesis (H9) claiming that *Esperanto's lexicon does not have a significant Slavic share*. However, regardless of the strong Romance influence, the study's next hypothesis, (H10) *Esperanto is equally euphonious as Italian and Spanish*, was supported by only 59,05 % of participants.

According to 74,53 % of participants, (H11) *Esperanto is not particularly simple*. Participants seem to be aware that Esperanto does not consist of a mere 16 rules, as some believe. Also, according to 88,79 % of participants, (H12) *Esperanto is not perceived as too artificial*, which clearly shows that Esperantists are very cognizant of the fact that there are interventions in standard languages, making them artificial as well, but it also shows that, having become used to the language, speakers do not consider it unnatural anymore. Furthermore, despite the popular view, (H13) *Esperanto is not a sexist language* according to 87,5 % of our participants – and despite morphological elements that might be so construed. In our view, future studies should investigate male and female views regarding gender discrimination in the linguistic structures of Esperanto.

As expected, the study also demonstrates the belief that (H14) *Esperanto has a simple grammatical structure* (YES: 95,33 %), and that therefore (H15) *Esperanto is a completely logical language* (YES: 75,24 %). As stated above, attitudes of beginners and more fluent speakers of Esperanto could be researched and compared in a future case study looking into the language's structure and the way it is perceived.

Table 3. Esperantists' attitudes towards the structure of Esperanto.

Item	Answer, %		
	YES	**NO**	**MAYBE**
1. Esperanto is in every respect a Eurocentric language.	43,81	27,62	28,57
5. Esperanto is too simple.	9,43	74,53	16,06
8. Esperanto is too artificial.	4,67	88,79	6,54
15. Esperanto's lexicon has a significant Slavic share.	47,12	25,00	27,88
18. The vocabulary of Esperanto is easy to acquire.	80,00	4,76	15,24
19. Esperanto is a sexist language.	2,88	87,50	9,62
21. Esperanto is as melodious as Italian or Spanish.	59,05	19,05	21,90
31. Esperanto has a simple grammatical structure.	95,33	1,87	2,80
32. There are too many neologisms and unnecessary synonyms in Esperanto.	2,86	76,19	20,95
33. Esperanto is a completely logical language.	75,24	10,48	14,28

THE ESPERANTO MOVEMENT

The study provides valuable information on views of the Esperanto movement – see Table 4. According to 72,64 % of participants, (H16) *Esperanto has not died as a movement*; that is, it is still considerably vital. However, our next hypothesis (H17), claiming that *there are ever fewer Esperanto meetings and congresses*, produced mixed results: 50 % of participants stated the opposite and 31,13 % were not quite sure of our hypothesis. Since our study relied heavily on answers from beginners, who had not had an opportunity to experience Esperanto meetings and congresses, as well as advanced Esperantists, who had, it is not surprising that mixed results were obtained.

According to 94,39 % of participants, (H18) *Esperanto is not sufficiently disseminated*. None claimed the opposite: after all Esperanto has still not achieved global success. However, our next hypothesis claiming that (H19) *Esperanto has experienced ghettoisation* was negated by 54,72 % of participants and 25,47 % were not certain.

Unhappiness with the spread of Esperanto was confirmed in the following hypotheses. In particular, our next hypothesis claiming that (H20) *the Esperanto movement does not have a sufficient number of Esperantists teaching the language* was confirmed by 76,19 % of our participants. Although this situation varies from one national Esperanto movement to another, the Croatian Esperanto movement has few teachers of Esperanto at its disposal. It is clear that if the movement is to grow, it needs sufficient properly trained Esperanto teachers to do so. Our next hypothesis, that (H21) *Esperanto does not have a significant number of native speakers,* was supported by 64,08 % of our participants. Though they are not a decisive factor in the language community, native speakers do demonstrate Esperanto's continuity and history and the richness of a given national movement.

The next hypothesis, claiming that (H22) *even some experienced Esperantists have problems with the acquisition of Esperanto,* left us in doubt, with 50,94 % of participants disagreeing, and 30,19 % of them uncertain. It is widely believed that there are many so-called *eternaj komencantoj* (Esp. for *eternal beginners* or 'perpetual learners') in the movement, who make little progress in learning the language, but less clarity on why this should be so. Is it connected with the lack of advanced Esperanto teachers, a limited number of accessible Esperanto meetings and congresses, absence of the desire for near-perfect language skills, or something else? There is a need for research here.

Table 4. Esperantists' attitudes towards the movement.

Item	Answer, %		
	YES	**NO**	**MAYBE**
16. Esperanto has become ghettoised, that is, made accessible only to a limited number of people who are regarded as a sect.	19,81	54,72	25,47
17. Even some experienced Esperantists have a problem with the acquisition of Esperanto.	18,87	50,94	30,19
20. Esperanto has a significant number of native speakers.	9,71	64,08	26,21
24. Esperanto is sufficiently disseminated.	0,00	94,39	5,61
25. There is a sufficient number of people who teach Esperanto.	4,76	76,19	19,05
28. There is an original culture of Esperanto.	73,08	8,65	18,27
29. There are fewer and fewer Esperanto meetings and congresses.	18,87	50,00	31,13
30. Esperanto has virtually died as a movement.	4,72	72,64	22,64

Finally, the last hypothesis dealing with the Esperanto movement, maintaining that (H23) *there is an original culture of Esperanto* was confirmed by 73,08 % of our participants. Future research on the Esperanto community should investigate Esperantists' activities in the movement, that is, their contribution to the Esperanto community, as well as their perceived reasons for such activity.

PERCEPTION OF THE ESPERANTO PHENOMENON

The study also offers important insight into the overall Esperanto phenomenon – see Table 5. According to 76,85 % of participants, (H24) *everyone can become a successful speaker of Esperanto*, but only 60,75 % of participants (MAYBE: 33,64 %) (H25) believe that *Esperanto is the easiest language to acquire*, which clearly points to participants' uncertainty regarding the perceived simplicity of Esperanto. Does this mean that in some participants' opinion there are actually easier languages than Esperanto or (more likely) that certain aspects of Esperanto are not as easy as sometimes claimed?

Some 54,21 % of participants (MAYBE: 42,05 %) do not think that (H26) *Esperanto is too difficult for non-Europeans*. Even though Esperanto is often criticised for its complicated structure, of a kind unfamiliar to non-Europeans, it is obvious that our participants are uncertain regarding this question. A possible reason is that they have not met many Esperanto-speaking non-Europeans. Also, our participants do not seem to be certain (YES: 42,99 %; NO: 40,19 %) about our next hypothesis, that (H27) *the learning of Esperanto implies being well versed in linguistics to a certain extent*. Unfortunately this was a confusing question for many and should have been worded differently: we were in fact hypothesizing that one must be conversant with basic grammatical concepts in one's mother tongue in order to acquire Esperanto successfully.

As expected, according to 70,75 % of participants, (H28) *Esperanto experiences changes on the same way as natural languages do*, and, in a similar vein, according to 62,26 % of participants, (H29) *Esperanto is not much different from natural languages*.

However, according to 80,37 % of participants, (H30) *the fact that Esperanto is a non-national language is an advantage*. Connectedness with a given nation would negate Esperanto's claim to be an international and neutral language. As expected, according to 94,39 % of participants, (H31) *Esperanto is not actually redundant even though English is predominant today*, but (H32) *Esperanto is not perceived as relevant at an international level* – according to 41,35 %. Though Esperanto may not be playing a key role internationally at present, it is useful nevertheless. Our next hypothesis was given significant support, with 95,37 % claiming that (H33) *Esperanto is too little represented in the media*. Although Esperantists generally strive to make the language and the facts about it as public as possible, it still remains vastly underreported.

In contrast to popular belief, according to 76,41 % of participants, (H34) *Esperanto will not accelerate the process of extinction of various languages and dialects*. While English is perceived as an imperial and 'killer' language, our participants do not think Esperanto could be seen this way. What is more, according to 59,81 % of participants, (H35) *Esperanto can connect all nations equally*, that is, according to 74,04 % of participants, (H36) *one can establish communication with Esperantists from other countries to an equal extent*.

The study also touched on various general issues relating to the Esperanto phenomenon. One of the issues concerned our hypothesis that (H37) *an Esperantist is a person connected with the Esperanto movement*. Answers to the question *Who would be an Esperantist according to your definition?* show that participants believe that an Esperantist is mainly a person who is either a member of the movement directly or who supports the movement indirectly, that is, who

Table 5. Esperantists' perception of the Esperanto phenomenon.

Item	Answer, %		
	YES	NO	MAYBE
2. Everyone can become a successful speaker of Esperanto.	76,85	10,19	12,96
3. Esperanto is relevant at an international level.	27,88	41,35	30,77
4. If Esperanto emerged on the world scene, it could accelerate the death of languages and dialects.	10,38	76,41	13,21
6. The fact that Esperanto is a non-national language is an advantage.	80,37	6,54	13,08
9. Esperanto can connect all nations equally.	59,81	18,69	21,50
10. Esperanto is the easiest language to acquire.	60,75	5,61	33,64
11. Esperanto is actually redundant since English is today the language that enables communication in the whole world.	0,94	94,39	4,67
12. The learning of Esperanto implies being well versed in linguistics to a certain extent.	42,99	40,19	16,82
13. Esperanto is too little represented in the media.	95,37	1,85	2,78
14. Esperanto changes linguistically in the same way as natural languages.	70,75	7,55	21,70
23. Esperanto is too difficult for non-Europeans.	3,74	54,21	42.05
26. Esperanto is not much different from natural languages.	62,26	17,93	19,81
27. One can establish equal communication with Esperantists from other countries.	74,04	10,58	15,38

supports the movement's ideology. In short, according to our study, one does not have to participate in the Esperanto movement in order to support the principles behind it. As can be seen from the plethora of various answers, there are many other conceptions to the issue of an Esperantist:

- **Who would be an Esperantist according to your definition?**

> **AN ESPERANTO SPEAKER**[10] **(22):** *As it was defined in Boulogne-sur-Mer* [at the first international congress of Esperantists in 1905], *everybody who speaks Esperanto.*[11] (52, m)

> **AN ESPERANTO SPEAKER + IDEOLOGY (18):** *A person who speaks Esperanto fluently as their mother tongue and who lives for the idea of a universal world language.* (19, m)

> **AN ESPERANTO SPEAKER + THE MOVEMENT (17):** *Even though, according to Zamenhof's definition, an Esperantist is everybody who uses Esperanto, history has shown that an Esperantist is considered anyone who is in any way connected with the Esperanto movement.* (44, m)

> **AN ESPERANTO SPEAKER AND USER (11):** *Everybody who uses Esperanto.* (67, m)

> **A COSMOPOLITAN (7):** *Every person who is not nationally limited and only thinks about the origin of his nation. Only that person who appreciates all peoples can be a good Esperantist.* (70, m)

> **OTHER (6):** *An enthusiast, slightly strange for the outside world, a cosmopolitan, an idealist, interested in the sense of language.* (26, m)

AN ESPERANTO SPEAKER + (LANGUAGE) EQUALITY (4): *A person who hopes that all people in the world will one day be equal when communicating.* (55, f)

A LANGUAGE FREAK (4): *Everybody who wants to learn languages and know something new.* (47, m)

AN ESPERANTO SPEAKER + MULTICULTURALISM (2): *An Esperantist is above all a person who in their communication uses Esperanto, but also a person with a propensity to establish contacts with people from other milieus and at the same time be sensitive to the issue of intercultural dialogue.* (46, m)

AN ESPERANTO SPEAKER - THE MOVEMENT AND IDEOLOGY: *An Esperantist is in my opinion a person who speaks Esperanto. I don't agree that Esperantists should necessarily support the ideas and 'fight' for the movement.* (21, f)

AN ESPERANTO SPEAKER +/- IDEOLOGY: *An Esperantist is an Esperanto speaker regardless of whether he believes in the ideas connected with Esperanto or not.* (33, f)

The study also tried to find out what attracted people to start learning Esperanto. The language itself and the point of view afforded by a neutral language scored highest in participants' answers.

- **What attracted you the most to start learning the language?**

    A NEUTRAL LANGUAGE (21): *That it is everybody's and nobody's language.* (75, f)

    THE LANGUAGE ITSELF (17): *The simplicity, the lack of exceptions, euphony, a regular orthography.* (78, m)

    NO LANGUAGE BARRIERS (10): *A wish to directly communicate with those who do not speak Croatian, but are our close neighbours – the Hungarians, Austrians, Italians –, and a wish not to spend the rest of my life learning all foreign languages.* (57, f)

    CONTACT WITH OTHER PEOPLE (8): *The possibility of correspondence with members of different peoples, travelling to foreign countries through Esperanto, communication with foreigners in Esperanto.* (44, m)

    ESPERANTISTS (8): *I think that it was not the language, but the people who wanted to teach me. I liked their cohesion and devotion.* (27, f)

    A COSMOPOLITAN OUTLOOK (5): *Because it is above all nations.* (54, f)

    MULTICULTURALISM (4): *The idea and possibility of hanging out with people from other countries and cultures.* (44, f)

    (LINGUISTIC) CURIOSITY (4): *I was attracted by curiosity about it; I like it because it is simple and because it is spoken throughout the world.* (19, f)

    TRAVELS (4): *The possibility of travelling and getting to know various cultures.* (29, f)

    THE LANGUAGE ITSELF + THE IDEA (3): *The simplicity of the language and the idea of Esperanto.* (39, m)

ARTIFICIALITY (3): *It is strange and interesting because it is 'artificial'.* (19, m)

A NATIVE TONGUE (2): *My parents are Esperantists.* (22, m)

(LANGUAGE) DEMOCRACY (2): *Equality and friendship, all speakers on an equal footing.* (61, f)

THE HISTORY OF THE LANGUAGE: *Its history.* (22, f)

The study also tried to find out which aspects of the Esperanto phenomenon the Esperanto community considered positive and which negative. The fact that the language has a simple and logical structure enabling rapid acquisition, as well as its neutral outlook, rose to prominence as positive sides of Esperanto – see Table 6. However, there were many other positive sides participants pointed out in the research.

- **Which positive sides of Esperanto have you perceived that other languages do not have?**

All in all, the study showed that participants saw more positive than negative traits in the Esperanto phenomenon, corroborating our hypothesis that (H38) *Esperanto has more positive than negative sides*. Much of the criticism dealt with the structure of the language, as can be seen in the answers in Table 6.

- **Have you perceived some negative sides of Esperanto in general?**

NO (40)

YES – AS A LANGUAGE (INTERNALLY)[12] **(20):** *A majority of the vocabulary is based on Indo-European languages, so I suppose that to speakers of other language areas it [Esperanto] is not as close. Also, because of its logic and simplicity, a part of language diversity has been 'sacrificed,' because many words are created by the addition of prefixes and suffixes to a word of an opposite meaning.* (22, f)

Rigidity, a lack of euphony, chauvinism, a belief in its own logic. (26, m)

Copying of ethnic languages in a negative sense, that is, it abounds in synonyms and homonyms, which is good for poetry, but not for reality. (72, m)

YES – AS A MOVEMENT (8): *Occasional aggressiveness while defending their stance.* (21, f)

Fanatics in the Esperanto movement, love affairs between people living on two different continents, broken hearts. (22, f)

A mistake by the ingenious 'creator' of Esperanto that he pushed the internal idea of Esperanto alongside the language. (77, m)

People who deal with Esperanto are inadequate to give Esperanto the strength needed to achieve its goal. (39, m)

Inertia in the organisation, too many partisan organisations, no major umbrella association. (63, f)

Unconscious ghettoisation. (39, m)

Rushing to the UN; too many people of the same type (poets). (46, m)

The idea of Esperanto is transferred too slowly to others. (24, m)

YES – AS A LANGUAGE (EXTERNALLY) (7): *The fact that people are not even acquainted with it, and do not know concretely what it is.* (43, f)

Table 6. Positive sides of Esperanto according to the questionnaire.

Positive sides	Answers (*N*)
Simple(r) grammar	36
Fast acquisition	29
Neutrality	22
Creative word formation	18
Simplicity	18
Logic	10
International vocabulary	8
No exceptions	5
A phonetic language	5
Making contacts	4
Precision	3
Universality	3
Companionship	3
Interlocutors – esperantists	2
Low prices of courses and textbooks	2
Tolerance of other people and languages	2
Euphony	2
A rich culture	1
Mediation of literary works	1
Spontaneity of speakers	1
Words easy to remember	1
A movement with a noble cause	1
A secret language	1
A rich culture	1
A fast integration in the language community	1
Travelling possibilities	1
A compact language community	1
Cosmopolitanism	1
Possibilities for disabled persons	1
Useful in studying other languages	1
Economy	1
No bad sides	1
Esperanto meetings	1
Openness	1
Openness to neologisms	1
It is the same as other languages	1
The idea	1
A positive idea (non-colonialist)	1
Communication on an equal footing	1
Educated speakers	1
A grammar with more possibilities	1

The only negative side of Esperanto is the prejudice that it is not usable because it is artificial, which I consider nonsense. To me, every language I have learned is artificial. I'll moan, beg, express sudden joy always and only in my mother tongue. (67, f)

YES – AS A LANGUAGE AND MOVEMENT (EXTERNALLY) (5): *No understanding from non-Esperantists.* (40, m)

People sometimes react strangely when they find out that my occupation is Esperanto. (43, f)

People who don't know what Esperanto is see it mainly as unnecessary, and its learning and usage as snobbery. (27, f)

That it is labelled as marginal, sectarian, weird, ideal and unreal. (49, f)

NOT YET (5): *No, not yet.* (19, m)

NO – AS A LANGUAGE; YES – AS A MOVEMENT (3): *I have not encountered negative sides of Esperanto as a language, but as a movement Esperanto occasionally tends to be inward-turning and sectarian.* (47, m)

There are people who propagate Esperanto in a wrong way and thus ghettoise it, that is, make it unattractive to people who are not part of that world. (35, f)

OTHER (2): *Because of little practice Esperantists often stay at the basic level.* (47, f)

YES – AS A LANGUAGE; YES – AS A MOVEMENT: *The needed supplementary terminology (neologisms, language of the professions) is being introduced too slowly, because the Academy [of Esperanto] does not react in an appropriate way. Esperantists have a sectarian attitude about the role of other languages in globalisation.* (56, m)

NO – AS A LANGUAGE: *Even though I'm a woman, I am not affected by the fact that female gender is created by adding the suffix -in. To me, this easily recognisable word of female gender is much easier than it is in many languages with some other word.* (57, f)

In sum, concerning the language, the following negative features were identified: artificiality, rigidity, lack of euphony, chauvinism, a belief in its own logic, too many synonyms and homonyms. Concerning the movement, a considerable number of negative features were identified: too many people of the same type; unprofessional, fanatical and aggressive members; sectarianism and ghettoisation; inertia in the organisation; too many partisan (as opposed to non-partisan) organizations and no major umbrella association as a reason for the idea of Esperanto not being transferred faster; the fact that non-Esperantists are often not acquainted with Esperanto at all or are highly prejudiced about it, often considering it artificial, marginal, sectarian, snobbish, weird, ideal, unnecessary and unreal etc.

The study also set out to find out how the language community perceived the language's success. The data suggest that Esperantists' opinion about the present state of the language is one of dissatisfaction – which also confirms our next hypothesis, that (H39) *Esperanto has failed to become a universal language*.

- **Has the original idea of Esperanto to become a universal language succeeded?**

  NO (41): *No. It has become a language of the community of Esperantists and it therefore has a potential to become a language of the European Union.* (65, m)

> *No, because Esperanto doesn't have adequate international influence for the politics of Esperanto to succeed.* (21, m)

> *Unfortunately, I think it hasn't. We are witnesses that the English language is becoming dominant.* (65, f)

> *No, English has become universal just as Latin was in the Middle Ages. If 'Historia est magistra vitae,' I hope that English will one day become a dead language!* (58, f)

> **NOT YET (18):** *Maybe for some future time.* (73, f)

> *No, it has become the language of a small language community, but its application on the Internet is giving it a new chance.* (86, m)

> *No, but there are those working to make it succeed. Esperantists have never said something like 'we will work on Esperanto for 20 or 100 years, and if it doesn't succeed, we will undo everything and forget it.'* (48, m)

> **NOT COMPLETELY (17):** *Not completely, but everyday life shows that success could be achieved.* (21, f)

> *In a way it has already succeeded because it is possible to use it 'universally,' but, viewed by the number of speakers, no.* (24, f)

> *It depends on what we mean. The language has succeeded; the goals of the movement haven't.* (52, m)

> **YES (11):** *Yes, regardless of the fact that it has a small number of speakers.* (74, m)

> *Yes, because it was accepted by the United Nations as an international language.* (24, m)

> *Esperanto has become an international language, but its breakthrough is prevented by the unnatural intrusion of the English language.* (89, m)

> *Perhaps not in a numerical sense as it was planned, but in every country you can find a group of Esperantists. To me the effort was successful.* (27, f)

The participants' explanations for Esperanto not having become a universal language are, as we can see, most often the dominance of English and the inadequate international influence of Esperanto, that is, its unachieved goals. However, Esperantists are glad that it has become a language of the community of Esperantists and are quite positive about its future.

Our last hypothesis dealt with the question of whether Esperanto might become the only official language in the EU. According to our participants, it has been largely confirmed that (H40) *Esperanto should substitute for all official EU languages*.

- **Should Esperanto substitute for all official languages in the EU? Would it be successful in this task? Why?**

> **YES (40):** *Yes, everybody would acquire it equally, everybody would be on an equal footing, and national languages would be preserved.* (61, f)

> *Yes, Esperanto should become an official language of the EU. Translation expenses would be reduced, as well as domination of strong European countries.* (70, f)

> **ONLY AS A SUBSIDIARY LANGUAGE (21):** *It should not replace them, but be used as the bridge language or a subsidiary language.* (52, m)

It would certainly be useful if it were one of the official languages, in that way no other language would be preferred. (55, f)

YES, BUT... (14): *I think that Esperanto could replace all official EU languages successfully, but it should not do this if there is insufficient interest from people – from the EU citizens.* (24, f)

It would be successful, but given the fact that it has no state behind it, no political lobbies, no economic standing, it is difficult to believe that such a thing could happen. (22, f)

I think it would be a good move for the EU, not necessarily for Esperanto. (21, f)

NO (12): *No. The EU's slogan is 'United in diversity' and that should not be changed.* (34, f)

No, because the imposition of a language is not a good way to learn it or widely use it in public. Perhaps the time for language unity has not come yet; Esperanto is still developing. (27, f)

Esperanto should not be an official language of the EU, because the EU is a monarchist and imperialist system and the language would become Eurocentric. (24, f)

If there were no prejudices, vested interests and long-settled habits in the international community, Esperanto would be successful. As things are, it can't be. (49, f)

IT SHOULD, BUT... (4): *It should, but there are problems (England and France have stronger lobbyists), and the EU has no interest in reducing expenses through Esperanto, because more languages mean greater possibilities for manipulation and less transparency.* (39, m)

NOT YET (3): *Not yet, because there are still no competent cadres for such an undertaking.* (65, m)

Participants feel that, if Esperanto is to be substituted for the current official languages, there must be more interest in the language; currently it has no (economic) support, and, according to some, it is not yet ready and is still evolving. Some are sceptical about such a role, given that the EU's motto is 'United in diversity'; they fear that nation states would not accept it, because it would be imposed from outside. According to some, if there were no prejudices and vested interests, Esperanto would be perfect, but, as it is, Esperanto is not right for the EU, because the EU is focussed on only one region of the world and is imperialist at heart. According to others, it could serve only as a co-official language.

CONCLUSION

The main aim of this research was to provide insight into attitudes to Esperanto among the rapidly changing Croatian Esperanto community. The research also dealt with the outlook of the Croatian Esperanto community: it showed that Croatian Esperantists are mainly highly educated people who became acquainted with Esperanto primarily in towns and cities, and that their average age is relatively high (49,28 years). However, since this was a survey of a particular Esperanto demographic, largely connected to the old membership-based model of the Esperanto movement, it cannot be claimed that Esperantists are growing older *in the aggregate*. Many younger Esperantists are likely to have adapted to the new organizational model, the electronic one, which does not demand official membership of any association,

either national or international. This is something which one often loses sight of. For that reason, future studies should also do research on active Esperantists on the Internet whose average age is probably lower and who were largely outside the scope of our study.

In order to get an insight into Esperantists' attitudes to Esperanto, we laid out a series of hypotheses that the researched population was asked to either support or reject. In other words, this survey served very much as an Esperantist opinion poll, reinforcing many of our hypotheses. Concerning the structure of Esperanto, Croatian Esperanto speakers feel themselves more at home with Esperanto than with English, they regard Esperanto as a linguistically Eurocentric language (with an insufficient Slavic element) that is accordingly relatively easy for them to acquire, but, contrary to our expectations, they do not perceive it as having too many neologisms and unnecessary synonyms. It is not seen as a sexist language or too artificial, despite widespread criticism on these points.

Our participants believe that the speech community has managed to create its own original culture, with an adequate number of Esperanto meetings and congresses. Croatian Esperantists feel that they do not have a sufficient number of teachers of Esperanto, and that even some experienced Esperantists have problems with the complete acquisition of Esperanto. Nonetheless, the perspective of a neutral language with a simple and logical structure that makes the acquisition of knowledge possible was among the most positively regarded aspects of the Esperanto phenomenon.

Croatian Esperantists participating in our study believe that anyone can become a successful speaker of Esperanto, but they are uncertain whether prior linguistic training is needed. For them, the fact that Esperanto is a non-national language is an advantage: Esperanto cannot be regarded as redundant even if English is predominant today. Esperanto, they feel, is often not seen as relevant at the international level, in part because it is too little represented in the media. Furthermore, contrary to popular belief, Esperanto is not a threat to the diversity of languages and dialects.

Finally, the Esperantists in the study were not optimistic about the prospects for the international success of the language, though a considerable number of Esperantists think that Esperanto could serve as a substitute for the official EU languages in the work of the EU or become a co-official language.

REMARKS

[1]Here we use the term 'natural languages' in order to differentiate those languages from constructed languages such as Esperanto. In some instances we also use the term 'national languages' when we only want to refer to official national standard languages. However, by using the term 'natural languages' we mean both official and unofficial languages.

[2]Brozović [14; pp.16-17] also does not seem to be very certain about the future of Esperanto, as in his well-known statement: 'Therefore Esperanto will not become the second language of every human being because it is a just and rational solution of high quality; humanity does not do anything for these reasons, but it always tries to solve problems easily and painlessly, without facing unpleasant truths, by some detour or shortcut, with as little effort, costs and risks as possible. It is only when all that has fallen through that one approaches the real solution. Esperanto will win when in the 21st century there is no other solution. And until then – the meaning of the Esperanto movement is to ensure that *lingvo internacia*, the language of Zamenhof, lives, makes progress, takes root and develops, so that the decisive moment does not catch it unprepared' (italics by D. Brozović, translation by K. Puškar).

[3]Some would, however, take the propaedeutic advantage of Esperanto as a double-edged sword. In particular, it can be maintained that if Esperanto is learnt as the first foreign

language (FL1), children (or even older speakers) could refuse other foreign languages as being too difficult to master. At any rate, children's acquisition of Esperanto has been a matter of continued interest to psycholinguists. Future case studies will most certainly give us more reliable data.

[4]Esperantists strongly hope that Esperanto will become an EU language. The European political party *Europe – Democracy – Esperanto* (EDE, or *Eŭropo – Demokratio – Esperanto*) has devoted intense effort to the introduction of Esperanto as the EU official language.

[5]For an insight into non-Esperantists' attitudes towards Esperanto see [15].

[6]For an example of extensive sociolinguistic research of a national Esperanto community see the analysis of the Czech Esperanto Association (Ĉeĥa Esperanto-Asocio) [16].

[7]One person for some reason did not provide an answer to this question.

[8]One person did not provide an answer to this question.

[9]Five male participants did not provide an answer to this question.

[10]Numbers in bolded brackets refer to the number of similar answers given by our participants.

[11]Information in the non-bolded brackets refers to the age and gender of the participant at the time when our study was conducted.

[12]Internally refers to the structure of Esperanto and its movement from an Esperantist point of view, whereas externally (later on) refers to the very same aspects, but from a non-Esperantist perspective.

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UVOD: U POTRAZI ZA ESPERANTOM

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SAŽETAK

Nakon gotovo jednog stoljeća neprekinute uporabe, Esperanto je postigao status i karakter zrelog jezika, djelujući kao i drugi jezici. Istraživanja Esperanta su otežana jer se poznavanje jezika često smatra dokazom manjka objektivnosti. Također su otežana i zato što je Esperanto ljudima često drugi strani jezik te je njegove govornike teško prebrojiti. Problem je dodatno složen zbog brze promjene zajednice esperantista iz organizacije temeljene na članstvu u decentraliziranu, neformalnu mrežnu grupu. Također, mijenja se i ideološka osnova zajednice: početno je bila riječ o odgovoru na manjak komunikacije između jezika ali se u današnje vrijeme doživljava kao alternativni, pravedniji način komunikacije nego na sve zastupljenijem engleskom. Ispod tih promjena nalazi se razvijajuća kulturna osnova što uključuje opsežna literarna i periodička izdanja. Stalna je potreba za daljnjim istraživanjima – lingvističkim, sociolingvističkim te o povijesti ideja. U intelektualnoj povijesti, Esperanto i povezane ideje igrale su veću ulogu nego je općenito poznato. To je uključivalo prožimanje i utjecanje na takve pokrete kao što su modernizacija u Japanu, razvoj međunarodnih organizacija, socijalizam u više dijelova svijeta i, u današnje vrijeme, strojno prevođenje.

KLJUČNE RIJEČI

Esperanto, zajednica esperantista, interlingvistička istraživanja, ideologija jezika

PLANIRANJE JEZIKA I PLANIRANI JEZICI

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SAŽETAK

Područje planiranja jezika većinom je ignoriralo planirane jezike. Među klasičnim pristupima procesima planiranja jezika samo je Tauli (sljedeći Wüstera) predložio kako planirani jezici (koje Wüster naziva *Plansprache*) mogu ostvarivati teoriju i praksu planiranja jezika. Ako planiranje jezika teži „promjeni jezičnog ponašanja neke zajednice iz nekog razloga", kako su to postavili Kaplan i Baldauf, onda je stvaranje novoga jezika donekle različito. Pristupi jezicima i planiranju jezika sve se više doživljavaju kao lokalni i neformalni, a sve manje kao međunarodni i kozmopolitski. Zamenhofov rad na Esperantu predstavlja opsežni materijal, nedovoljno proučen, koji dokumentira stvaranja jezika i njegovo vezanje za nadnacionalne teme planiranja jezika. Pri definiranju odlučivanja u planiranju jezika, Kaplan i Baldauf započinju kontekstom i ciljanom publikom. Zamenhofov Esperanto pojavio se neznatno prije Ben-Yehudine revizije hebrejskog. Zamenhofova ciljana populacija bila je (pretežno) obrazovana elita svijeta, a Ben-Yehudina Židovi u cijelome svijetu. Obojicu su pokretale sociopolitičke ideologije ukorijenjene u reakciji na antisemitizam i prožete idejom napretka, a ne lingvistički interes. Njihova područja bila su bez granica ali nisu bila imaginarna. Funkcija je značila koliko i forma (prema Haugenu), status koliko i korpus. Za Zamenhofa, planiranje statusa isticalo je Esperanto kao svojinu njegove zajednice – kolektivno planiranje koje obuhvaća sve govornike (usp. hebrejski). Planiranje korpusa uključivalo je standardiziranu europsku semantiku, leksičku isključivost temeljenu na reprezentaciji a ne samo na standardizaciji, kao i razvoj pisanog i književnog stila. Esperanto je bio uspješan kao jezični sustav i jezik zajednice, a manje kao opće prihvaćeni jezik. Njegov razvoj terminologije i kultiviranje jezika pružaju model za obnovu jezika. Međutim, Zamenhof, zbog donekle ograničene analize ekonomije jezika, nije bio pripremljen baviti se jezikom kao snagom.

KLJUČNE RIJEČI

planirani jezici, planiranje jezika, Esperanto, moderni hebrejski

KAKO NE OTKRIVATI ISPOČETKA … OSNOVNA LITERATURA INTERLINGVISTIKE I ESPERANTOLOGIJE

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SAŽETAK

Interlingvističke studije pisane u nacionalnim jezicima – posebno istraživanja planiranih jezika – često nisu dostatno zastupljena u bitnoj stručnoj literaturi. Studije na engleskom jeziku često ne razmatraju stručnu literaturu na njemačkom, ruskom, francuskom i ostalim jezicima. Znatan dio ove specijalizirane literature pisan je na planiranim jezicima (posebno na Esperantu) te prečesto ostaje nepoznat. Zbog nedostatnog poznavanja prakse stvarnog planiranja jezika nastaju nesporazumi, npr. u relaciji između jezika i projekta jezika, jezika i jezične zajednice, jezika i kulture, mogućnosti izricanja u planiranim jezicima. Za utemeljene znanstvene studije, izrazito je značajna specijalizirana građa pisana na planiranim jezicima (od čega je oko 95 % pisano na Esperantu). Ovaj rad daje pregled glavnih dostupnih izvora stručne literature o interlingvistici i esperantologiji te, između ostalog, pruža informacije i specijaliziranim knjižnicama i arhivima, bibliografijama, značajnijim monografijama, antologijama, savjetovanjima i zbornicima savjetovanja, sveučilišnim radovima i disertacijama, periodičkoj građi, građi na internetu i priručnicima za specijaliste interlingvistike.

KLJUČNE RIJEČI

međunarodni planirani jezici, interlingvistika, Esperanto, esperantologija, studiji Esperanta, bibliografija, *Modern Language Association of America*, knjižnice

JE LI MOGUĆA STRUČNA KOMUNIKACIJA NA „UMJETNIM" JEZICIMA?

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SAŽETAK

Za svaki je jezik bitno je njegovo korištenje u stručnim krugovima. Jesu li „umjetni jezici", tj. „međunarodno planirani jezici" podesni za takvo korištenje? Ovaj rad pokazuje kako jesu. Između planiranih jezika, planiranja jezika i istraživanja u stručnim krugovima nekoliko je veza koje su posebno uočljive na primjeru Esperanta. Još od početka XX. stoljeća na tom je jeziku bilo stručnih tekstova o različitim temama, objavljenih u časopisima i drugim publikacijama, a također je postojao usmeni stručni diskurs u obliku komunikacije između pojedinih stručnjaka, odnosno u kontekstu organizacija i drugih zajednica što u današnje vrijeme uključuje i mrežne zajednice. Karakteristike Esperanta, posebno tvorba riječi, pogoduju fleksibilnom nazivanju pojmova u skladu sa zahtjevima tehničkog odbora ISO/TC 37. Takvo razvijeno stručno nazivlje obuhvaćeno je u preko 200 rječnika koji pokrivaju oko 90 područja. Univerzalno udruženje esperantista traži načine za suradnju, na području terminologije, s glavnim međunarodnim institucijama za terminologiju. Van njihovih diskursa, planirani jezici potaknuli su rad, npr. na decimalnoj klasifikaciji, nazivlju i znanosti o nazivlju. O navedenome postoji opsežna stručna literatura.

KLJUČNE RIJEČI

MOŽE LI SE PLANIRATI KOMPLEKSNOST?

I. Koutny

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SAŽETAK

Dugo prihvaćena invarijantnost kompleksnosti ljudskih jezika u zadnjem je desetljeću postala kontroverzna. U proučavanju ovog problema često se zanemarivalo kreolski i planirane jezike. Nakon opisivanja značenja problema invarijantnosti i opisivanja prirodnoga za kontinuum planiranih jezika, u radu se razmatra doprinos planiranih jezika. Razmatra se kompleksnost Esperanta na fenomenološkoj, morfološkoj, sintaktičkoj i semantičkoj razini koristeći lingvističke baze podataka. Također, uloga zajednice govornika tipa L2 te razvoj jezika su uzeti u obzir kod razmatranja istrajnosti iste razine jednostavnosti Esperanta kao planiranog jezika. U radu se diskutira kako kompleksnost može biti promjenjiva, a u određenoj mjeri i planirana i održavana.

KLJUČNE RIJEČI

kompleksnost, planirani jezik, sastavljivost, fonologija, morfologija, sintaksa, semantika

FRAZEOLOGIJA ESPERANTA

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SAŽETAK

Rad razmatra skup fraza Esperanta, idiome, fraze, poslovice, doskočice i ostale jedinice govora koje govornici pamte. Prema porijeklu, frazeologiju Esperanta može se podijeliti u tri grupe. Prvu čine mnogobrojne frazeološke jedinice koje su u Esperanto ušle iz drugih jezika. Ovo uključuje klasične prijevode, posebno iz Biblije ali i prijevode koje su više ili manje spontano donijeli govornici iz svojih materinjih jezika. Drugu grupu čine planirane, svjesno stvorene frazeološke jedinice. Većinom dolaze od Zamenhofa, incijatora Esperanta, koji je 1910. godine objavioZbirku poslovica Esperanta (*Proverbaro Esperanta*). Treću grupu čine frazeološke jedinice koje potiču iz samog Esperanta i kulturnog života govorne zajednice. Rad pokazuje kako planirani jezik Esperanto, s karakterističnim sljepljivanjem, slobodnim poretkom riječi i fleksibilnom tvorbom riječi, posjeduje sve preduvjete za stvaranje stilski upečatljivih i zamjetnih frazeoloških jedinica. Analiza književnih i novinarskih tekstova, kao i usmene komunikacije na Esperantu, pokazuje kako je njegova frazeologija raširene uporabe te omogućava autorima mijenjanje fraza i idioma sukladno situaciji u tekstu. Korištenje frazeoloških jedinica dokazuje kako je Esperanto živući jezik. Frazeologija može biti smatrana kriterijem za procjenu uspješnosti razvoja planiranog jezičnog sustava od projekta do zrelog jezika. Ona dokazuje kompleksnost kulture Esperanta.

KLJUČNE RIJEČI

STROJNO PREVOĐENJE KAO KOMPLEKSNI SUSTAV I FENOMEN ESPERANTA

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SAŽETAK

Povijest strojnog prevođenja i povijest Esperanta dugo su povezane jer predstavljaju dva načina bavljenja istim problemom: problemom komunikacije preko jezičnih prepreka. Jezik se može smatrati kompleksnim adaptivnim sustavom, kao i strojno prevođenje. U oba sustava postoje brojni agenti (prirodni i umjetni) koji međusobno međudjeluju a posvećeni su postizanju zajedničkog cilja, npr. strojnom prevođenju. Glavna svojstva jezika kao kompleksnog adaptivnog sustava također su prisutna u strojnom prevođenju, posebno u statističkom pristupu temeljenom na primjerima, koji je u današnje vrijeme paradigmatski i nezaobilazan. Zapravo, kontrola je distribuirana, ne postoji idealni agent koji predstavlja ostale (intrinsična raznolikost), stalna je dinamika u provedbi, adaptirana pojačavanjima i kompeticijom novih slučajeva koji se javljaju u mnoštvu korisnika. S druge strane, Esperanto kao živući jezik može se smatrati kompleksnim adaptivnim sustavom posebne vrste jer njegova intrinsična pravilnost strukture do određene granice pojednostavljuje strojno prevođenje. U radu je dan pregled kako Esperanto doprinosi razvoju čovjek-računalo komunikacije općenito, a također i u okviru strojnog prevođenja. To doprinosi razvoju strojnog prevođenja u kojemu bi Esperanto mogao biti ključan.

KLJUČNE RIJEČI

strojni prijevod, kompleksni adaptivni sustav, Esperanto, strukturna pravilnost

GRAMATIKA: KOMPLEKSNA STRUKTURA. LINGVISTIČKI OPIS ESPERANTA U GRAMATICI FUNKCIONALNOG DISKURSA

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SAŽETAK

Gramatika funkcionalnog diskursa novo je razvijena vrsta funkcionalne gramatike. Njen razvoj inicirao je Nizozemski lingvist Simon Dik (1940-1995). U ovom radu arhitektura gramatike funkcionalnog diskursa je opisana, uključujući ulogu vangramatičkih konceptualnih i kontekstualnih komponenti. Jednostavnom upitnom rečenicom na Esperantu ilustrirano je kako se grade lingvistički izrazi od postavljanja njihovih (pragmatičkih) namjera do izražavanja. Pažnja je posvećena lingvističkoj transparentnosti i neprovidnosti, koje su u ovom radu definirane kao nepostojanje ili postojanje prekinutosti između opisnih razina gramatike. Neprovidnosti se smatra uzrokom, između ostalih faktora, što su neki jezici lakši a neki teži za učenje. Gramatika svakog ljudskog jezika kompleksni je sustav. Ovo je jasno pokazano upravo za Esperanto u kojemu je relativno malen broj poteškoća identificiranih kao neprovidnosti sustava, a koje su u oštrom kontrastu s općom podlogom slobode, pravilnosti i odsustva izuzetaka.

KLJUČNE RIJEČI

Esperanto, funkcionalna gramatika, lingvistička transparentnost

UČENJE I PODUČAVANJE ESPERANTA

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SAŽETAK

Jedan od prvih zadataka kojima se bavio Zamenhof, izumitelj Esperanta (1887) bio je dovođenje statusa Esperanta na status živućeg jezika. Dijelom je to postignuto poučavanjem drugih ljudi Esperantu, dijelom prevođenjem i stvaranjem literature a dijelom stvaranjem zajednice korisnika. Jedan od prvih govornika, Lav N. Tolstoy, naglašavao je jednostavnost njegovog učenja. Kako rana povijest tako i sadašnja iskustva Esperanta pokazuju kako se vještine stečene učenjem Esperanta međusobno podupiru neuobičajeno jako. U formalnom učenju jezika, učenici mogu relativno brzo postići prihvatljivu razinu korištenja što im omogućava praktičnu primjenu jezika. Također su sposobno samostalno učiti jezik. Jednostavnost učenja razvija sigurnost tako da Esperanto općenito predstavlja dobar uvod u jezične studije, iako je lingvistički znatno složeniji nego što na prvi pogled izgleda. Esperanto također pomaže u usvajanju kulturne osjetljivosti. Zadnjih godina razvijaju se elektronička pomagala poučavanju i učenju te je velik broj resursa dostupnih učiteljima i učenicima.

KLJUČNE RIJEČI

Esperanto, učenje Esperanta, propedeutika, standardi vještina, učenje jezika, podučavanje jezika

SIMBIOZA I JEZIČNA DEMOKRACIJA U JAPANU NA POČETKU DVADESETOG STOLJEĆA

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SAŽETAK

Fokusiranjem na Japan ranog dvadesetog stoljeća i na popularnog pisca Miyazawe Kenjia kao predstavnika većeg intelektualnog fenomena tog vremena, rad razmatra učenjački okvir iza pokreta Esperanta kao i odgovarajuću logiku koja se razvila u početnim godinama pokreta. Rad diskutira kako početak pokreta Esperanta u Japanu nije bio izolirani lingvistički pokret među malobrojnim lijevo orijentiranim intelektualcima nego dio većeg intelektualnog, kulturnog i društvenog pokreta koji je određivao posebni pogled na svijet, kojeg nazivam anarhistička znanost. Taj pokret odupirao se konceptualnom račvanju „moderno vs. tradicionalno" ili „priroda vs. kultura" moderne povijesti. Povijest njegovih vizija nudi nove perspektive sagledavanja moderne povijesti, daljnje vizije prošlosti kao i povijesno utemeljenje samog pokreta Esperanta.

KLJUČNE RIJEČI

prirodne znanosti, Miyazawa Kenji, simbioza, Esperanto, jezična demokracija, djetinjstvo, anarhizam

KOLIKO LJUDI GOVORI ESPERANTO?
ILI: ESPERANTO NA MREŽI

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SAŽETAK

Predlaže se ažurirana procjena broja govornika Esperanta u svijetu, temeljena na broju korisnika Facebook-a koji navode kako govore Esperanto. Jednostavni proračun s razumnim pretpostavkama dovodi do otprilike dva milijuna govornika Esperanta samo među korisnicima Interneta, a vjerojatno znatno više u cijelom svijetu.

KLJUČNE RIJEČI

Esperanto, zajednica govornika Esperanta, Internet, društvene mreže

ESPERANTO (S)EN PERSPEKTIVO? HRVATSKI ESPERANTISTI O MEĐUNARODNOM POMOĆNOM JEZIKU ESPERANTU

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SAŽETAK

Prema našim saznanjima ne postoji značajan broj socioloških studija o esperantskom pokretu, a do današnjeg dana također postoji jako malo sociolingvističkih istraživanja čitavog fenomena esperanta. Usredotočivši se na hrvatski esperantski pokret, proveli smo opsežno istraživanje o stavovima hrvatskih esperantista prema strukturi esperanta, percepciji esperantskog pokreta i cjelokupnom fenomenu esperanta, aspektima koji još u velikoj mjeri nedostaju u suvremenim esperantološkim istraživanjima. Ova nam je studija stoga dala neprocjenjiv uvid u te interlingvističke aspekte koji su premalo istraživani, ali i u sâmu strukturu hrvatskog esperantskog pokreta.

KLJUČNE RIJEČI

esperantologija, interlingvistika, sociolingvistika, stavovi prema jezicima

MANUSCRIPT PREPARATION GUIDELINES

Manuscript sent should contain these elements in the following order: title, name(s) and surname(s) of author(s), affiliation(s), summary, key words, classification, manuscript text, references. Sections acknowledgments and remarks are optional. If present, position them right before the references.

ABSTRACT Concisely and clearly written, approx. 250 words.

KEY WORDS Not more than 5 key words, as accurate and precise as possible.

CLASSIFICATION Suggest at least one classification using documented schemes, e.g., ACM, APA, JEL, PACS.

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