

TORKEL LINDQUIST

**Some Considerations on ‘The Matrix Model’ for Written Arabic
under the Influence of Hebrew in Israel¹**

Abstract

The following article is devoted to the suitability of the Matrix Model, when studying Hebrew influence on Written Arabic. This model defines originally the frames for code-switching² within bilingual conversations.

Introduction

Languages in a bilingual environment borrow from each other.³ This means that elements of one language appear in the other. The situation that makes possible a borrowing is when speakers of two distinctly different languages are in contact on a daily basis. This contact is at hand when the same persons use both languages alternatively on the same time and in the same place.⁴ It has been observed that when one language is clearly dominant in several domains of the daily life of the speakers, this language will

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² Code-switching is when bilingual persons switch from one language to another, possibly within a single sentence, in: V. Fromkin, R. Rodman, and N. Hyams, (2003), *An Introduction to Language* (Boston), 489.

³ *Borrowing* is defined as “The incorporation of a loan word from one language to another”, in: Fromkin et al., (2003), *Introduction*, 576.

⁴ U. Weinreich, (1953), *Languages in Contact*, (The Hague), 1; S.G. Thomason, (2001), *Language Contact: an Introduction*, (Washington D.C.), 1.

exert greater influence on the subordinate language than vice versa.⁵ Some of the social factors that have been observed as reasons behind the acceptance of this influence are the cultural dominance of the donor language as well as a prestige-function, where the use of the borrowings renders association with speakers of the dominant language.⁶

The contact linguistic field of Arabic and Hebrew

The above written also seems to be the case in the contact linguistic field of Arabic and Hebrew in Israel, where Amarah explains the willingness of Arab-Israelis, especially younger generations, to master Hebrew, with its “symbolic function”, that is it “symbolizes the desire and aspiration to associate oneself with the modern outside world”.⁷ The Arab Israelis learn Hebrew in the basic school from the first grade as a national language and not as a foreign language,⁸ as well as through, in varying degrees, informal contacts with those who speak Hebrew.⁹ The Arab Israelis need to learn Hebrew for pragmatic reasons: they need this language for work, in order to attain service from public officials and for higher studies.¹⁰ These factors result in a considerable Hebrew influence on the Modern Colloquial Arabic (MCA) in Israel.

This influence has its strongest argument in all the ‘lexical borrowings’ from the Hebrew language and culture, as in the following examples: The Arab Israelis switch a traditional Arabic word or expression with a Hebrew equivalent (תְּקִלִּידִי; מוֹדֵרְנִי – חֲדִיִּת).¹¹ The result of influence, if the word already exists in Arabic, could be a change in meaning (חֲשֵׁדֵהּ פִּי הָאִמְתָּחַן: חֲשֵׁד/עֲדָם נִזְהָה הָאִמְתָּחַן). Sometimes Hebrew simplifies when several words in Arabic is replaced with only one in Hebrew (בְּגֵרוֹת – שְׁהָדָה הַתְּיָה הָעָמָה; סְמִינָרִיִּן – הַחֻלְפָּה הָרְאִיָּה). It is also possible to view this influence in fusions of Arabic and Hebrew (טַעֲמִים/אֵכֵל שְׁהִי; דִּלֵּק מַחְפָּה – תַּחֲנֹת דִּלֵּק/מַחְפָּה וְקוֹד).¹² (חֲרֻכּוֹת – חֲרֻכָּת-חֲרֻכָּה), or even in changes in morphology or syntax (אֵכֵל טַעֲמִים – אֵכֵל

⁵ T. Kaufman & S.G. Thomason, (1988), *Language Contact, Creolization, and Genetic Linguistics*, (Berkley), 67–8.

⁶ N.C. Dorian, (ed.), (1989), *Investigating Obsolescence: Studies in Language Contraction and Death* (Cambridge), 287–312 and 41–51; T. Kaufman et. al. (1988), *Language Contact*, 44 ff.

⁷ M.H. Amarah, (2002), *The Place of Arabic in Israel*, “International Journal of Social Languages” 158 (2002): p. 62.

⁸ M. Winter, (1981), בעיות יסוד במערכת החינוך, in A. Layish, (ed.), עֵרֵבִים בְּיִשְׂרָאֵל: רֵצִיפּוֹת וְתִמּוּרָה, (Jerusalem), pp. 168–179.

⁹ R. Cooper, & B. Spolsky, (1991), *The Languages of Jerusalem* (Oxford).

¹⁰ M.H. Amarah, & B. Spolsky, (1986), *The Diffusion and Integration of Hebrew and English Lexical Items in Spoken Arabic in an Israeli Village*, “Anthropological Linguistics” 28 (1), pp. 43–58.

¹¹ These borrowings from Hebrew may, as in the examples above, be preceded by borrowings to Hebrew from different European languages.

¹² This example actually conforms to the rulings of the *Matrix* (see below). It is a question of “lexically internal relations”. C. Myers-Scotton, (1993), *Dwelling Languages: Grammatical Structure in Codeswitching* (New York): 77.

13. (טבלה אל ליגה מלל נוער לל מבוגרים? As another possibility, Arabic grammar remains and is applied on a borrowing in Hebrew (قسمته; لغتي احرق من لغته – حرق יותר / أقوى منه في اللغة) (بئير شيبع – باءر شבע; الجليل الاعلى – הגליל העליון) (חלקתי אותו – חלקתי אותו).¹⁴

There is also terminology from Israeli society (مكبي; بنك هيواليم; هستدروت) as well as direct translations of expressions in Hebrew (بئير شيبع – باءر شבע; الجليل الاعلى – הגליל העליון) or (بئير شيبع – باءר شבע; الجليل الاعلى – הגליל העליון) (עבודה שחורה: for untaxed labour; כסף שחור: for untaxed money).¹⁵

Hebrew influence is also observable in Written Arabic in Israel.

On borrowings

Perhaps the most obvious form of borrowing is in the lexicon, where the dominant language, the donor, donates words or morphemes into the receiving language system.¹⁶ Indeed, the lexicon is where borrowings take place before any kind of structural borrowing (morphosyntax).¹⁷ H a u g e n has divided these borrowed elements into the following: I.) *Loanwords*, which includes both form and meaning including also phonological integration, at least partly; II.) *Loan blends*, where we find combinations of foreign and native forms, as in English *co-worker*; III.) *Loan shifts*, with foreign meanings translated into the native language, as *superman* from German *Übermensch*.¹⁸ Further, *loanwords* could be classified into 1.) *Additions*, where labels for new concepts that are new in the culture are introduced, and; 2.) *Substitutions*, where existing labels are replaced with foreign ones.¹⁹

Grammatical elements may also be borrowed from one language to another. In that case, it seems that the association of certain grammatical elements to the donor language matters profoundly. The more closely the association is of these elements to the donor

¹³ This phenomenon is also noted in general linguistics. A morphological or syntactical influence as presented here denotes a high level of knowledge of the foreign language, while single lexical borrowings, as e.g. Arabic words in Hebrew, signifies a more casual contact. Structural borrowings (morphology, syntax) signifies a higher level of linguistic contact. See T. Kaufmann and S.G. Thomason (1988), *Language Contact, Creolization and Genetic Linguistics* (Berkley) 67, 74–76.

¹⁴ Other examples on morphological adaptations are presented in R. Talmon, (2000), *Arabic as a Minority Language in Israel*, in J. Owens, (ed), (2000), *Arabic as a Minority Language, Contributions to the Sociology of Language* 83 (Berlin & New York): 216–17.

¹⁵ M.A. Amarah, (1995), *Hebrew and English Lexical reflections of Socio-Political Changes in Palstinian Arabic*, "Journal of Multilingual and Multicultural Development" 15(6): pp. 165–172; E. Ben-Rafael, (1994), *Language, Identity and Social Division: the Case of Israel* (Oxford). According to Talmon, 'Minority Language', 215, the Druze and the Bedouins of Galilee are two Arab speaking communities in Israel that most readily incorporate Hebraisms into their Arabic. For a general survey of linguistic coexistence of Hebrew and Arabic in Israel see N. Kinberg & R. Talmon, (1994), *Learning of Arabic by Jews and the Use of Hebrew among Arabs in Israel*, "Indian Journal of Applied Linguistics", vol. 20, no. 1-2, pp. 37–54.

¹⁶ T. Kaufmann et al. (1988), *Language Contact*, 48 and 76 ff.

¹⁷ Ibid. 20–21. Thomason, *Language Contact*, 69.

¹⁸ E. H a u g e n, (1950), *The Analysis of Linguistic Borrowing*, "Language" 26, pp. 211–20.

¹⁹ F.W. Field, (2002), *Linguistic Borrowing in Bilingual Contexts* (Amsterdam), 9.

language the more difficult they will be to borrow.²⁰ Previous studies conclude that it will be there, in the grammar, that the least extended borrowings should be taking place.²¹

When it comes to linguistic factors, there are two in particular that either play a role of encouraging borrowing or inhibiting it. 'Frequency', that is how often particular items occur in the donor or receiving language, does matter. It goes both ways: the more the item appears in the donor language, the more likely it will appear as a borrowing. However, the more frequent an item appears in a receiving language the less likely it is that this item will be replaced with a corresponding item from the donor language. The second important linguistic factor deals with (formal) 'equivalence'. Equivalence pertains to word classes, where the forms or structures as well as functions of the borrowing language must be equivalent in the receiving language to those of the donor language, and, where this equivalence will either promote or inhibit borrow ability.²²

Not all parts of language are borrowed as freely. The scale of borrowing depends on each individual language.²³ In general the borrowing language will borrow more frequently content items, than grammatical items. Further, grammatical words will be borrowed more frequently than will inflectional affixes.²⁴

The structure of borrowing

A structural question when studying borrowings from one language into another is whether these borrowings are unlimited, or if there are restrictions as to what may and may not be borrowed. If, again, there are structural restrictions, it is of interest to find what these are and if they are of universal validity or only ruling the languages under examination.²⁵

A number of previous studies have all focused on rules governing what can be borrowed. Fredric W. Field, for one, argues for a set of 'Principles of System Compatibility and

²⁰ E. Haugen, (1950), *The Analysis*, pp. 224–25.

²¹ S. Romaine, (1995), *Bilingualism*, (Cambridge 2nd ed.) 64.

²² P. Muysken and R. Van Hout, (1994), *Modelling Lexical Borrowability*, "Language Borrowability and Change", 6 (1), 39–62; U. Weinreich, (1953), *Languages in Contact* (The Hague), 61. 'Frequency' and 'equivalence' are but two important linguistic factors. Also, when it comes to 'frequency', this argument has to be tested against counterarguments. One such counterargument is that an item has to be *relevant* for the borrowing language, otherwise its frequency does not matter. P. Muysken et al. (1994), *Modelling*, 52–54. Another counterargument deals with basic vocabulary that is very frequent in nature but obviously resistant to change. These are items of kinship, body parts as well as some daily activities. 'Equivalence' is on the other hand relevant only in a comparison of two markedly separate languages and can result only in a table or scale of sliding values. With such a multitude of language users, a claim for exactitude cannot be scientifically certain. That is, it is not possible to verify absolutely that a borrowing will *always* take place.

²³ Field, (2002), *Linguistic Borrowing*, 34 ff.

²⁴ B. Comrie, (1989), *Language Universals and Linguistic Typology* (Chicago), 209–10.

²⁵ Similarities found in two languages in contact could of course also be the result of common linguistic ancestry, or of an internal and similar, even parallel, development in each language. A. Saxena, (1997), *Internal and External Factors in Language Change: Aspects in Tibeto-Kinnauri* (Uppsala): 3.

System Incompatibility'. According to him, it is the morphological typology that places constraints on the possibility of borrowing features from another language.²⁶

The Matrix Model

Myers-Scotton, whose theory is the main focus of argument for this article, in her systematic approach to the problem, believes that each individual in the same bilingual context shares the same underlying cognitive process that, then, shapes a *matrix language*²⁷ or perhaps a *system of a base language* that will determine in what way borrowings may take place.²⁸

A *Matrix* is also found in other models for *code-switching*.²⁹ This kind of model stands in opposition to models that give that *code-switching* is symmetrical, where each language takes equal part in the shaping of an utterance.³⁰ The general idea of Myers-Scotton is that one of the two languages is considered the basic language *into which* elements from the other language is *embedded*.³¹ *The Matrix* produces the hidden rulings that will determine word order as well as any appearance of 'system morphemes' (grammatical morphemes).³² Phonology is yet a possibility of the matrix.³³

The *Matrix Model* of Myers-Scotton was exemplified with a database consisting of recorded conversations in Nairobi, Kenya, and the two languages involved are English and Swahili, where Swahili is borrowing from English. The *Matrix Language* determines the underlying structure of any utterance, including inserted foreign material (borrowings).

²⁶ F.W. Fields, (2002), *Linguistic Borrowing in Bilingual Contexts* (Amsterdam), 40–46.

²⁷ There is experimental support for the theory of a *Matrix* language. Subjects heard a sentence including both Chinese and English elements. They were asked, and able, to identify the sentence either as English or Chinese. Myers-Scotton, (1993), *Dwelling Languages*, 70. Myers-Scotton defines ML as "the language of more morphemes in interaction types including intrasentential CS". Ibid. 68.

²⁸ Myers-Scotton, (1993), *Dwelling Languages*, 68 ff., 117. In a conversation the ML does not have to remain the same language. The so called Embedded Language might alternatively be ML. Ibid. 69–70.

²⁹ L. Boumans (1998), *The Syntax of Codeswitching: Analysing Moroccan Arabic/Dutch Conversation* (Nijmegen) PhD, pp. 65–81; P. Muysken, (2000), *Bilingual Speech: A Typology of Code-Mixing* (Cambridge).

³⁰ Haugen, (1950), *The Analysis*, p. 211. P. Muysken, (1995), *Code-Switching and Grammatical Theory*, in L. Milroy and P. Muysken, (eds.), *One Speaker, Two Languages: Cross-Disciplinary Perspectives on Code-Switching* (Cambridge), 177–198.

³¹ Myers-Scotton, (1993), *Dwelling Languages* (New York), 3, 20, 75.

³² C. Myers-Scotton, (1995), *A Lexically Based Model of Code-Switching*, in L. Milroy et al., *One Speaker, Two Languages*, 233–256.

³³ Sometimes, phonological borrowings are hardly recognisable. Extreme examples are found in some European loanwords into Sino-Tibetan Languages or vice versa. A more comprehensible example is found in the Spanish borrowing from Arabic of *in šā' Allāh* (If God wants) into Spanish *Ojalá* (I hope). In his study of Bedouin municipality officials in the Negev town of Rahat, Henkin notes a phonetic influence from Oriental Hebrew. R. Henkin, (1997), *Code mixing in the Negev Bedouin city of Rahat*, in M. Bar-Asher, (ed.), 1997, *Language Traditions and Jewish Languages IX–XI* (Jerusalem) 363–381 (in Hebrew).

Any inserted element should, according to this, not exhibit markers from the donor language, but are rather governed by the *Matrix Language*.³⁴

Myers-Scotton prefers the term *code-switching* to describe the process of borrowing, in which bilinguals select forms from an embedded variety in utterances of a matrix variety. She uses the term, *Matrix Language* (hereafter ML), for the language that borrows, and, for the donor language, she prefers *Embedded Language* (hereafter EL). ML and EL constituents are morphemes that conform to the structural specifications of the ML hypothesis (see below). Furthermore, a third category is termed *Islands*. These are then constituents entirely of ML or EL morphology. They must be well-formed according to ML or EL grammar respectively and must show internal structural-dependency relations. The *Island* does not conform to the rulings of the ML, but must conform to syntax, like word-order. In Myers-Scotton's example, *job small* cannot constitute an EL (English) *Island* in Swahili as it is not well-formed according to English word-order".³⁵ As such, it is a word from the donor language used as it is in that language, without changes. In her words: "The argument of the model presented here is that the ML sets the morphosyntactic frame of sentences showing CS" (*Codeswitching*). Deciding morpheme order and supplying the syntactically relevant morphemes when both languages appear together are what is intended with setting the frame. The division between system (grammatical) and content morphemes³⁶ is the major organizing device the matrix uses in setting the frame.³⁷ Her conclusions are the following:³⁸

The ML provides the morphosyntactic frame for both ML and EL constituents, but not for *Islands*. This *Matrix Language Hypothesis* is verifiable by two principles, the first is that Morpheme order must not violate ML morpheme order, and the second, is that all syntactically relevant system morphemes must come from the ML.³⁹

Further, the ML will, according to the *Blocking Hypothesis*, block the appearance of any EL content morphemes, which do not meet conditions of congruency with the lemma of ML.⁴⁰

³⁴ There are examples of the opposite case, where the syntax of the donor language is governing the inserted material, and not the Matrix Language. See Boumans, *Syntax of Codeswitching*, 90–103.

³⁵ Myers-Scotton, *Dwelling Languages*, 77–78.

³⁶ A system morpheme is defined by Myers-Scotton as any lexical item belonging to "any category that behaves quantificationally in a model-theoretic semantic sense." This includes quantifiers, determiners and possessive adjectives. It includes copula and do verbs, as it is neither a *thematic role assigner* nor *thematic role receiver*, either of which defines content morphemes (most verbs and nouns). Ibid. 100–1. For an overview of system versus content morphemes see also Fromkin et al., (2003), *Introduction*, 104.

³⁷ Myers-Scotton, *Dwelling Languages*, 57, 99.

³⁸ Ibid. 229–230.

³⁹ System morphemes of EL may appear if they could be construed as signalling lexically internal relations (e.g. plurality). Ibid. 98.

⁴⁰ "First, even if the EL realizes a given grammatical category as a content morpheme, if it is realized as a system morpheme in the ML, the ML blocks the occurrence of the EL content morpheme. Second, the ML also blocks an EL content morpheme in these constituents if it is not congruent with an ML content morpheme counterpart in terms of thematic role assignment. At a third level, congruence between EL content morphemes and ML content morphemes is in terms of their discourse or pragmatic function." Ibid. 121.

Islands, entirely in EL, result whenever an EL morpheme is not permitted under either *The ML hypothesis* or *The Blocking Hypothesis*.⁴¹

Matrix Model and Written Language

The *Matrix Model*, as developed by Myers-Scotton (1993), deals with *the spoken language*. Spoken language is, in its spontaneous nature, more apt to various borrowings. It goes without saying that a bilingual person will find it easier to accept elements from the donor language in a conversation, as the communication is instant, than when writing the language. This is so because the written language is a formalized, constructed language, bound by artificial grammatical rules that have been learnt. These rules make the written language more resistant to change than what is the case with the faster developing and more vivid spoken language. Further, the writer is to a larger or lesser extent aware of these rules and has, in addition to that when writing, more time for consideration in creating his or hers sentences.

The *Matrix Model* and influence of Hebrew on Arabic

Our basic assumption is that this model could be applicable, not only on conversations, but also on written language.⁴² But is it an acceptable model when studying the influence of Hebrew on Arabic? Probably the best way to find the answer to that question is by giving some examples that then will be tried according to the model.⁴³

The following examples all contain obvious, or highly probable, Hebrew influence on Written Arabic. Some cases are borrowings in the form of EL constituents (morphemes), while other cases are less easy to detect.⁴⁴

A) Borrowings as EL constituents and as *Islands*

Borrowings, according to Myers-Scotton, appear as EL constituents (morphemes) in the sentences of ML with the morphology of EL changed to conform to the rulings of the *Matrix*. But those that have not conformed to the rulings of the *Matrix* are observable

⁴¹ Or of course entirely in ML, which is the case when no activity from EL is allowed. Ibid. 137.

⁴² *Codeswitching* is in the definition of Myers-Scotton clearly intended for spoken language. The basic principle could in our view nevertheless be applicable also in the writing. Myers-Scotton. (1993), *Dwelling Languages*, 3.

⁴³ In the study of Myers-Scotton, those EL lexemes that are found in three or more conversations are counted as borrowed forms, while fewer occurrences are CS forms. (p. 15) This distinction is not sustained in the present study.

⁴⁴ All the examples are found after studying a representative corpus consisting of Israeli publications in Arabic. These are: "Al-Fağr al-Ğadīd" of 1/1 2006 and 2/1 2009, "As-Salām" of 2/1 2009, "Hadīṭ an-Nās" of 5/12 2008, "Kull al-'Arab" of 5/12 2008, "Al-Ittiḥād" of 18–19/12 2008, "Bānōrāmā" of 5/12 2008, "Al-Aḥbār" 2/1 2009, "Al-'Unwān ar-Ra'īsī" of 2/1 2009, "Aṣ-Ṣinnāra" of 2/1 2009, "Ṣawt al-Ġalīl" of 2/1 2009, "Ṣawt al-'Arabī" of 2/1 2009, "Al-Markaz" of 2/1 2009, "Arab ad-Dāḥil" of 2/1 2009, and "Laylak" of No 110 June 2009.

as isolated *Islands*. The *Islands* are thus EL constituents with the EL morphology intact. Now, this part of the theory of Myers-Scott is applicable also for written Arabic. We will see examples of this below.

The orthographic signs are missing as is the normal case in media text, but if read out in accordance with the grammatical rules of Modern Standard Arabic these endings should appear with conformity to ML. But there also examples where the orthographic signs are not even needed in order to establish conformity with the ML. See the behaviour of the following examples:

اقدمت بلدية الناصرة على تحويل مبلغ 300 شاقل لخزينة فريق الممتازة اخا الناصرة...⁴⁵

One way to establish conformity also without any orthographic sign written is in the numbers. Above is the currency of Israel, underlined. The pronunciation in Arabic of the above is *šaqil*. It should be read in the genitive, *šaqilin* (or rather *šaqila* as it is considered a diptote). Now, if we compare with the original version of the EL constituent, the Hebrew text on a *one hundred Shekel* note is *me'ah šeqalim*, that is 'one hundred shekels' with the currency in the plural. The ML tells us that the currency must be in the singular genitive after hundreds, and it is indeed. So there is, in this case, conformity to the rulings of ML. But there is more to it in this example. 'Shekel' on the 100 shekel note is, when written in Arabic, also in the singular, but more in accordance to the Hebrew word than what is found in our example above, thus the odd *šīqil*. What we see then in this example (*šaqil*) is conformity to ML not only by writing the EL constituent in the singular (and, if spelled out, in the genitive), the writer also conforms the morphology to an already existing pattern in Arabic, that of *ism al-fā'il*. The above example is thus an EL constituent conforming to the morphological and syntactical rules of the *Matrix*. It is not an *Island*.

Let us see but another example from the same page, this time without numbers:

في اشارة الى الوضع القائم حاليا في فريق هبوعيل كفرنا ابدى كل من...

In this example we also find the EL as a borrowed name from Israeli culture. Here, also, there is conformity to the *Matrix* in the case ending, as well as violation of it as the Hebrew definite article has been kept unchanged, together with something very close to the Hebrew phonology. Here it is found as the name of an Arab football club. The Hebrew article is *ha-*, and the origin in Hebrew is pronounced *ha- pō'el*, which is transformed into the underlined Arabic above as *ha-bō'īl*. Thus from a morphological aspect it is to be counted as an *Island* as the EL morphology seems to remain intact. However, if the case endings are read out it nevertheless reveals conformity to the matrix. The case ending would be *-a*, as it stands in the genitive and as it is a diptote. And,

⁴⁵ "Al-Markaz" of 2/1 2009, p. 23.

syntactically, it furthermore conforms to the rulings of the matrix with its correct position in the genitive construction. The latter also qualify for an *Island*.⁴⁶

These are but two examples that could be supported by hundreds of others in the examined corpus. The common denominator is that both *The ML hypothesis* and *The Blocking Hypothesis* according to Myers-Scotton are entirely adequate to single out *Islands* of Hebrew in Written Arabic. Borrowings of morphemes from Hebrew appear in Written Arabic as EL constituents, since they conform to the rulings of the Matrix not only when it comes to its position and function in the syntax, but also in the unseen, but present, case endings. Or else they appear as *Islands*.

So far, the *Matrix Model*, is suitable for examining Hebrew influence. Both of Myers-Scotton's hypothesis are met as both the order of morphemes does not violate ML morpheme order, and, all syntactically relevant system morphemes come from the ML.

But there are several areas where these rulings are simply irrelevant when studying Hebrew influence.

B) Word-order

The most controversial point when it comes to the *Matrix Model* and its suitability for written Arabic is when studying word-order, or the Order of Meaningful Elements in the Sentence. The *Matrix* hypothetically sets the morpho-syntactical frame for the EL constituents, and, as seen in the previous examples, it may indeed do this. When, however, it comes to entire sentences, possibly without any EL morphemes, things turn problematic.

The Classical Arab grammarians did not see the order of meaningful elements in the sentence as a major problem to be concerned with. Their definition of sentence typology in Arabic is basically twofold: a verbal sentence is one beginning with a verb, and a nominal sentence is one beginning with a noun. Both kinds of sentences are grammatical.

Also, Western authorities on Arabic such as Brockelmann, Wright, Fischer, Reckendorf all acknowledge this basic separation. Generally they consider both Classical Arabic (CA) and the modern development of Modern Standard Arabic (MSA) to be Verb-initial albeit with an option of SVO and even VOS order.⁴⁷

When it comes to MSA in newspapers, which is the corpus studied for this article, SVO seems to have preference in headlines. In a quantitative study by Parkinson, he presents a 92% SVO in the headlines as well as 39% in the editorials.⁴⁸ We have

⁴⁶ This kind of example is common in North African Arabic/French CS. There, in identical fashion, the French determiner + noun fits as *Island* in the larger ML frame. The example given by Myers-Scotton is *rebça dja: les appartements*. This is taken from M. Lahlou, (1989), "Arabic-French Code-switching in Morocco", paper presented at African Linguistics Conference, Univ. of Illinois, Urbana. Ibid. 154. See also A. Bentahila, and E.D. Davies, (1983), *The Syntax of Arabic-French Code-switching*, in "Lingua" 54, pp. 301–30.

⁴⁷ S.O. Dahlgren, (1996), *Word Order in Arabic* (Gothenburg), 11ff.

⁴⁸ A similar point is made also by D. Parkinson, (1981), *VSO to SVO in Modern Standard Arabic: A Study in Diglossia Syntax*, "Al-'Arabiyyah" 14 (1981), pp. 28ff. For similar results see also M. Ennaji, (1995), *A Syntactico-*

elsewhere confirmed this ambivalent standing of SVO or VSO word-order, both in main and secondary clauses.⁴⁹ From this, we may conclude that MSA of newspapers will not give a very dominant indication nor of SVO or VSO.

That, if MSA of newspapers has SVO or VSO word-order, is the first part of the problem of determining Hebrew influence on Written Arabic. The second part of the problem lies in establishing the origin of influence.

The variants of Modern Colloquial Arabic (MCA) are, mostly, considered SVO.⁵⁰ Still, previous studies on word-order in MCA gives a somewhat varying result. Thus, Driver gives SVO predominance but with VSO also prominent. Feghali claims that SVO is the most common feature for MCA.⁵¹ Among the more recent, Parkinson as well as Versteegh share the opinion that SVO is the basic order of MCA.⁵² Holes, to mention another, also states that urban MCA of the Eastern Mediterranean have SVO as the normal Word Order. While Dahlgren, finds that MCA of the Eastern Mediterranean in general has a strong preference also for VSO in the narrative.⁵³

Modern Hebrew is at large a SVO language. The subject is placed before the verb in most possibilities with verbs in the sentence. But there are examples of the opposite as well, as in *yarad šeleg li-fnei še-yarad gešem* (*Fell snow before that fell rain: VS).⁵⁴

In short, using the *Matrix Model*, in order to establish influence from Hebrew on the word order of Written Arabic is no easy task. The MSA of media texts generally in Arabic reveals a very high frequency both of SVO and of VSO order, a finding confirmed by us also when it comes to the Arabic of the Arab Israeli press. The source of influence could, in addition to that, actually be both Hebrew, considered a SVO language mostly, or, if indeed SVO, MCA, that is Palestinian Colloquial. If both are indeed SVO the source of influence is hard to tell.

Semantic Study of the Language of News in Morocco, "International Journal of the Sociology of Language" 112, pp. 97–111. See also N.M.S. Abdelfattah, (1990), *Linguistic Changes in Journalistic Language in Egypt, 1935–1989: A Quantitative and Comparative Analysis* (Austin). See also N. Haeri, (2003), *Sacred Language, Ordinary People: Dilemmas of Culture and Politics in Egypt* (New York). See also for similar results R.F. Hussein, & M.R. Zughoul, (1993), *Lexical Interference in Journalistic Arabic in Jordan*, "Language Science" 15 (3), pp. 239–254.

⁴⁹ T. Lindquist, (2010), *Different Gender, Different Arabic? The Case of Israel*, "Acta Orientalia".

⁵⁰ B. Ingham, (1994), *Najdi Arabic, Central Arabian* (Amsterdam/Philadelphia). Bedouin MCA is not considered in this study. We assume that influence from this MCA on MSA of the newspapers is insignificant.

⁵¹ G.R.A. Driver, (1925), *Grammar of the Colloquial Arabic of Syria and Palestine* (London); M. Feghali, (1928), *Syntaxe des parlers arabes actuels de Liban* (Paris) 116–117.

⁵² Parkinson, *VSO to SVO*, p. 25; K. Versteegh, (1984), *Pidginization and Creolization: The Case of Arabic* (Amsterdam/Philadelphia), 21 and 79. Versteegh assumes the reason for a shift from CA VSO to MCA SVO is due to a "pidginization process" that affected all MCs when all the new Muslims had to learn Arabic during Islam's early expansion.

⁵³ Dahlgren, (1996), *Word Order*.

⁵⁴ L. Glinert, (1989), *The Grammar of Modern Hebrew*, (Cambridge), 127. A randomly chosen article from the biggest daily in Israel, *Yediot Aharonot*, of the 21/9 2009 p. 19, confirms the above preference for SVO word-order of MH, albeit this Order seems to be reversed frequently in the narrative as well as in secondary clauses.

Influence can nevertheless be established. It is done by comparing publications exposed to MCA, that is Palestinian Colloquial, which in the one case is also exposed to Hebrew, as the Arab Israeli Press, and in the other case that is not exposed to Hebrew, as publications like “Filasṭīn” from the Gaza Strip or “Al-Ayyām” from the West Bank. If the result gives differences in word-order, these are indications of different influence.⁵⁵ A few randomly selected articles give us the following statistics of word-order (only sentences containing verbs are counted):

“Filasṭīn”⁵⁶ and “Al-Ayyām”⁵⁷ has in the examined article an average of 70% in favour of VSO word-order in the main clauses. Secondary clauses as well seem to have VSO word-order as the preferred choice, albeit less dominantly so, with an average of 62%. Considering the limited size of corpus, these numbers must be treated with caution. Nevertheless, the indication is in favour of VSO word-order in both main and secondary clauses.

If we then compare the results from this sample to the results of our corpus from Arab Israeli Press, we do find a significant difference when it comes to word-order.⁵⁸ In main clauses VSO has only a slight overweight of 55%, while in secondary clauses SVO word order is actually the preferred one with 61%.

What these results, albeit only indications, tell us, is that there seems to be Hebrew influence on Word Order. The Order differs between publications under possible influence from either only MCA, or, both MCA and Hebrew. Finally, and of particular interest in this article, this kind of influence is not acceptable in the *Matrix Model*.

C) Tempus

One field of probable influence from Hebrew lies in the function of DPs or more clearly put, in the difference between the Hebrew present tense, *beinōni*, and the Arabic *ism al-fā'il*. The Hebrew tense-function influences Arabic, thus giving *ism al-fā'il* tense value. Elsewhere, we have found indications of this, and its implications stand out of the *Matrix Model*, since that kind of influence is observable (also) without any visible EL constituent.⁵⁹ In our previous observation of EL constituent *ماحش* (*māḥiṣ*), the original version of which is in EL actually no lexeme but rather an abbreviation of no less than three words, appear in MSA with the morphology of *ism al-fā'il* stem I, and, with a function of Present Tense. As such it conforms to the rulings of ML. The

⁵⁵ In fact, the *Matrix Model* is not suitable for an investigation of Word Order in this case. If the result is that influence from Hebrew is established, this means that the syntax of the EL goes against the rulings of the *Matrix*, which according to the model is unacceptable. Previous studies, see above, have argued for influence on MSA from MCA thus increasing its tendency for SVO word order. That too is a violation of the rulings of the *Matrix*, thus making it unsuitable for any investigation on influence on word order (whatever the source) on Written Arabic.

⁵⁶ 29/12 2009, 6/1 2010.

⁵⁷ 29/12 2009, 6/1 2010.

⁵⁸ The same kind of articles is examined in all the material. These are columns (editorials) expressing political or cultural opinions, or analysis of current events. No reports of news are included. With likelihood this fact has implications on the results. Previous studies have to a large extent included also news.

⁵⁹ T. Lindquist, (2011), *Semantic Borrowings and Grammatical Change in Written Arabic in Israel under the Influence of Hebrew: the Function of DPs and the Peculiar Change in ماحش*.

abbreviation in Hebrew is מ"ח *makhaš*, short for *Ha-makhlāqah le-kheqirōt šotrīm*, that is a judicial department of the Israeli Police, a kind of 'Internal affairs': *The Section for Investigating Policemen*. But the abbreviation seems also to have developed into a word by its own right,⁶⁰ with a function of Present Tense. There can be no other explanation as the found example, one of two found cases of the development, would otherwise not be grammatical.

- (1) سكب الطعام والشراب الساخن عليه ومأحش تحقّق⁶¹
 (2) تواصل دائرة التحقيق مع رجال الشرطة مأحش التحقيق في الشكوة التي تقدم به الشاب الفلسطيني⁶²

In example no. (1) the short form is an EL constituent (not an *Island*) inside the sentence in (MSA) that seems to fit rather fine. It conforms to both syntax and morphology. In order to illuminate the EL more clearly, I placed the abbreviated version of Hebrew inside the sentence instead of translating it: *He spilled food and hot drink over him and م"ח investigates*. Here it is the subject of the verb 'investigates' and is in the nominative case. As such it conforms to the rulings of the ML.

In example no. (2), however, the short form is not possible (not as an *Island* either). For the abbreviation to fit in the sentence something would need to be added in (MSA), such as e.g. *taqūmu bi* or *yaqūmu bi* (depending on gender in the chosen translation) after it. Otherwise the sentence is not grammatical. As it is written, with an addition, it would be: *The rounds of investigation with the policemen continues م"ח (conducts*) the investigation... into the complaint that was forwarded by the young Palestinian*. Could it not then be a question of a simple mistake in writing? It could indeed. But it is unlikely as this way of writing repeats itself elsewhere.⁶³ A more reasonable explanation is a development of the EL into an Arabic *ism al-fā'il* that expresses T-function, (with likelihood) borrowed from Hebrew Present Tense.

And this, the borrowing of the Present Tense function, is not observable in the *Matrix Model*. The function neither conforms to nor violates the rulings.

D) Other areas of possible influence not included in the rulings of the *Matrix*

In the following, we will present superficially two additional areas where influence from Hebrew on Written Arabic can appear. This kind of influence is up till date, to our knowledge, not proven, but nevertheless highly probable.

Van Mol has found local variations in the use of MSA complementary particles in radio broadcasts as well as in word-order. He investigated broadcasts from three different

⁶⁰ The process of abbreviations becoming lexicalized is sometimes called *clipping*. Fromkin et al., (2003), 97.

⁶¹ "Al-Fağr al-Ğadīd" of 1/1 2006, p. 9.

⁶² Ibidem.

⁶³ I also observed an identical expression as in the second example (that is مأحش التحقيق في الشكوة) in a radio broadcast by the local station of Nazareth of the 13th of April 2008. Also on that occasion it was used in connection with a police investigation.

countries, Algeria, Egypt and Saudi Arabia, with the same MSA used in all areas. Still, variation does exist when it comes to frequency in the choice of complementary particles.⁶⁴ Van Mol suggests that cultural differences have caused the variation. Similarly, Hebrew influence could also make a less frequent grammatical morpheme appear more frequent, if the morpheme in question adopts meaning or function from a Hebrew counterpart.

The problematic issue related to the *Matrix Model* is that there is no EL constituent, nor any *Island*. Lexemes, sentences, morphology and syntax are all entirely MSA, and yet we are faced with probable influence from Hebrew.

Style is also an area where the *Matrix Model* does not help us establish if influence is at hand or not. Yet influence is a great probability. How may we argue for that opinion? Well, it was influence from Europe and the USA, through Arab writers that read literature in English and French, which initiated the transformation of Arab literature into its modern era.⁶⁵ In the same way, influence from different styles in Hebrew is a probability on an Arab Israeli writer, who masters Hebrew, who works equally well on Hebrew as on Arabic, and, who every day follows television in Hebrew, reads the major newspapers of the country, in Hebrew, speaks with Hebrew speaking friends, in Hebrew, and maybe even read much literature in Hebrew. To claim that all this contact with Hebrew cannot influence his or her style in Arabic, just as did the contact ones with literature, media and science in English and French, is close to absurd.

What is 'style' then? Style could include the above, the choice between two grammatical variants in MSA. Style is, also, a preference for main or secondary clauses, of sentence length, of many or few adjectives, of how to use and which adverbs to use. Absolute Object, so frequently used in many an Arabic text, is but one interesting subject in connection to this. All the previous examples as well as others reveal the style of writing.

Elsewhere, we have examined grammatical differences in Written Arabic depending on Gender. That investigation included some of the suggestions for *style* above. If we compare only the average percentage found of secondary clauses (as opposed to main clauses) between the Palestinian publications above and our corpus of Israeli Arab Press, we find that some 51% are secondary clauses in the two Palestinian publications, to be compared to 43% secondary clauses in the Arab Israeli Press. Again, these figures are indications in need of further confirmation. Nevertheless, they hint towards a very likely probability of variations in styles of writing. These variations we suggest come from different surrounding environment and more specifically from Hebrew influence.

Now, Stylistic differences, however, will go undetected in the *Matrix Model*, as it is, with or without influence, nevertheless conforming to the rules of the *Matrix*. Like in the previous example it is entirely in Arabic, yet with a possible influence from Hebrew.

⁶⁴ M. Van Mol, (2003), *Variation in Modern Standard Arabic in Radio News Broadcasts: a Synchronic Descriptive Investigation into the Use of Complementary Particles* (Leuven).

⁶⁵ A. Ayalon, A., (1995), *The Press in the Arab Middle East: a History* (Oxford).

Concluding remarks and further studies

When studying Hebrew influence on Written Arabic in Arab Israeli Press, it must be concluded that the *Matrix Model* is at least partly suitable to use.

Certainly, in all that belong to the surface structure, as seen in the examples above, the *Matrix Model* actually functions, with EL constituents having conformity to the rulings of the ML, or appearing as *Islands*.

Word-order is a particularly problematic area when it comes to establishing Hebrew Influence. In fact, the problem has three parts: The first is the ambiguity of whether the MSA of Arab Israeli press (as well as other Arab Media MSA) is SVO or VSO primarily. The second is the ambiguity of the source of Influence, that is whether it is MCA or Hebrew that is influencing Word-order, and of course, an additional complexity is if MCA for certain in a SVO variant. The third part of our argument goes completely against the usefulness of the *Matrix Model*. Actually, if the MSA at hand would clearly be favoring VSO Order and the source is Hebrew (with SVO Order mostly), then the ML would have increased SVO under Hebrew influence, which violates the *Matrix*. Therefore, observable Hebrew influence on the basic Word Order, is not compatible at all with the two major hypothesis of the *Matrix Model*.

Giving T-value to the DP in Arabic, through Hebrew influence from its basic present tense, on the other hand, stand completely at the side of the *Matrix Model*. There are indications towards such an influence. The morpheme in our example is, however, in conformity with the Matrix, both in Syntax and Morphology, but Hebrew influence on its T-value cannot be detected within the frame of the *Matrix Model*.

The same goes for other kinds of influence, the consequent changes of which are subtle and difficult to confirm without a major and systematic comparison of a large corpus material. One such case of likely influence is in MSA variation. If less frequent variants in MSA are used more frequently in Israel, and in Israel only, in comparison to other areas. Then the reason for this variation may very well be a case of Hebrew influence. Still, it is nevertheless MSA in conformity with both syntax and morphology and this influence is not observable in the *Matrix Model*.

Style, finally, is probably an obvious case of Hebrew influence, where the *Matrix Model* is not applicable. This influence, as well, will take place without any visible EL constituent, and, naturally, with full conformity to the rulings of the Matrix. It is entirely in Arabic, while under influence.

To summarize our conclusions

The *Matrix Model* is partly useful for studying Hebrew influence on Written Arabic. It is not useful when studying probable influence in areas not visible in either syntax or morphology.

For those kinds of influence other hypothesis and models need to be developed to complement the *Matrix Model* of Myers-Scotton.