



Arabizi: A Linguistic Manifestation of Glocalization in the Arabic Language Area? (working paper)

Giulia Brabetz, Freie Universität Berlin

Maydan: rivista sui mondi arabi, semitici e islamici 2, 2022

<https://rivista.maydan.it>

ISSN 2785-6976

Reference:

Brabetz, Giulia. 2022. "Arabizi: A Linguistic Manifestation of Glocalization in the Arabic Language Area?", *Maydan: rivista sui mondi arabi, semitici e islamici 2*. 103-129. <https://rivista.maydan.it/maydan-vol-2/pubblicazioni/>

Arabizi: A Linguistic Manifestation of Glocalization in the Arabic Language Area?

Giulia Brabetz

Freie Universität Berlin

giulia.brabetz@fu-berlin.de

ABSTRACT

As the density and pace of the world's interlinguistic connections accelerate through globalization, the reciprocal exchange of global and local language resources impacts the development of both. This paper investigates the linguistic characteristics of the sociological concept "glocalization" and analyzes the Latin-based orthographic Arabizi variety from this perspective. The Arabizi variety displays mainly colloquial forms of Arabic in different applications of Computer-Mediated Communication (CMC) (Sullivan 2017:13-19). Based on sociological and linguistic research on glob/calization and digitization, this paper defines four linguistic features of glocalization: digitization, linguistic mobility/translingual practices, the hegemony of the English language/Latin alphabet, and bottom-up construction of local identities through digital resources (Crystal 2001; Danet & Herring 2007b; Blommaert 2010; Coupland 2010). Drawing on more than 30 studies about Arabizi from each of the five Arabic language areas and empirical examples, the results of this analysis imply that the Arabizi variety is characterized by said linguistic features of glocalization and hence, constitutes a linguistic manifestation of glocalization in the Arabic language area.

KEYWORDS

Arabizi / chat alphabet / glocalization / digitization / linguistic heterogenization

1 - Introduction

The interconnectedness of the world and the digitization of human communication continues to advance due to globalization. In this work, "globalization" refers to the «enhancement of worldwide social processes interconnecting even the most distant places on our planet» due to the «accelerated compression of time and space» (Rizman 2015:2). In recent years, this enhancement of social processes occurred largely via networked communication technologies such as the Internet. These technologies alter our ways of exchanging information and thereby called a new area of communication into being: Computer-Mediated Communication (CMC). This form of communication «involves sending messages through computer networks such as the internet» (Liang &

Walther 2015:504). In the context of CMC applications, new styles and varieties of language have arisen,¹ among them an orthographic variety that is analyzed in this paper: Arabizi.

With the advent of the Internet in the 1960s and of the World Wide Web in the 1990s, their textual input systems were solely based on the Latin alphabet (Couldry 2012:2; Crystal 2012:115). For people equipped with non-Latin-based linguistic resources (such as Arabic), this resulted in the need to develop a Latin orthography for expressing their respective varieties in various CMC applications. A new way of writing Arabic emerged in a decentralized manner during the 1990s in the context of CMC – the Arabizi variety. This orthographic variety uses Latin letters and the Arabic numerals adopted by the Western world to write local varieties² of the Arabic language continuum.³ In this paper, the term “variety” is defined as a «form of a language seen as systematically distinct from others» (Matthews 2014b).

Several researchers have investigated the Arabizi variety, its (socio-)linguistic features, impact on communication styles, relation to digitization, and significance in global as well as local contexts.⁴ In some Arabic areas, the use of Arabizi is controversial as it is frequently seen as a threat to the Arabic language (al-Shaer 2016). On one end of the spectrum of opinions are the voices of Arabic language purists who oppose any «hybrid language varieties» (Alswailim 2017:1) and condemn them as direct threats to one of the pillars of Arabic identity: the Arabic language. On the other end of the spectrum is the sentiment that Arabizi does not constitute any threat to the Arabic language, despite its use of the Latin alphabet. This position, instead, regards Arabizi as a resource for constructing the Arabic identity of future generations (Abu-Liel & Eviatar & Nir 2020). This controversy is an expression of the concern that local identities are increasingly destroyed by the homogenization processes triggered by globalization. However, although Arabizi is characterized by traits of global interconnectedness, it also exhibits features of local rootedness. These features relate to the expression and spread of local Arabic varieties in the global digital space. Recent research on globalization has considered the concept in new ways, adding the term “glocalization” to the critical vocabulary (Kraidy 1999; Lee & Barton 2011; Robertson 2012; Rubdy & Alsagoff 2013; Roudo-

¹ For further information, see Crystal’s (2001:7) concept of «netspeak».

² Due to the colonialist implications of the nomenclatural division into language and dialect as well as the insufficient applicability of this division in global contexts, the latter term “dialect” is deliberately avoided in this work. Instead, this paper examines linguistic resources in form of “varieties”, including spoken and written, standardized and locally differentiated linguistic resources (Phillipson 1992:38-39; Crystal 2001:6; Blommaert 2010:1-27).

³ This continuum is structured according to geographical distribution on the horizontal level and according to differing prestige layers (from Qur’anic Arabic to local varieties) on the vertical level (Blommaert & Dong 2010:368; Albirini & Chakrani 2017).

⁴ For a detailed overview, see section 3.

metof 2016; Roudometof 2019). The concept of glocalization rethinks globalization from a more holistic perspective, claiming that globalized networks enable local identities and languages to develop and spread globally in the digital space. In the context of (linguistic) glob/calization and digitization (Robertson 1995; Crystal 2001; Blommaert 2010; Robertson 2012; Roudometof 2016; Roudometof 2019), the question arises if the Arabizi variety really is a manifestation of globalization, or rather of glocalization.

This paper attempts to establish a linguistic framework for glocalization and analyze the Arabizi variety from this new perspective. Therefore, the second section offers an extensive review of sociological literature on glocalization and its constituent parts: globalization and localization. Four defining features of glocalization become apparent: digital networking, the global dominance of local phenomena, increased human mobility, and a bottom-up construction of local identities via digital resources. The third section presents the empirical subject of this paper, the orthographic Arabizi variety. The fourth section connects the priorly defined features of glocalization with corresponding research results in linguistics to determine that glocal linguistic resources can be defined by the following four features: usage in the context of CMC while carrying features of written and spoken language as well as traces of digitization, the dominance of the English language and/or Latin alphabet, mobile transfer of linguistic phenomena, expressed in translanguing practices and the despatialization of language, as well as identity construction through non-standardized varieties in the digital space. Based on the findings of researchers in Arabic studies, this section presents an evaluation of the Arabizi variety considering and explaining four expressions of linguistic glocalization: arithmographemization in the context of CMC, digraphia with the Latin alphabet, code-switching with English and/or French, and digital display of colloquial Arabic varieties that operate in the identity construction of the global Arabic youth. Concluding, the sociological features of glocalization, their placement on the spectrum of homogenization versus heterogenization, the corresponding linguistic framework for glocalization, and its expressions in the orthographic Arabizi variety are utilized to answer the initial research question: does the Arabizi variety constitute a manifestation of glocalization in the Arabic language area?

1.1 Examples of Arabizi

Below you find two examples of Arabizi which exhibit the four features of linguistic glocalization that constitute the main research results of this paper. The analysis in section 4 will refer to the examples below in addition to the examples provided in the existing literature on Arabizi.

Example 1:

Arabizi: «*Ne7na mech open minded ne7na bala akhle2*».⁵

Translation: “We are not open-minded, we don’t have manners”.

Example 2:

Arabizi: «*Ma fi wa2et lal enhiyar chteghil w enta 3am t3ayyit*».⁶

Translation: “There is no time for confusion [,] you work as you are crying”.

2 - Glocalization – globally networked and locally anchored

2.1 Globalization

In the fields of economics and the social sciences, Levitt⁷ and Robertson (1983) coined the term «globalization» in their respective 1983 publications. They use this term to describe a compression of global interconnectedness. A generally accepted definition of globalization was provided by Robertson in 1992 when he defined globalization as the «compression of the world» (Robertson 1992:8) into the proverbial village. Compression refers here to the «accelerated pace of contact among cultures, peoples, and civilizations or the sense that the world is ‘shrinking’» (Robertson 1992:8). According to Victor Roudometof (2016:10), this compression is triggered by the reduction of spatial and temporal distances. This reduction is accredited to the means of digital (communication) technologies, especially the Internet, whose potential is evident in the realities of transnational cosmopolitanism (Roudometof 2019:803-804; Marvin 2020:1-4). The latter concept refers to the increased mobility of individuals and groups, expressed for example in mass migration or digital nomadism, which ultimately leads to a world where national borders are permeable, inhabited by a global community of «world citizens».⁸

In their research on globalization, Martin Albrow (1996:88) and Roudometof (2019) have provided another widely accepted definition: «globalization refers to the general notion of the spread of any specific topic, process, condition, artefact, blueprint, idea or cultural item to an inter-regional, planetary or transnational level» (Roudometof 2019:802). Linguist Jan Blommaert refers to this definition in his work and defines the

⁵ “Sarcasmbeirut”. Instagram. <https://www.instagram.com/p/CXGJvOIs9HC/>. Last accessed 28/01/2022.

⁶ “Sarcasmbeirut”. Instagram. <https://www.instagram.com/p/CcavxrpMl4B/>. Last accessed 01/08/2022.

⁷ See “The Globalization of Markets”. Harvard Business Review. <https://hbr.org/1983/05/the-globalization-of-markets>. Last accessed 29/11/2022.

⁸ See “Cosmopolitanism”. Oxford Reference. <https://www.oxfordreference.com/view/10.1093/acref/9780198794790.001.0001/acref-9780198794790-e-149?rskey=8Y1GYk&result=158>. Last accessed 09/11/2022.

term “globalization” accordingly as the process of rapidly advancing interconnectedness of academic, economic, political, cultural, and social ideas throughout the world (Blommaert 2010:1). This is accompanied by the exchange of capital, commodities, people, symbols, narratives, and discourses. As financial services, bureaucratic registration, and interpersonal communication have all moved to the Internet, this constitutes a significant intensification of electronic globalization via digitization and technologization.

The different processes of globalization were first specified by anthropologist Arjun Appadurai (1990; 1996). He defines globalization as a constituent feature of modernity that implies global «cultural flows» (Castells 2009) which result from the interplay of five transnational «scapes» (Appadurai 1990:296-299):

- «Ethnoscape»: global migration and mobility of people;
- «Technoscape»: technological global networks such as the Internet;
- «Financescape»: the interconnectedness of global financial markets;
- «Mediascape»: global dissemination of narratives by increasingly locally independent media actors, including social media;
- «Ideoscape»: common global ideologies based on the prescriptive relationship of reading, representation, and publicness defined by European Enlightenment and its iterations.

These scapes emerge from the constituent drivers of globalization, namely mass migration, deterritorialization, electronic data processing, and transmission. According to Appadurai (1990:296-303), they can be understood as spaces without locality. Their interplay adds a dimension of juxtaposition to the concept of globalization: cultural homogenization versus cultural heterogenization (Appadurai 1990:295-296; Appadurai 1996:32).

2.2 Localization

The *Oxford Dictionary of Media & Communication* defines “localization” as (1) the adaptation of global products and services to local needs but also (2) a reactionary resistance to the homogenizing effects of globalization.⁹ Therefore, localization promotes diversity and the preservation of cultural forms which can be directed against the homogenizing tendencies of globalization.

According to Robertson (1992) and Roudometof (2019), the social sciences attach

⁹ See “Localization”. Oxford Reference. <https://www.oxfordreference.com/view/10.1093/acref/9780198841838.001.0001/acref-9780198841838-e-1555?rskey=V7kmaf&result=1802>. Last accessed 01/11/2022.

less importance to the local than to the global as they tend to consider the former only in combination with the latter. Presenting this as a conceptual inaccuracy, Robertson and later Roudometof promote a complementary view of the relationship between local and global, which provides the semantic ground for Robertson's neologism, «glocalization» (Robertson 1992:172). Glocalization emphasizes the relevance of local places for the construction of global spaces. This idea was prefigured by Hall (1991), whose works emphasize the reciprocity of the local and the global, although he failed to coin his own term for the concept (Hall 2019; Hall & Morley 2019).

According to Hall, the abstract space of global flows reinforces the construction of local identities, often in the form of heterogeneous minorities. The identity-constructing narrations of these minorities are often developed rather bottom-up than top-down (McAdams & McLean 2013; Hall 2019). Bottom-up identity construction is coined by decentralized and heterogeneous narratives that stitch together a group's or individual's identity like a patchwork rug, in contrast to streamlined and mass-communicated homogeneous identity narratives. According to Horan (2000), this bottom-up form of identity construction is buttressed by the information technology revolution as it creates further opportunities to creatively construct local identities using globally available digital resources. From these findings, it can be concluded that localization is the process of a local, bottom-up identity construction, which utilizes digital tools (Roudometof 2019:806-810).

According to sociologist Ruediger Korff (2003), localization also includes a dimension of power, since the decision about which local forms are allowed to prevail globally depends on their capacity to proliferate local concepts. Under the circumstance of local control over a resource in global demand, local knowledge becomes a global condition for its usage. Thus, Korff not only offers a convincing argument that the global can be of local origin, but he also underlines the relevance of local forms to the global level.

2.3 Glocalization

In 1992, Roland Robertson (1992:172) introduced the term «glocalization» to the social sciences in the discourse on globalization. With this, he reconciled the relationship between the local and the global which has often been misrepresented as dichotomous. In Robertson's view, the concept of glocalization specifies the larger concept of globalization, dissolving the dichotomy between local anchoring and global networking, or, as Roudometof (2016:10) puts it: «Local spaces are shaped, and local identities are created by globalized contacts as well as by local circumstances». The synthesis of the discussed concepts of globalization and localization as well as Robertson's (1983; 1992; 1995; 2012) and Roudometof's (2016; 2019) works reveals that glocalization is characterized by the following four features:

- Reduction of temporal and/or spatial distances through digital networking (Castells 2009; Roudometof 2016:10);
- Dominance of distinct local phenomena on a global scale through local resource control, leading to their adaptation in other local places (Korff 2003);
- Reduction of temporal and/or spatial distances through increased (human) mobility (Appadurai 1990:297);
- Local bottom-up identity construction through digital resources (Hall 1991; Horan 2000; Roudometof 2019).

In his work on «The sociolinguistics of globalization», Blommaert (2010:1-27) discusses the metaphor of the world as a village. Blommaert argues that this metaphor implies a cultural homogenization, although he disagrees with the assumption that this implies a linguistic homogenization. Instead of the often-anticipated homogenization as a result of globalization and digitization, Blommaert notices an increase in linguistic complexity due to the growing interconnectedness of trans-local and local varieties, i.e., linguistic heterogenization.

3. The orthographic Arabizi variety

Writing Arabic with Latin letters is not a new phenomenon. As early as 1880, the Arabist Wilhelm Spitta-Bey (1880) had the Eurocentric idea of replacing Arabic with Latin letters but was unsuccessful in his attempt to westernize the Arabic language due to conservative resistance (Abu-Liel & Eviatar & Nir 2020:127). In the context of the Arab and Ottoman Europeanization movements of the 19th and 20th centuries (Halm 2004:96-103), an increasing number of linguists followed Spitta-Bey's idea. For example, reformer Abdul Aziz Fahmi put forward the radical idea of replacing Arabic with Latin letters during a contest to modernize and simplify the Arabic language that was hosted by the *Academy of the Arabic Language* in Cairo 1943 (Yaghan 2008:41). This and similar reformist ideas were seen as direct attacks on one of the culture-constituting pillars of the pan-Arab identity – the Arabic script – and were therefore not implemented due to the efforts of language purists (Halm 2004:18).

The Arabic language enjoys a high status and solid language political support to conserve it. This is due to its role as the liturgical language of Islam and its long, prestigious history which is closely tied to the origin of the Arabic people (Lian 2020:17-47). With the advent of the Internet as a glocal medium for communication in the Arabic-speaking world in the 1990's (Whitaker 2018), this conservative language ideology changed, especially among the younger segments of the population (Sullivan 2017:3-8).

Beginning in the US, digital communication was initially based on the *American Standard Code for Information Interchange* (ASCII) character set. As a text transmission protocol, the ASCII offered 95 usable 7-bit code blocks which were all occupied by Latin

letters and diacritical signs (Warschauer & El Said & Zohry 2002; Danet & Herring 2003; Danet & Herring 2007a). As a result, digital communication media based on the ASCII character set displayed no other scripts than Latin. Because of this limitation, a Latin orthography of locally spoken Arabic varieties, Arabizi, evolved in a decentralized bottom-up process (Gorter 2006:3-4) in different CMC applications, such as social media, chat rooms, blogs, and forums (Abu-Liel & Eviatar & Nir 2019:226; 2020:126).¹⁰ Despite a mass recoding of large parts of the Internet to *Unicode Standard* (UTF) in 1991, which enabled the encoding of Arabic script (Danet & Herring 2003),¹¹ Arabizi continues to be used. Today, Arabizi is even displayed in offline contexts, such as in the teaching of Arabic as a foreign language (Obeid 2019-2019), in street art (Yaghan 2008:46), and on advertising posters (Alomoush 2019:38-39).¹²

The name Arabizi is a neologism containing the words “Arabic” and [ˈɪŋɡlɪzɪ] (“English”). Thus, it describes the central point of this non-standardized orthography: the display of spoken Arabic varieties with the Latin letters of the colonial languages English and French (Sullivan 2017:31-32). Using a technique that Bianchi (2011:41-42) calls «arithmographemization», modern European numerals are used in Arabizi to display Arabic phonemes that have no equivalent in the Latin alphabet. The process of arithmographemization is primarily based on graphic features as it attempts to substitute Arabic letters with similar looking numerals (see Table 1).

Arithmographems in Arabizi	Arabic Letters
2	ق / ء
3	ع
3´	غ
4	ذ
5	خ
6	ط
6´	ظ

¹⁰ See also “Sarcasmbeirut”. Instagram. <https://www.instagram.com/p/CXGJvOIs9HC/>. Last accessed 28/01/2022.

¹¹ See also “UnicodeData-1.0.0.txt”. Unicode. <https://www.unicode.org/Public/reconstructed/1.0.0/UnicodeData.txt>. Last accessed 30/01/2022.

¹² See also “Arabîzî: Lost in Arabic”. Qantara.de. <https://de.qantara.de/inhalt/arabisch-in-lateinischer-schrift-arabizi-lost-in-arabic>. Last accessed 18/01/2022.

7	ح
7'	خ
8	غ / ق
9	ق / ص
9'	ض

Table 1 - Arithmoglyphs in Arabizi according to the works of Palfreyman and al-Khalil (2003), Sullivan (2017:40-41), and Akbar (2019:307-310)

Not only the orthographic level is affected by multilingual practices but also the lexical level. When people transition between different linguistic codes in the same linguistic unit, this process is referred to as «code-switching» (McArthur & Lam-McArthur & Fontaine 2018a). According to Sullivan (2017:39) and Bianchi (2011:256), the lexicon of Arabizi is characterized by code-switching which is related to distinct emotional and thematic contexts. In Bianchi's (2011:310-315) large-scale study on Arabic, English, and Arabizi usage on Jordanian web forums, Arabizi was often related to phatic¹³ expressions and references to Arab culture. English, on the other hand, was used for information exchange in a professional context and sensitive topics, such as homosexuality or politically oppositional opinions. Arabic script was mainly used by Arabic speakers for poetry and/or humor (Bianchi 2011:191-255).

Since Arabizi was never subject to top-down standardization, its orthography remains diverse. Still, the realizations of Arabic phonemes in Arabizi are largely coherent across the Arabic-speaking world. There are some marginal variations, which, according to Akbar (2019:309-310), Kenali, Yusoff, Kenali, and Kamarudin (2016), are determined by social factors of Arabizi users, such as age and level of education. However, there are distinct and consistent differences along the isoglosses¹⁴ of Arabic dialectology, which divide the Arabic-speaking world into five areas according to phonological, morphological, and grammatical differences (Versteegh 2014:192-220). To provide a general overview of Arabizi despite these regional differences, this paper refers to more than 30 studies from all different sub-areas of the Arabic language area (Behnstedt & Fischer & Jastrow 1980; al-Wer 2006:342):

- Arabian Peninsula (Palfreyman & al-Khalil 2003; Allehaiby 2013; Kenali *et al.*

¹³ “Phatic” describes a communication act that mainly performs a social function rather than transferring information (McArthur & Lam-McArthur & Fontaine 2018b).

¹⁴ “Isoglosses” are geo-linguistic boundaries that mark different variations of local varieties, e.g. the isogloss that separates Palestinian from the South Lebanese variety (Versteegh 2014:199).

- 2016; Alghamdi & Petraki 2018; Alsulami 2019);
- Levant (Yaghan 2008; Gordon 2011; Bianchi 2011; Alomoush 2015; Hamdan 2016; Bianchi 2016; Shaer Al 2016; Sullivan 2017; Abu-Liel & Eviatar & Nir 2019; Abu-Liel & Eviatar & Nir 2020; Abu-Liel & Ibrahim & Eviatar 2021; Naboulsi 2021; Bardaweel & Rababah 2022);
 - Mesopotamia (Akbar 2019);
 - Egypt (Warschauer & El Said & Zohry 2002; Björnsson 2010; Darwish 2017);
 - Maghreb (Benítez Fernández 2003; Moscoso García 2009; Daoudi 2011; Hoogland 2014; Caubet 2017; Gugliotta 2018; Masmoudi *et al.* 2020; Younes *et al.* 2020; Younes *et al.* 2022);
 - Arab world, not focusing on a specific region (Abu Elhija 2014).

In the following analysis, the definition of glocalization developed in section 2 is used to derive four linguistic features of glocalization: digitization, linguistic mobility/translingual practices, the hegemony of the English language/Latin alphabet, and bottom-up construction of local identities through digital resources. Based on the studies and examples mentioned above, these linguistic features are then applied to the Arabizi variety to analyze whether and to what extent Arabizi is a linguistic manifestation of glocalization in the Arabic language area.

4. The linguistic features of glocalization in Arabizi

4.1 Linguistic digitization in CMC

According to Castells (2009:355-406) and Roudometof (2016:10), the creation of digital archives through digitization is relevant to linguistic glocalization because it reproduces and preserves written and spoken language modalities independent of time and space. Therefore, digitization makes different language modalities available to an infinite number of humans through Computer-Mediated Communication (CMC). This form of communication is a major aspect of the global «technoscape» (Appadurai 1990) and largely takes place in virtual networks, e.g., in email traffic, forums, or social media (Castells 2009:356). A central topic in CMC research is the relationship between language and writing, together with how digital varieties are to be classified (Herring & Stein & Virtanen 2013). According to linguist David Crystal (2001:28-48), linguistic resources on the Internet are characterized by simultaneous features of spoken and written language. Therefore, he assumes that CMC linguistic resources, or «netspeak» as Crystal (2001:7) calls them, constitute a third modality of language which is coined by mixing features of spoken and written language. To define this linguistic modality, Crystal (2001:7-9) presents seven levels to differentiate and classify linguistic varieties. Only five of these levels concern written varieties, which are graphic, orthographic,

grammatical, lexical, and discursal.

The features of CMC varieties described by Crystal (2001), Herring, Stein, and Virtanen (2013) correspond to the first characteristic of glocalization – reduction of temporal and/or spatial distances through digital networking – as they are produced by the compression of linguistic resources through digital media. Thus, to be considered a manifestation of linguistic glocalization, the concerned variety should be used in the context of CMC and carry signs of written and spoken language. In doing so, the concerned variety should show traces of digital technology on at least one of Crystal's five levels for classifying written varieties in the digital space.

4.1.1 Linguistic digitization in Arabizi

The Arabizi variety emerged and is still predominantly used in the digital context of CMC. As Arabizi displays locally spoken varieties of the Arabic language continuum in written format, it can be considered a combination of written and spoken language, which suits Crystal's (2001:28) definition of digital varieties. The combination of written and spoken language is evident on the lexical level, as can be seen from the inclusion of colloquial expressions such as *mech* ("none", see Example 1) or *ma fi* ("there is no", see Example 2). The mixture of written with spoken language is also evident on the grammatical level, as Arabizi utilizes colloquial verb conjugations in a written format (Sullivan 2017:9; 21). Hence, the blend of written and spoken linguistic features characterizes the Arabizi variety.

Given the fact that Arabizi emerged because of the way applications of CMC are set up, it would be surprising if no signs of digitization were inherent to this variety. And indeed, Arabizi shows features of digitization at the orthographic level, which is characterized by the extension of non-alphabetic signs (such as diacritic signs or numbers). Werry (1996) defined the extension of an orthography with non-alphabetic signs as a feature of written Internet varieties. In Examples 1 and 2, the arithmographems "2", "3", and "7" are used to display the letters "ء", "ع", and "ح". In Arabizi, this process of arithmographemization (Bianchi 2011:117-118) serves the realization of the Arabic phonology in a script that is not designed for it. Hence, the Arabizi variety is coined by signs of digitization, expressed in arithmographemization.

To conclude, the Arabizi variety was developed and is predominantly used in the context of CMC as a written variety that displays features of otherwise predominantly spoken language. Arabizi also bears signs of digitization because its characters include arithmographems to express Arabic phonemes. Accordingly, Arabizi is characterized by indicators for linguistic digitization.

4.2 Linguistic hegemony of English and the Latin alphabet

«If you want to take full advantage of the Internet there is only one way to do it:

learn English, which has more than ever become America's greatest and most effective export». ¹⁵ What *New York Times* journalist Michael Specter points to with these words matches the research results of, for example, Phillipson (1992), Kirkpatrick (2007), East (2008:163-164), and Roudometof (2016:115-17). It is a fact that linguistic glocalization is particularly apparent in the global omnipresence of the English language and its written counterpart, the Latin alphabet.

Contrary to initial fears, this hegemony did not lead to linguistic homogenization, i.e., the linguistic death of minority languages, but the heterogenization of glocal varieties of English (Omoniyi & Saxena 2010). Despite these localized forms of English, the English language remains dominant in international communication, especially in the digital space (Crystal 2012:86-122). Referring to Korff's (2003) argument of local resource control as an indicator of global dominance, this leads to the conclusion that English (and further, the Latin script) has global influence on other local varieties due to its hegemony in digital space.

The Latin alphabet of the former colonial languages (i.e., English, French, Spanish, German, and Portuguese) still controls access to large parts of the most important resource of the information age: knowledge (Crystal 2012:110; 117). Partially, the reasons for this lie in the colonial past itself and the subsequential influence of these languages on the current governmental and educational systems of former colonies and protectorates (Phillipson 1992:109-135). Simultaneously, global knowledge distribution increasingly takes place on the Internet. The Internet emerged in the US and French industries, whose languages utilize the Latin alphabet. While the French experiment in digital communication in form of the videotex system *Minitel* did not work well (Castells 2009:372-375), the American ARPANET of the 1960s became as much a prototype for today's Internet as its English working language became the global standard for communication on the World Wide Web (Crystal 2012:115).

At the beginning of the Internet in the 1960s, the English language and the corresponding Latin alphabet were displayed by the ASCII text transmission protocol. Even after its expansion to an 8-bit code, allowing for indexing 256 characters, it did not provide enough space to include all existing characters. Due to the tight limitations of the ASCII and standardization problems, UTF was introduced in 1991. In its first version, it offered space for about 7000 characters¹⁶ and contains in the current version (as of September 2021) more than 144 000 characters.¹⁷ However, even this capacity is insuf-

¹⁵ See "Computer Speak;World, Wide, Web: 3 English Words". The New York Times. <https://www.nytimes.com/1996/04/14/weekinreview/computer-speak-world-wide-web-3-english-words.html>. Last accessed 29/01/2022.

¹⁶ See "UnicodeData-1.0.0.txt". Unicode. <https://www.unicode.org/Public/reconstructed/1.0.0/UnicodeData.txt>. Last accessed 30/01/2022.

¹⁷ See "Unicode 14.0.0". Unicode. <https://www.unicode.org/history/publicationdates.html#Fo->

ficient to display all existing characters, a number which is estimated at about 170 000. In summary, the reasons for the lasting dominance of the Latin script on the Internet, according to Crystal (2012:115-116), are as follows:

- Delayed facilitation of enough space in the commonly used text transmission protocols to include characters of all scripts;
- Considerable problems in the implementation and user-friendly application of non-Latin-based fonts;
- An excess of English-speaking Internet hosts;
- The colonial past of the Latin script.

Thus, the mastery of originally local linguistic resources, the English language, and the Latin alphabet, became a global prerequisite for using the Internet (Ricento 2010:138).

The Latin-based architecture of the Internet has noticeably affected varieties that do not utilize the Latin alphabet. To access most resources on the Internet, users of these varieties had to either use English (or other Latin-scripted) language(s) or find ways to display their native tongues with the Latin alphabet. This limitation has given rise to «digraphia» – writing a language in multiple scripts (Grivelet 2001; Rivlina 2016). Due to the hegemony of the Latin alphabet in digital space, digraphia of non-Latin-based languages using the Latin alphabet has become a prevalent vehicle for (socio-)linguistic glocalization (Sebba 2012:4-5; Rivlina 2016:208).

According to Bhatt (2010:520), the global influence of English (and the Latin alphabet) on local varieties constitute a major factor of the «linguascape»¹⁸ because it marks the historical incision of colonialism. As this incision is apparent on the structural as well as on the individual level and expressed by linguistic markers, the choice of linguistic resources is closely related to postcolonial identity construction. In former colonies, such as the Arabic states, the hybridization of English and/or French with diverse local varieties characterizes postcolonial linguistic identity (Bhatt 2010:534). Thus, the hybridization of English (and its written equivalent, the Latin alphabet) with local varieties, e.g., in form of digraphia, is a linguistic feature of glocalization that is present in the Latinate orthographic variety Arabizi.

4.2.1 Linguistic hegemony of the Latin alphabet in Arabizi

Before the development of the Internet, an Arabic keyboard layout had already

reword. Last accessed 30/01/2022.

¹⁸ “Linguascape” is Bhatt’s addition to Appadurai’s concept of global cultural flows and describes a globally networked linguistic dimension.

existed for Arabic typewriters, patented in Egypt in 1899 by Selim Shibli Haddad and Philippe Waked, and mass-produced since 1917.¹⁹ Nonetheless, after introducing the first English-language computer keyboard based on Latin letters in 1964, it took another 27 years until the *Unicode Standard* Block Arabic provided a globally available option to use the Arabic script digitally.²⁰ Even with this possibility, the Latinate orthographic variety Arabizi enjoys high popularity. The reasons for this include the colonial past of the Arab states, which were dominated in the 19th century by European colonial powers (primarily France and Great Britain) and the European-influenced Ottoman Empire. When the defeat of the Ottoman Empire in World War I was foreseeable, the colonial powers Great Britain and France redistributed the remaining dominions, which consisted largely of today's Arab states, among themselves in 1916 (Krämer 2016:249-273).

From this much-abbreviated version of Arab colonial history, one can deduce that the English and French languages, with their common script, the Latin alphabet, had a major influence on the administrative and educational systems of today's Arab states. In the context of the modernization efforts of the 19th century and Western colonialization during the 20th century, many prestigious educational Arab institutions changed their language of instruction to English and/or French (Lian 2020:2). Partially during but mainly after the fall of colonial rule, language political measurements such as the Arabi(c)ation of private and public sectors were implemented to reverse the influence of (former) colonial languages (Lian 2020:105-43). Although these measurements were partially successful, the linguistic colonialism of the West is still apparent in many Arabic societies and created one of the requirements for the emergence of Arabizi: mastery of the Latin alphabet (al-Mahrooqi & Denman 2015). Based on this premise, and in the context of the ubiquity of English and the Latin alphabet in a glocal context, Arabizi is overtly influenced by the hegemony of Latin letters.

4.3 Linguistic mobility phenomena and translingual practices

As the interconnectedness of digital technologies shapes the global technoscape, the increased human mobility of the post-industrialized world creates a concurrent "ethnoscape", which significantly supports the reduction of spatial and temporal distances. Increased human mobility is a constitutive feature of glocalization, as it contributes to the interconnectedness of global processes on the local level. According to Blommaert (2010:1-17), the increased interconnectedness and mobility that constitute Appadurai's

¹⁹ See "The Invention of the Arabic Typewriter". Medium. <https://medium.com/@kerning-cultures/the-invention-of-the-arabic-typewriter-a6d26e0554a>. Last accessed 31/01/2022.

²⁰ See "The History of the Computer Keyboard". ThoughtCo. <https://www.thoughtco.com/history-of-the-computer-keyboard-1991402>. Last accessed 15/11/2021.

“ethnoscape” have fundamentally changed people’s communication behavior, and thus, their use of linguistic resources. These linguistic resources are distributed across vertically and horizontally stratified continua, which are to be studied and classified using three theoretical concepts: sociolinguistic scales, orders of indexicality, and polycentricity.

Blommaert (2010:32-37) employs the concept of scales following its use in Wallerstein’s (1999; 2004) world-systems theory. There, the concept of scale denotes the various spatial orders of magnitude from local to global. In Blommaert’s work, scales connote different dimensions of language use and their sociolinguistic implications. Higher scales have the claim of generality, while lower scales only have contextual relevance. Scales thus represent the vertical stratification of linguistic mobility phenomena, as they serve to classify sociolinguistic power issues. The interactions of these different scales are relevant to linguistic mobility phenomena because they can be used to explain the reciprocal effects of global diffusion and local realization of different linguistic patterns and standardizations.

The dimensions of sociolinguistic scales describe different linguistic standardizations, which are realized in the form of different indexicality orders. Their interaction seems chaotic at first sight. However, they are structured according to (often unconscious) sociolinguistic categories, which in turn build on systemic and individual expressions of power and prestige (Blommaert 2010:37-39). Blommaert calls the authorities that determine the prestige and power of certain expressions «centers». Accordingly, his concept of polycentricity describes the circumstance that there are always multiple authorities and norms (i.e., multiple centers) that prescribe the value of linguistic expressions (Blommaert 2010:39-41).

These three theoretical concepts – sociolinguistic scales, indexicality orders, and polycentricity – are more salient in the context of glocalization and constitute a helpful framework for examining glocalized varieties from the perspective of mobility. They describe increasing heterogenization of linguistic forms as well as translingual practices triggered by increasing mobility. Therefore, a feature of linguistic glocalization is the mobility and de-spatialization of language, i.e., the mobile transfer of linguistic phenomena and the translingual practices caused by it.

4.3.1 Translingual practices in Arabizi

Similar to other Latinized orthographies such as Pinyin or Greeklish, Arabizi emerged because of the initial absence of ways to digitally display orthographies that are not based on the Latin alphabet (Androutsopoulos 2012; Baines & Nahar 2020:3584). To write Arabic varieties in digital space, speakers of Arabic oriented themselves towards common Latin transcriptions for displaying Arabic web pages when the first Inter-

net connections appeared in Arabic regions in the early 1990's (Björnsson 2010:29-31). These writing systems evolved in a decentralized bottom-up process (Abu-Liel & Eviantar & Nir 2019:227) that, according to Gorter's (2006:3) definition, excludes the involvement of political institutions and is instead implemented by private actors. Accordingly, the authorities that guide the conventions of this orthography and the local realizations of Arabizi are inherently polycentric. It follows, that the indexicality orders of Arabizi depend on the users and may therefore vary from each other. These variations may take the form of different realizations in writing certain phonemes in line with the isoglosses of Arabic (Behnstedt & Woidich 2005). Examples of this are the different phonological realizations and correspondingly different written realizations of the letter *qāf* <ق> [q], which will be discussed in more detail in section 4.4.1.

One of the characterizing features of Arabizi is the translingual effect of code-switching, in which different codes occur within the same linguistic unit, (McArthur & Lam-McArthur & Fontaine 2018a) as can be seen in Example 1. In Arabizi, this phenomenon is a mixture of respective local Arabic codes and the global code English (Warschauer & El Said & Zohry 2002:39-40; Bianchi 2011). As discussed in the previous point, the exclusive status of English is partially related to its global prestige and dominance in the digital space. Accordingly, in Blommaert's theory of sociolinguistic scales, English expressions in the Arabizi variety are the manifestation of a higher, global scale. The main corpus of the Arabizi variety, however, comes from respective local varieties of Arabic that represent a lower, local scale. The emerging picture is one of a heterogeneous global variety: on the one hand, using English, testifying to global mobility, and on the other hand, using local varieties, indicating local roots.

4.4 Local linguistic identity construction through digital resources

Sociolinguistic research in the 21st century assumes that linguistic resources influence the identity construction of individuals and groups and vice versa (Coupland 2007; Androutsopoulos 2010). This influence permeates all scales but is particularly noticeable at national and local levels. National languages and their differentiation from local varieties are indispensable for the construction of national identity since mastery of the so-called national language is a limiting factor for determining membership in a nation. During state formation in 19th century Europe, a common language and an associated language ideology were crucial factors in the construction of a common national identity. Although in the postmodern age this identity is shaped by other social factors as well (some of them being supranational), standard languages remain one of the most important factors in the construction of national and state identities (Romaine 2007; Joseph 2011). On the local scale, linguistic identity construction works similar to the national scale. Again, a sense of identity is conveyed through linguistic conventions, in distinction to linguistic conventions of others. Since local varieties often deviate from

standard languages, their linguistic conventions express membership in a local «community of practice» (Paltridge 2015) and its respective group identity (Jaffe 2012:207).

How do glocalization and related digitization affect the linguistic construction of collective identities? Johnstone (2010) found in her study of Pittsburgh's local variety that some local forms align with higher scale language use in a process of linguistic leveling.²¹ Other local forms are preserved and even perceived as reinforced by their juxtaposition with higher scales. This preservation and reinforcement of local identity-constructing varieties also occur in virtual space via emails, blogs, and forums (Johnstone, & Baumgardt 2004). Androutsopoulos (2012) claims in his research on the Latin digraphia "Greeklsh" that this orthography used for writing Greek in CMC is mainly utilized for identity maintenance by the local community's diaspora in digital space. In the context of national language ideology, Androutsopoulos established that the use of Latin script, similar to the Arabic case, is seen as a departure from national identity.

From this research on linguistic identity construction, it is evident that local linguistic forms can be leveled by higher scales but are also preserved and perceived more consciously by contrasting them with higher scales. This preservation and, in some cases, reinforcement of local linguistic identities occur increasingly via digital resources, thus contributing to local identity construction in digital global spaces and local places.

4.4.1 Local linguistic identity construction in Arabizi

Since Arabizi is a writing system for predominantly colloquial Arabic varieties, its locally differing realizations reflect the phonological differences inherent to the isoglosses of the Arabic world (Gordon 2011:27-28; Sullivan 2017:19-20). For example, the consonant *qāf* <ق> [q] is pronounced similar to the glottal plosive *hamza* <ء> [ʔ] in the Lebanese variety (Behnstedt & Woidich 2005:55-66). Similarly, in Lebanese Arabizi, the former consonant is transliterated with the same arithmographe <2> as the glottal plosive instead of the <q> commonly used for transcribing *qāf* in Modern Standard Arabic (MSA) (Sullivan 2017:46). Yaghan (2008:40-45) observed in a qualitative study that students at the University of Petra transliterate the letter *qāf* with either the arithmographe <8> or <2>, depending on their phonological realization as [q] or [ʔ]. In the Arabizi variety of Kuwait, the same consonant *qāf* <ق> [q] is transliterated as <g> complying with the local phonological realization (Akbar 2019:309). From these examples, it is evident that Arabizi provides a form of expression for local identities, as it is used to display spoken varieties, i.e., local varieties that differ from each other, in the horizontal stratification of the Arabic continuum (Sullivan 2017:39).

²¹ For a definition, see Matthews (2014a).

As the proliferation of local linguistic Arabic identities is realized in digital space by using Arabizi, it is reasonable to assume that this variety contributes to spreading pluralistic Arabic identities. This assumption is supported by the findings of several sociolinguistic studies on Arabizi (see for example Warschauer & El Said & Zohry 2002; Bianchi 2011; Daoudi 2011; Allehaiby 2013; Darwish 2017; Sullivan 2017; Alghamdi & Petraki 2018; Alsulami 2019; Akbar 2019; Naboulsi 2021). Bianchi (2011:62; 313) writes in his sociolinguistic corpus analysis that Arabizi has a clear connection to local Arabic varieties and culture as well as to members of the global Arabic diaspora. Moreover, Bianchi (2011:270) shows that the use of Arabizi (at least in the online forum *mahjoob.com*, which Bianchi used as data pool for his research)²² strongly correlates with non-conformist expressions towards the traditions and governments of Arab countries. The bottom-up emergence of Arabizi and its resulting non-standard conventions reflect its birthplace, the digital space. It also reflects the attitude of the people who primarily use it: the global, digitized Arab youth that rebels against the conventions of pan-Arab ideology Warschauer & El Said & Zohry 2002:319-20; Allehaiby 2013:60; Sullivan 2017:18). These people display their respective local varieties by encoding them with Arabizi in global digital space and thereby construct a glocal linguistic identity for themselves. By displaying the local varieties of the horizontal Arabic continuum, Arabizi represents a (presumably unintended) attempt to promote local varieties and provide them with the support that, so far, only the standard variety MSA of the imagined pan-Arabic entity has enjoyed in the Arabic region: an orthography (Suleiman 2004:59-95).

5 - Conclusion

The definition of glocalization developed in section 2 shows that glocalization is characterized by the reduction of temporal and/or spatial distances through (1) digital networking and (2) increased (human) mobility, the dominance of distinct local phenomena on a global scale through local resource control, and local bottom-up identity construction through digital resources. Based on this concept of glocalization, the present analysis demonstrates that a glocalized variety is characterized by the following linguistic features:

- Usage of the concerned variety in CMC while displaying features of written and spoken language as well as traces of digitization;
- Dominance of the English language and/or the Latin alphabet;
- Mobile transfer of linguistic phenomena, resulting in linguistic despatializa-

²² As Bianchi's detailed sociolinguistic analysis of the Arabizi variety in online contexts connects the vital points of online identity construction and the usage of Arabizi, his research remains highly relevant for this paper.

tion, and translingual practices;

- Identity construction through non-standardized varieties using digital resources.
-

The analysis in sections 3 and 4 shows that these criteria are constituent factors of the Arabizi variety, as can be seen from the following features of Arabizi:

- Use of arithmographems to display Arabic phonemes and the inclusion of colloquial expressions;
- Digraphia with the Latin alphabet for scripting local Arabic varieties;
- Code-switching with English;
- Digital display of locally rooted varieties along the isoglosses of the Arabic language area to construct the identity of the global Arabic youth.

Each of these points supports the conclusion that the orthographic Arabizi variety combines linguistic features of global and local scales. Consequentially, this paper concludes that the Arabizi variety is a manifestation of linguistic glocalization in the Arabic language area. To explore this linguistic framework of glocalization more thoroughly, further research needs to be done. It would be highly informative to apply this framework to other glocal varieties, such as Androutsopoulos' Greeklisk or the Indian variety of English, to investigate if the features of linguistic glocalization defined above are generally applicable, and if there are more to discover.

The arguments that led to the linguistic framework of glocalization are presented in Table 2. This table displays the features of glocalization identified in section 2, their effects on the composition of the geocultural system, the corresponding linguistic features of glocalization, and their expressions in the Arabizi variety as analyzed in section 4. From the analysis of each criterion, it is apparent that all but one (the global dominance of English and/or the Latin alphabet) have the effect of heterogenization on the geocultural system. Hence, the present analysis of the Arabizi variety from the perspective of linguistic glocalization does not only show that this orthographic variety is a manifestation of linguistic glocalization. It also supports the results of other researchers in translingual and glob/cal linguistics (Bhatt 2010; Blommaert 2010; Baines & Nahar 2020) in revealing that glocalization supports the diversification and heterogenization of linguistic resources.

Feature of glocalization	Effect on the geocultural system	Linguistic manifestation	Corresponding feature of Arabizi
Digital networking	Heterogenization Hybridization	Traces of digitization Usage in the context of CMC while carrying features of written and spoken language	Usage of arithmographems to display Arabic phonemes Inclusion of colloquial Arabic expressions in an orthographic variety
Global dominance of local phenomena	Hybridization	Dominance of English language and/or Latin alphabet	Digraphia with the Latin alphabet to write local Arabic varieties
Increased human mobility	Heterogenization Hybridization	Despatialization of language Mobile transfer of linguistic phenomena Translingual practices	Code-switching with English
Bottom-up construction of local identities via digital resources	Heterogenization	Identity construction through non-standardized varieties in the digital space	Digital display of colloquial Arabic varieties along the isoglosses of the Arabic language area Utilization for identity construction of global Arabic youth

Table 2 - Linguistic framework for glocalization and exemplification

References

- Abu Elhija, Dua'a. 2014. "A New Writing System? Developing Orthographies for Writing Arabic Dialects in Electronic Media", *Writing Systems Research* 6(2). 190-214.
- Abu-Liel, Aula K., & Eviatar, Zohar, & Nir, Bracha. 2019. "Writing Between Languages. The Case of Arabizi", *Writing Systems Research* 11(2). 226-238.
- 2020. "Arabic Teenagers' Attitudes to Electronic Writing in Arabizi", *Journal of Cultural Cognitive Science* 2(5). 125-142.
- Abu-Liel, Aula K., & Ibrahim, Raphiq, & Eviatar, Zohar. 2021. "Reading in Multiple Arabics. Effects of Diglossia and Orthography", *Reading and Writing* 34(9). 2291-2316.
- Akbar, Rahima. 2019. "Arabizi among Kuwaiti Youths. Reshaping the Standard Arabic Orthography", *International Journal of English Linguistics* 9(1). 301-323.
- Albirini, Abdulkafi, & Chakrani, Brahim. 2017. "Switching Codes and Registers. An Analysis of Heritage Arabic Speakers' Sociolinguistic Competence", *International Journal of Bilingualism* 21(3). 317-339.
- Albrow, Martin. 1996. *The Global age. State and Society Beyond Modernity*. Cambridge: Polity.
- Alghamdi, Hamdah, & Petraki, Eleni. 2018. "Arabizi in Saudi Arabia. A Deviant Form of Language or Simply a Form of Expression?", *Social Sciences* 7(9). 155-174.
- Allehaiby, Wid H. 2013. "Arabizi. An Analysis of the Romanization of the Arabic Script from a Sociolinguistic Perspective", *Arab World English Journal* 4(3). 52-62.
- Alomoush, Omar. 2015. *Multilingualism in the Linguistic Landscape of Urban Jordan*. PhD Thesis. Liverpool: University of Liverpool.
- 2019. "English in the Linguistic Landscape of a Northern Jordanian City", *English Today* 35(3). 35-41.
- Alsulami, Ashwaq. 2019. "A Sociolinguistic Analysis of the Use of Arabizi in Social Media Among Saudi Arabians", *International Journal of English Linguistics* 9(6). 257-270.
- Alswailim, Fahda. 2017. *Twitter, Gender and Purism in Saudi Arabia. A Small-Scale Study on the Decrease of Arabizi in Computer-Mediated Communication, its Hidden Causes and Implications*. PhD Thesis. London: Kingston University.
- Androutsopoulos, Jannis. 2010. "Localizing the Global on the Participatory Web", Coupland, Nikolas (ed.), *The Handbook of Language and Globalization*. West Sussex: John Wiley & Sons, Ltd. 201-231.
- 2012. "Greeklsh. Transliteration Practice and Discourse in the Context of Computer-mediated Digraphia", Jaffe, Alexandra et al. (eds.), *Orthography as Social Action. Scripts, Spelling, Identity and Power*. Boston/Berlin: De Gruyter Mouton. 359-392.
- Appadurai, Arjun. 1990. "Disjuncture and Difference in the Global Cultural Economy, Theory", *Culture & Society* 7(2-3). 295-310.

- 1996. *Modernity at Large. Cultural Dimensions of Globalization*. Minneapolis/London: University of Minnesota Press.
- Baines, Lawrence, & Nahar, Gul. 2020. “Loosening the Linkages between Language and the Land”, Brunn, Stanley D., & Kehrein, Roland (eds.), *Handbook of the Changing World Language Map*. Cham: Springer International Publishing. 3579-3593.
- Bardaweel, Mahmoud R., & Rababah, Luqman M. 2022. “Gender Differences in Using Arabizi Among Jordanian Undergraduate Students. A Socio-Linguistic Study”, *Theory and Practice in Language Studies* 12(1). 86-95.
- Behnstedt, Peter, & Fischer, Wolfdietrich, & Jastrow, Otto. 1980. *Handbuch der arabischen Dialekte*. Wiesbaden: Harrassowitz.
- Behnstedt, Peter, & Woidich, Manfred. 2005. *Arabische Dialektgeographie. Eine Einführung*. Boston: Brill.
- Benítez Fernández, Montserrat. 2003. “Transcripción al árabe marroquí de mensajes de teléfono móvil”, *Estudios de dialectología norteafricana y andalusí* 7. 153-163.
- Bhatt, Rakesh. 2010. “Unraveling Post-Colonial Identity Through Language”, Coupland, Nikolas (ed.), *The Handbook of Language and Globalization*. West Sussex: John Wiley & Sons, Ltd. 520-539.
- Bianchi, Robert M. 2011. *Arabic, English, or 3Arabizi? Code and Script Choice within Discussion Forums on a Jordanian Website*. PhD Thesis. Lancaster: Lancaster University.
- 2016. “Glocal Arabic Online. The Case of 3Arabizi”, *Studies in Second Language Learning and Teaching* 2(4). 483-503.
- Bjørnsson, Jan A. 2010. *Egyptian Romanized Arabic. A Study of Selected Features from Communication Among Egyptian Youth on Facebook*, MA Thesis. Oslo: University of Oslo.
- Blommaert, Jan. 2010. *The Sociolinguistics of Globalization*. Cambridge: Cambridge University Press.
- Blommaert, Jan, & Dong, Jie. 2010. “Language and Movement in Space”, Coupland, Nikolas (ed.), *The Handbook of Language and Globalization*. West Sussex: John Wiley & Sons, Ltd. 366-385.
- Castells, Manuel. 2009. *The Rise of the Network Society*. Oxford: Wiley.
- Caubet, Dominique. 2017. “Morocco. An Informal Passage to Literacy in Dārija (Moroccan Arabic)”, Hoigilt, Jacob, & Mejdell, Gunvor (eds.), *The Politics of Written Language in the Arab World. Writing Change*. Leiden/Boston: Brill. 116-141.
- Couldry, Nick. 2012. *Media, Society, World. Social Theory and Digital Media Practice*. Cambridge: Polity.
- Coupland, Nikolas. 2007. *Style. Language Variation and Identity*. Cambridge: Cambridge University Press.
- (ed.). 2010. *The Handbook of Language and Globalization*. West Sussex: John Wiley

- & Sons, Ltd.
- Crystal, David. 2001. *Language and the Internet*. Cambridge: Cambridge University Press.
- 2012. *English as a Global Language*. Cambridge: Cambridge University Press.
- Danet, Brenda, & Herring, Susan C. 2003. "Introduction. The Multilingual Internet", *Journal of Computer-Mediated Communication* 9(1). Online version: <https://onlinelibrary.wiley.com/doi/full/10.1111/j.1083-6101.2003.tb00354.x>.
- 2007a. "Introduction", Danet, Brenda & Herring, Susan C. (eds.), *The Multilingual Internet. Language, Culture, and Communication Online*. New York/Oxford: Oxford University Press. 3-40.
- (eds.). 2007b. *The Multilingual Internet. Language, Culture, and Communication Online*. New York/Oxford: Oxford University Press.
- Daoudi, Anissa. 2011. "Globalization, Computer-Mediated Communications and the Rise of E-Arabic", *Middle East Journal of Culture & Communication* 4(2). 146-163.
- Darwish, Elsayed B. 2017. "Factors Influencing the Uses, Diglossia and Attrition of Arabic Language in Social Media. The Arabic Youth Case", *Journal of Education and Social Sciences* 7(1). 250-257.
- East, Martin. 2008. "Moving Towards 'Us-Others' Reciprocity. Implications of Glocalisation for Language Learning and Intercultural Communication", *Language and Intercultural Communication* 8(3). 156-171.
- Gordon, Clara. 2011. *From Speech to Screen. The Orthography of Colloquial Arabic in Electronically-Mediated Communication*. PhD Thesis. Swarthmore: Swarthmore College.
- Gorter, Durk. 2006. "Introduction. The Study of the Linguistic Landscape as a New Approach to Multilingualism", Gorter, Durk (ed.), *Linguistic Landscape. A New Approach to Multilingualism*. Clevedon England/Buffalo: Multilingual Matters. 1-6.
- Grivelet, Stéphane. 2001. "Introduction", Grivelet, Stéphane (ed.), *Digraphia. Writing Systems and Society*. Berlin/New York: De Gruyter Mouton. 1-10.
- Gugliotta, Elisa. 2018. "Arabish come supporto all'apprendimento dei dialetti arabi come LS", Lancioni, Giuliano, & Solimando, Cristina (eds.), *Didattica dell'arabo e certificazione linguistica. Riflessioni e iniziative*. Roma: Roma Tre-Press. 169-178.
- Hall, Stuart. 1991. "The Local and the Global. Globalization and Ethnicity", King, Anthony D. (ed.), *Culture, Globalization and the World-System. Contemporary Conditions for the Representation of Identity*. Basingstoke: Macmillan. 19-39.
- 2019. *Old and New Identities, Old and New Ethnicities*, Hall, Stuart & Morley, David (eds.), *Essential essays, Volume 2*. Durham: Duke University Press. 63-82.
- Hall, Stuart, & Morley, David (eds.). 2019. *Stuart Hall. Selected Writings, Essential Essays. Volume 2*. Durham: Duke University Press.
- Halm, Heinz. 2004. *Die Araber. Von der islamischen Zeit bis zur Gegenwart*. München: C.H.Beck oHG.

- Hamdan, Hady. 2016. "Attitudes Towards Arabic Romanization and Student's Major Evidence from the University of Jordan", *Arab World English Journal* 7(4). 493-502.
- Herring, Susan C., & Stein, Dieter, & Virtanen, Tuija. 2013. "Introduction to the Pragmatics of Computer-Mediated Communication", Herring, Susan C., & Stein, Dieter, & Virtanen, Tuija (eds.), *Pragmatics of Computer-Mediated Communication*. Berlin: De Gruyter Mouton. 3-32.
- Hoogland, Jan. 2014. "Towards a Standardized Orthography of Moroccan Arabic Based on Best Practices and Common Ground Among a Selection of Authors", *Árabe marroquí: de la oralidad a la enseñanza*. 59-76.
- Horan, Thomas A. 2000. *Digital Places. Building our City of Bits*. Washington, D.C.: ULI-the Urban Land Institute.
- Jaffe, Alexandra. 2012. "Transcription in Practice. Nonstandard Orthography", Jaffe, Alexandra *et al.* (eds.), *Orthography as Social Action. Scripts, Spelling, Identity and Power*. Boston/Berlin: De Gruyter Mouton. 203-224.
- Johnstone, Barbara. 2010. "Indexing the Local", Coupland, Nikolas (ed.), *The Handbook of Language and Globalization*. West Sussex: John Wiley & Sons, Ltd. 386-405.
- Johnstone, Barbara, & Baumgardt, Dan. 2004. "Pittsburghese online. Vernacular Norming in Conversation", *American Speech* 79(2). 115-145.
- Joseph, John E. 2011. "Identity and Language", Hogan, Patrick C. (ed.), *The Cambridge Encyclopedia of the Language Sciences*. Cambridge: Cambridge University Press. 369-371.
- Kenali, Ashwaq M. S., et al. 2016. "Code-Mixing Consumptions among Arab Students", *Creative Education* 7(7). 931-940.
- Kirkpatrick, Andy. 2007. "Linguistic Imperialism? English as a Global Language", Hellinger, Marlis, & Pauwels, Anne (eds.), *Handbook of Language and Communication. Diversity and change*. Berlin/New York: Mouton de Gruyter. 333-364.
- Korff, Ruediger. 2003. "Local Enclosures of Globalization. The Power of Locality", *Dialectical Anthropology* 27(1). 1-18.
- Kraidy, Marwan M. 1999. "The Global, the Local, and the Hybrid. A Native Ethnography of Glocalization", *Critical Studies in Mass Communication* 16(4). 456-76.
- Krämer, Gudrun. 2016. *Geschichte des Islam*. München: C.H. Beck oHG.
- Lee, Carmen K. M., & Barton, David. 2011. "Constructing Glocal Identities through Multilingual Writing Practices on Flickr.com®", *International Multilingual Research Journal* 5(1). 39-59.
- Lian, Chaoqun. 2020. *Language, Ideology and Sociopolitical Change in the Arabic-Speaking World. A Study of the Discourse of Arabic Language Academies*. Edinburgh: Edinburgh University Press.
- Liang, Yuhua, & Walther, Joseph B. 2015. "Computer Mediated Communication", Wright, James D. (ed.), *International Encyclopedia of the Social & Behavioural Sciences*.

- Amsterdam: Elsevier. 504-509.
- al-Mahrooqi, Rahma, & Denman, Christopher. 2015. "Introduction", al-Mahrooqi, Rahma, & Denman, Christopher (eds.), *Issues in English Education in the Arab World*. Newcastle upon Tyne: Cambridge Scholars Publishing. 1-5.
- Marvin, Carolyn. 2020. "Mobile Space and Agility as the Subversive Partner", Foucault Welles, Brooke, & González-Bailón, Sandra (eds.), *The Oxford Handbook of Networked Communication*. New York: Oxford University Press. 439-443.
- Masmoudi, Abir, et al. 2020. "Transliteration of Arabizi into Arabic Script for Tunisian Dialect", *ACM Transactions on Asian and Low-Resource Language Information Processing* 19(2). 1-21.
- McAdams, Dan P., & McLean, Kate C. 2013. "Narrative Identity", *Current Directions in Psychological Science* 22(3). 233-38.
- McArthur, Tom, & Lam-McArthur, Jacqueline, & Fontaine, Lise. 2018a. "Code-Mixing and Code-Switching", McArthur, Tom, & Lam-McArthur, Jacqueline, & Fontaine, Lise (eds.), *The Oxford Companion to the English Language*. Oxford: Oxford University Press.
- 2018b. "Phatic", McArthur, Tom, & Lam-McArthur, Jacqueline, & Fontaine, Lise (eds.), *The Oxford Companion to the English Language*. Oxford: Oxford University Press.
- Moscoso García, Francisco. 2009. "Comunidad lingüística marroquí en los foros y chats. Expresión escrita, ¿norma o anarquía?", *Al-Andalus Magreb* 16. 209-226.
- Naboulsi, Omar. 2021. *Facebook Dialect. Orthographical Standardisation in Romanised Lebanese-Arabic*. PhD Thesis. Edinburgh: University of Edinburgh.
- Omoniyi, Tope, & Saxena, Mukul (eds.). 2010. *Critical Language and Literacy Studies, Contending with Globalization in World Englishes*. Bristol: Multilingual Matters.
- Palfreyman, David, & al-Khalil, Muhamed. 2003. "A Funky Language for Teenzz to Use. Representing Gulf Arabic in Instant Messaging", *Journal of Computer-Mediated Communication* 9(1). 23-44.
- Paltridge, Brian. 2015. "Language, Identity, and Communities of Practice", Djenaar, Dwi N., & Mahboob, Ahmar, & Cruickshank, Ken (eds.), *Language and Identity across Modes of Communication*. Berlin/München/Boston: De Gruyter Mouton. 15-26.
- Phillipson, Robert. 1992. *Linguistic Imperialism*. Oxford: Oxford University Press.
- Ricento, Thomas. 2010. *Language Policy and Globalization*, Coupland, Nikolas (ed.), *The Handbook of Language and Globalization*. West Sussex: John Wiley & Sons, Ltd. 123-141.
- Rivlina, Alexandra. 2016. "Global English-Related Digraphia and Roman-Cyrillic Biscrriptal Practices", *Procedia. Social and Behavioral Sciences* 236. 207-212.
- Rizman, Rudolf. 2015. "Globalization", Mazzoleni, G. (ed.), *The International Encyclopedia of Political Communication*. West Sussex: John Wiley & Sons, Ltd. 1-8.

- Robertson, Roland. 1983. "Interpreting Globality", *World Realities and International Studies Today*. 7-20.
- 1992. *Globalization. Social theory and global culture*. London: Sage.
- 1995. "Glocalization. Time-Space and Homogeneity-Heterogeneity", Featherstone, Mike, & Lash, Scott, & Robertson, Roland (eds.), *Global Modernities. 10th Anniversary Conference*. Revised Papers. London/Thousand Oaks/New Dehli: Sage. 27-45.
- 2012. "Globalisation or Glocalisation?", *Journal of International Communication* 18(2). 191-208.
- Romaine, Suzanne. 2007. "Linguistic Diversity and Language Standardization", Hellinger, Marlis, & Pauwels, Anne (eds.), *Handbook of Language and Communication. Diversity and Change*. Berlin/New York: Mouton de Gruyter. 685-714.
- Roudometof, Victor. 2016. *Glocalization. A Critical Introduction*. London: Routledge.
- 2019. "Recovering the Local. From Glocalization to Localization", *Current Sociology* 67(6). 801-817.
- Rubdy, Rani, & Alsagoff, Lubna. 2013. "Reframing the Global-Local Dialectic and Hybridized Textual Practices", Rubdy, Rani, & Alsagoff, Lubna (eds.), *The Global-Local Interface and Hybridity. Exploring Language and Identity*. Bristol: Multilingual Matters. 300-314.
- Sebba, Mark. 2012. "Orthography as Social Action. Scripts, Spelling, Identity and Power", Jaffe, Alexandra *et al.* (eds.), *Orthography as Social Action. Scripts, Spelling, Identity and Power*. Boston/Berlin: De Gruyter Mouton. 1-19.
- al-Shaer, Ibrahim. 2016. "Does Arabizi Constitute a Threat to Arabic?", *Arab World English Journal* 7(3). 18-30.
- Spitta-Bey, Wilhelm. 1880. *Grammatik des arabischen Vulgärdialectes von Aegypten*. Leipzig: Hinrichs.
- Suleiman, Yasir. 2004. *A War of Words. Language and Conflict in the Middle East*. Cambridge: Cambridge University Press.
- Sullivan, Natalie. 2017. *Writing Arabizi. Orthographic Variation in Romanized Lebanese Arabic on Twitter*. PhD Thesis. Austin. University of Texas.
- Versteegh, Kees. 2014. *The Arabic Language*. Edinburgh: Edinburgh University Press.
- Wallerstein, Immanuel. 1999. *The End of the World as We Know It. Social Science for the Twenty-First Century*. Minneapolis/London: University of Minnesota Press.
- 2004. *World-Systems Analysis. An Introduction*. Durham: Duke University Press.
- Warschauer, Mark, & El Said, Ghada R., & Zohry, Ayman G. 2002. "Language Choice Online. Globalization and Identity in Egypt", *Journal of Computer-Mediated Communication* 7(4). 1-37.
- al-Wer, Enam. 2006. "Variation in Arabic Languages", Brown, Keith (ed.), *Encyclopedia of Language & Linguistics*. Oxford: Elsevier. 341-344.
- Werry, Christopher C. 1996. "Linguistic and Interactional Features of Internet Relay

- Chat”, Herring, Susan C. (ed.), *Computer-Mediated communication. Linguistic, Social and Cross-Cultural Perspectives*. Amsterdam: Benjamins. 47-63.
- Yaghan, Mohammad A. 2008. “Arabizi. A Contemporary Style of Arabic Slang”, *Design Issues* 24(2). 39-52.
- Younes, Jihene, et al. 2020. “A Deep Learning Approach for the Romanized Tunisian Dialect Identification”, *The International Arab Journal of Information Technology* 17(6). 935-946.
- 2022. “Romanized Tunisian Dialect Transliteration Using Sequence Labelling Techniques”, *Journal of King Saud University. Computer and Information Sciences* 34(3). 982-992.