‘THE STATE OF THE ART’ AS AN EXAMPLE FOR A TEXTUAL LINGUISTIC ‘GLOBALIZATION EFFECT’.

*Code Switching, Borrowing, and Change of Meaning as Conditions of Cross-cultural Communication.*

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**ABSTRACT:** In general, code switching is a linguistic term referring to using more than one language or variety in conversation. Bilinguals have the ability to use elements of both languages, when conversing with another. Here code switching is the syntactically appropriate use of multiple varieties of languages. Code switching can occur at the level of single words, terms, and limited phrases and can reach extension of the replacement of whole grammatical units at the level of full sentences. In the simplest definition, we can define code switching as the change of a set of a lexicon of an oral or written communication unit where one language is added by elements of a language. We will discuss the functions of the implementation of a second language in the langue of a communicated writing with the example of the expression ‘state of the art’ used both in English texts and other languages showing that the borrowed expression is a bearer of encoded semiotic meanings with a specific set of meanings connected, when used in writings of other languages.

**KEYWORDS:** code switching, bilinguals, second language

I Introduction

Research Positions

In semiotics a code is a set of conventions or sub-codes used in order to communicate meaning. The most common is language. Wood distinguished between special and temporal codes and called the connection between them transition. (Wood 16). Hess mentioned that “artistic function of code switching in literature” exist and that code switching is “a marker of liminality - the state of creative in-betweenness which serves as an underpinning for unconscious literary designs.” (Hess 5). In general, borrowing is the phrase that actually id applied for the use of single phrases from another language. Code switching refers to syntactical units. We will use here the expression code switching for the activity of changing the language. Semiotically, code switching is the change (transition) from one linguistic code to another. Even though the codes have equivalent carriers of meanings, words that can be translated, the existence of the expression in the foreign language brings additional meanings. The expression ‘state of the art’ in a text of

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a foreign language contains more meanings than the actually translated one. Karrebaek considers code switching "a linguistic mode, and thus a semiotic process" and aims "to place code switching within language as such, that is as a systematic, linguistic phenomenon which participates functionally in the grammatical structuring of linguistic constructions." (Karrebaek 407). Mahootian investigated into code switching as the relationship between code choice, bilingual identity and language change. Based upon bilingual Spanish-English publications examined and on the pattern of code choice, Mahootian concluded that “codemixed discourse is one of three varieties of code available to the bilingual, and where this variety is used intentionally, it is meant to emphasize the speaker's bilingual identity” and suggested that “in some contexts, code switching, is itself an instantiation of language change.” (Mahootian 361). Dury presented the results of a corpus-based diachronic study of the migration of vocabulary from the language of ecology into non-scientific language and vice versa. The results were extracted from a bilingual (French and English) comparable corpus compiled for the study. Dury showed that “if terms can get de-terminologized over time, words which have become widespread in the media can, in return, get terminologized over the years and move into the lexicon of ecology, as is the case in English with carbon neutral.” (Dury 230). When we trace back the meanings of “art” and “state” in a diachronic linguistic perspective, we find that their origin is Latin, *ars* and *status*, and both words were used as part of the terminology of rhetoric besides other terminological fields. In terms of the methodological development of languages Hitchcock argued that “inferences” in historical linguistics “conform to the common cause principle focusing on methodological issues in historical linguistics and correlations serving as premises for common cause inferences; they are also potential sources of error in historical linguistics”. (Hitchcock 423). Similarly Spolsky explored Darwinian literary criticism and adaptionist literary study as adopted by scholar Joseph Carroll under the aspect “The Centrality of the Exceptional in Literary Study”. (Spolsky 285). Fischer discussed whether the explanation of the data should be in terms of grammar change as advocated by formalist linguists or language change. “This latter point automatically leads to the question as to what type of grammatical model or theory the historical linguist should work with, and more particularly, in how far the innate, syntacto-centric generative model is adequate for studying grammar change. This is followed by a brief conclusion in which a semi-independent position for the historical linguist is advocated”. (Fischer 710). Christopher Potts wrote in *A Description Language for Economy Conditions* that economical conditions play an increasingly dominant role in syntactic theorizing. The central formal property of such constraints is that their ‘evaluation’ is relative to a set of ‘independent linguistic structures’. Formalization is an important step, since these conditions require fundamental revisions to the ‘usual description logic’ for linguistics. (Potts). Khalizev discussed “reductionism relative to the theory of sciences in literary studies. Accordingly, reductionism is an incomplete scope of study of
its object by concrete academic disciplines.” Moreover, it puts scholars at bad limit between academic, true knowledge and mythmaking which makes it vulnerable in literary scholarship. However, it is a study of "superindividual entities" like literary style, genres, and the history of various literatures which offers the individual literary facts within the creativity of the author.” (Khalizev 53). Devitt analyzed ways to integrate the rhetorical and literary theories of genre of literary and rhetorical genre theories, qualities and changes in genre and construction of genre. (Devitt 696). Based upon the book The Death of the Critic of Roman McDonald Posner discussed reasons that literary criticism has fallen into decline describing how literary theory has replaced criticism and suggests that literary critics write criticism intended for scholars rather than general readers, preventing the promotion of literary creativity. (Posner 385).

**Code switching as a Need of Intercultural Exchange**

Code switching and borrowing can occur as an activity due to the lack of words or a multi-lingual society. For example during the time of early Islamisation of Egypt bilingual writings for administrative purpose in Greek and Arabic containing the Islamic *bismillah* formula in the Arabic part not translated in the Greek part were written. For example Papyrus *Nyu.apis.5605* was written in the 9th century contains the beginning of a receipt with only the *bismillah* and the amount of taxes paid preserved using Greek numerals. (*APIS*). But in the case of the use of the phrase 'state of the art' in pragmatic text types the variable meanings of 'art' including also a metaphorical meaning and a stream of meanings of its etymology exist. Code switching in the 21st century occurs as a function of a globalized English language, which actually uses a simple vocabulary. Its genuine place of origin falls in the area of grammar and rhetoric with a universal impact. The expression “state of the art” experienced according to Google Trends between the years 2004 and 2009 a decline in general internet inquiry. On the contrary, the coverage of the expression in mass media news on the internet increased. (Google Trends). This is not an expression of Standard English, but a variety of an English idiom with style and rhetorical impact. Its striking effect is the global use of the phrase even in the context of writings in a language other than the English one. According to English Language Guide, English is currently one of the most widely spoken and written languages worldwide, with some 380 million native speakers. Through the global influence of native English speakers in cinema, music, broadcasting, science, and the Internet in recent decades, English is now the most widely learned second language in the world. English is the most widespread language in the world and is more widely spoken and written than any other language. Over 400 million people use the English vocabulary as a mother tongue, only surpassed in numbers, but not in distribution by speakers of the many varieties of Chinese. Over 700 million people, speak English, as a foreign language. (English
Language Guide). Holborow wrote in Ideology and Language: the Interconnections between Neo-liberalism and English: “A new “world English” is being used against the dictates of neo-liberalism in interesting, new ways, as the above excerpt makes clear. We should also note that the Internet has been put to wide radical uses, first in the anti-capitalist and then in the anti-war global movements. While it is true that Internet access is still fairly restricted in terms of the whole world, nevertheless it has historically speaking a reach not seen before in English and for purposes maybe entirely different for which it was invented. It is interesting to note how English is being used.” (Holborow).

II The Case of the State of the Art: Functions of Implementation: Our Research Questions

When code switching occurs in a literary text, is here the code switching of implemented parts as an individual capacity or linguistic faculty of the individual writer, or is the code switching a part of a social development and socio-linguistic phenomenon that durable lasts in the setting of the language of the language that has been implemented? Based upon the examination of texts with code switching we will show the functions of the implementation of a second language in the langue of a communicated writing. We will show that the re-figuration of a concept is here applied using a diachronic investigation. It is not an ‘ad-hoc’-built and implemented phrase, but an expression that is related to a concept, which can be traced back to cultural and linguistic settings arising from the beginnings of ancient European culture reflected in international English. The phase “state of the art” is in contemporary English commonly as an expression for the latest development in a field. Our sources are U.S. American writings, English literature from early English Literature to Modernity, writing in International English, and writing in other languages with the implementation of the concept related to the “State of the Art”.

I ‘Art’ and ‘Technique’– The Historical Roots Diachronically Examined

II Meanings of Art in Contemporary Language of International English

III Examples of the Use of State of the Art in the English Contemporary Language

IV Examples of the Implementation of the State of the Art in Other Languages

We discuss how the implementation of the second language in a text adds connotative meanings that are not covered by the first language. This is an increase of meanings, which requires the necessity of the receiver of the message to understand both first and second language. Lack of the implemented parts of the first language can arise from culturally diverse languages with a lexicon that is limited in terms of its vocabulary to semantic meanings that do not reach the area of the second language.
III The Rhetorical Barbarism in a Theory of Linguistics and Concept of Semiotics of Globalisation

The Diachronic Discussion of Meanings of Art

The word techne (τέχνη) is art, skill, or cunning of hand especially in metalworking. It also depicts a craft, cunning, in bad sense or a way, manner, or means whereby a thing is gained, without any definite sense of art or craft. (Liddel; Scott). The Latin equivalent Ars comprises as meanings a skill in joining something, combining, working it, etc., with the advancement of Roman culture, carried entirely beyond the sphere of the common pursuits of life, into that of artistic and scientific action, just as, on the other hand, in mental cultivation, skill is applied to morals, designating character, manner of thinking, so far as it is made known by external actions. As skill in producing any material form, handicraft, trade, occupation, employment it is identical with τέχνη. (Lewis; Short). Classical rhetoric distinguished between the art and the talent of the speaker expressed in the terms ars and ingenium. Ars is an equivalent to the Greek term techne, which actually also includes technique as a skill and tool. The modern concept of art only partly covers this classical understanding of ars techne. Quintilian speaks about the ars dicendi (6, 2, 13, 15) and ars rhetorica (7, 2, 14, 3) and he speaks about the ingenium of the young child and the memoria as the sign for it (2, 1, 3, 1):

Tradito sibi puero docendi peritus ingenium eius in primis naturamque perspiciet. Ingenii signum in parvis praecipuum memoria est: eius duplex virtus, facile percipere et fideliter continere. Proximum imitatio: nam id quoque est docilis naturae, sic tamen ut ea quae discit effingat, non habitum forte et ingressum et si quid in peius notabile est. (Quintilian).

While the basics of linguistic theory refer to a theoretical framework that is most widely employed in language description in grammatical descriptions of elements of entire languages based upon linguistic typology and classification of linguistic phenomena, we focus on the realization of linguistic phenomena to an internal linguistic concept that is transferable and includes diachronic developments from the perspective of a common and tradited semiotic concept across single languages and is related to a concept of meanings. Becker and Eckel wrote that “in the discourse of philosophical aesthetics during the last two centuries, it is evident that the question of the essence of art has played a central role. In this tradition, art was not understood as "something constructed". Instead, art was integrated into the conceptual world of epistemology through the philosophical aesthetics developed in the major philosophical systems.
Accordingly, within this metaphysical tradition, art was attributed an exploratory, interpretative and epistemological function, insofar as it was assumed that truth could appear in a given work.” (Becker; Eckel). According to Becker and Eckel, “in artistic expression, new views of the world which contrast with general paradigms of technology could be experienced and articulated. In its lack of purpose, art aimed not at making something available, but rather, in its very distance from the attitudes proper to technique, it referred to alternative modes of individual and cultural ways of living.” (Becker; Eckel).

IV Examples of Contemporary Use of the Phrase State of the Art

“State of the art” in Wikipedia is described as follows: “The phrase "state of the art" should be hyphenated when it is used as an adjective, e.g.: "This machine is an example of state-of-the-art technology", but not when used as a noun as in the following sentence: "The state of the art in this field is mostly related to the X technology". Cutting edge as a synonym of the term can be used as a noun. Leading edge conveys exactly the same meaning. The state of the art is the highest level of development, as of a device, technique, or scientific field, achieved at a particular time. It also applies to the level of development (as of a device, procedure, process, technique, or science) reached at any particular time usually as a result of modern methods. The earliest usage of the term "state of the art" documented by the Oxford English Dictionary dates back to 1910 from an engineering manual by H.H. Suplee titled Gas Turbine. It reads, "In the present state of the art this is all that can be done." In the context of the European and Australian patent law, the term "state of the art" is a concept used in the process of assessing and asserting novelty and inventive step, and is a synonym of the expression "prior art".” (Wikipedia). „State-of-the-art“ is translated to German as „modernst“, „topmodern“, „hochmodern“, „supermodern“, „auf dem neuesten Stand der Technik“, „dem Stand der Technik entsprechend“. The nouns “state of the art” are translated as “neuester Stand der Technik”. (Deutsch-Englisch-Wörterbuch). In the German Wikipedia “state of the art“ is defined as follows: “Der Begriff State of the Art bezeichnet den höchsten anzunehmenden Entwicklungszustand einer bestimmten Technologie (nicht zu verwechseln mit Stand der Technik). Umgangssprachlich wird damit meist das höchstentwickelte (High-End) verfügbare technische Gerät (z. B. Computer, Stereoanlage) seiner Klasse bezeichnet. Die früheste bekannte Anwendung des Begriffs stammt aus dem Jahre 1910 aus dem Handbuch Gas Turbine von H. H. Suplee, in dem es heißt: „In the present state of the art this is all that can be done.“ (Wikipedia). In WordNet the expression state of the art stands for “the highest degree of development of an art or technique at a particular time”. (WordNet). The airport of Vienna promotes on its website “State-of-the-art Technologies” writing “State-of-the-art equipment helps us to flexibly provide reliable, safe, and fast turnaround.” (Airport of Vienna).
State of the art is the current level of knowledge and development achieved in a technology, science, or art. (The American Heritage Dictionary of the English Language. Fourth Edition) State-of-the-art is the most recent and therefore considered the best; up-to-the-minute: state-of-the-art computers (Collins Essential English Dictionary). “State-of-the-art” is translated as auf dem neuesten Stand der Technik (referring to the latest state of technique). (Wörterbuch Englisch-Deutsch). The academic writing using the expressions state of the art is as a review very close to the writings of advertisements. Ricketts in “Digital Hearing Aids: Current "State-of-the-Art" used the expression:

So how far have we come? What is the current "state-of-the art" technology in digital hearing aids? Are digital hearing aids really superior to their analog counterparts? To determine whether digital hearing aids are better for patients, it is important to focus on the superior processing and features of these instruments. Digital hearing aids can't be described as if they are a separate entity from analog hearing aids. "Digital" simply indicates that the analog waveform is converted into a string of numbers for processing; and unfortunately, there is nothing inherently magical about this process. A linear, output-clipping, digital hearing aid could easily be built that would provide sound quality and speech recognition inferior to many analog hearing aids. Therefore, digital isn't superior just because it's digital, but because DSP allows manufacturers to create hearing aids with enhanced processing and features. (Ricketts).

IV Discussion of the Findings

The Rhetorical Tradition

The implementation of words and text parts of a foreign language in a text is regarding the language used in the text an elliptic construction replacing the elliptic text against a text in another language. The use of a foreign speech is in rhetoric a barbarism and not a virtue of rhetoric. Semiotically, meaning is here produced introducing indirectly connoted values such as appearance as a international value or a value, which is valid in other countries. Also innovation might be associated values of a barbarism. Seneca the Older mentions that cacozelia is a negative stylistic means in order to appear learned using foreign words. (Seneca 361). On the other hand, the implementation of terminology from other languages is an effect that occurs worldwide. Such terms are easy to recognize and offer a standardized normative meaning. The expression "state of the art" is actually a rhetorical one, since we find both terms 'status' and 'art’ in the rhetorical terminology since ancient Greek time. The expression as a phrase of an International English is
only loosely connected with a specific terminology or language. So is it basically employed in the areas of scientific writings serving as a reference report, the language used in advertisements and Public Relations, and writings in international English. Structurally it is a term used to indicate the latest status quo of a technical item or other objects. Choosing a diverse diachronic text corpus across English and other languages, we can demonstrate that the implementation of the concept refers to a cultural background of the European culture. We can call the phase implementation an actualization of the concept. Looking at the background of the actual phrase ‘state of the art’, its rhetorical impact can be shown in the international English and classified as a topic (topos) of rhetorical tradition. While code switching has been considered a linguistic development, we can clearly demonstrate that the concept of art is here a background for the linguistic concrete situation and documents we have examined. The rhetorical impact of code switching can be expressed approximately as an integration of neologisms, single new words as rhetorical figures that enter the first language. Among the rhetorical figures of connected words no term exists that covers the results of code switching in a text. The rhetorical system offers no solution for the transfer of foreign words into another language except the negative figure of a barbarism.

**Code Switching and Borrowing as Changes of the Semiotic Code**

The phenomenon of code switching as shown by the expression state of the art is as a semiotic phenomenon interesting. The expression fits in several contexts and professional and scientific areas. The rhetoric of the terms art and state is here obviously a key to broad applications. The status in rhetoric is an element of the status theory especially used in legal rhetoric. Here the different state of an issue are questioned. The phrase art refers actually when reviewed from a cultural historical perspective to a concept including also technique. Code switching in form of citations of foreign works as a common practice of academic writing implementing knowledge from a foreign language. Code switching and borrowing as changes of the semiotic code are replacements on the linguistic level of syntax and semantic and they refer to the change of meaning that refers to the specific language used. In the case of the borrowed expression "state of the art" we find an expression that looks at the first view like a terminus technicus, but actually is simply a phase that due to its high rhetoricity has a universal meaning applied to several professional and research areas. Approaching the use of the phrase from the perspective of lexical semantics, we ask what the expression means based upon the basic expressions it contains and the constituted composite meaning. This meaning is in two approaches examined examining how the expression refers to entities and how words are used in the appropriate contexts (pragmatic). We selected writings of pragmatic text types that are representative for the use of the expression. The ambiguity as
obvious. When facing the phenomenon that the expression 'art' has more than one meaning, but awareness of the meaning depends on the knowledge of the lexical and etymological tradition of the word. The expression 'state of the art' has a fixed syntactic structure in the texts it is used, while the semantic structure varies according to the contexts it is used in. So we have a metaphorical semantic meaning, when it is applied to fields of sciences that are classified as exact sciences. When it is used in the context of an art, the expression is a proper word. The expression is used in English compound nouns like "state-of-the-art research facilities" or "state of the art browser scripting". (The Monash Centre for Electron Microscopy). In a German-English dictionary the expression is translated as "(neuester) Stand der Technik", which means 'latest state of the technique'. (Dict.cc English-German Dictionary). State of the art in French for equipment means 'ultramodern' and for technology 'de pointe'. (Pocket Oxford-Hachette French Dictionary). State-of-the-art for technology as adjective in Italian is 'all'avanguardia'. (Pocket Oxford-Hachette Italian Dictionary). In Spanish 'state of the art' is 'último modelo' or 'tecnología punta'. (Pocket Oxford-Hachette Spanish Dictionary). The expression is an example how international differences in English with rhetorical impact are equalized across genres such as research essays, advertisements, websites, and business writings. Richard Gartner wrote the report Technology & Standards Watch. Metadata for Digital Libraries: State of the Art and Future Directions. (Gardner). The borrowing here is not a borrowing resulting from a lack of expressions in the other languages. It is a phenomenon of globalized use of English and the effect that the industries and professions the word is used are actually international fields with international communication. The language contact in the 21st century has created a multilingual professional work place. In areas with different language interaction needs a common language like English and English influences the other languages. While in former states the exchange was based upon migration, the communication with mass media is highly influential for the creation of texts with borrowed words and code switching. One of the effects of globalization has been an increasing use of bilingual texts. Code switching is mainly considered an oral phenomenon, but occurs also in written language. While in the first case it is a spontaneous ad hoc event of individual speakers, in cases of literal code switching and the use of loanwords the use of a foreign language is palled and the foreign language has a function. It is not the function to reach different linguistic communities, but to connect with a bilingual text the message with a globalized community. As an idiomatic expression the expression 'state of the art' is borrowed from a language considered to be with prestige. Here also the persuasive function of texts using the expression is obvious: The expression refers to the idea of the globalized internationally spoken English. It is considered prestigious, since it includes on the semantic level the idea of being on top of a global world in contrast to local borders of national areas. Used as a borrowed loanword in other languages it gets this function, while in a purely monolingual writing it is a metaphorical term replacing
‘art’ in most cases for ‘technique’. A word has a variety of meanings and connotations, which can be added, removed, or changed. In our case the tradition of meanings that actually match the contents of the writings is still from a diachronic perspective of the etymology of the word obvious. But the expression ‘state of the art’ has already become a pseudo-terminus technicus. Pseudo refers here to the fact that the expression is not related to a specific field of science or a specific profession, but is an expression that refers to a concept out of the meaning of the words itself using it as a contribution of globalized English. As a widening process of the semantic change the meaning of ‘art’ here increased implementing aspects that would be subordinated under the category of technique. Forces that trigger this semantic change are basically socio-cultural and results from communicative activities across languages with English as the lingua franca. Expressions like state of the art used in foreign languages give the impression of an international issue to be communicated. The expression is bound to the complex meanings associated with art, when considering its Latin origin and the connotation of meanings going beyond the borders of the traditional concept of art as a product of artificial skills. The use of the contemporary expression of the 21st century actually refers to the idea of a unit of art and technique. As an element of code switching the use of foreign language in the mass media refers to the effects of globalization with the common lingua franca English.

V Works Cited


