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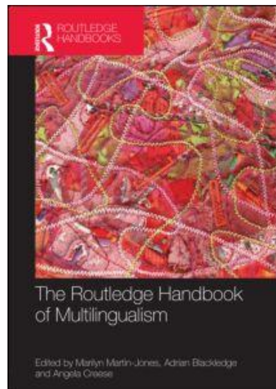

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Multilingualism on the Internet

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Multilingualism on the Internet

Sirpa Leppänen and Saija Peuronen

Preliminary definitions

An important preliminary step in the discussion of multilingualism on the Internet is to define our terms. Some definition of the notion of the Internet itself is first in order. Technically, it refers to a global network connecting millions of computers in which any computer can communicate with any other computer as long as they are both connected to the Internet. The Internet serves as the medium for the World Wide Web, a virtual system of distributing and accessing information in the form of hyperlinked Web documents. The Web is thus only one of the ways that information can be disseminated over the Internet. Other such means include email, bulletin boards, instant messaging and chat. Consequently, when we talk about the Internet we mean not only the Web, but also other information and communication systems on the Internet. The borderline between the Internet and other digital information and communication systems outside the Internet is meanwhile becoming increasingly blurred, due to convergences between Internet-based communication systems and, for example, digital gaming, interactive television and telephonic communication. As will be discussed in more detail in the final section of this chapter, this technological convergence also has implications in terms of language choice and use.

Other relevant terms are computer-mediated communication (CMC) and computer-mediated discourse (CMD). CMC can be defined as any communicative action that takes place through the use of networked computers. Although the term refers, by definition, to interaction that occurs via computer-mediated formats (i.e. instant messages, emails and chat rooms), it has also been applied to other forms of text-based interaction such as text messaging. CMC is text-based typically, therefore, involving a variety of forms (e.g. email, discussion groups, real-time chat, virtual reality role-playing games) the linguistic properties of which vary depending on the kind of messaging system used and the social and cultural context of the communicative event (Herring 2003: 612; 2004). CMD, in turn, refers to all the different kinds of interpersonal communication carried out on the Internet, for example by email, instant messaging, web discussion boards and chat channels. CMD can be distinguished from CMC by its more narrow ‘focus on language and language use in computer-networked environments, and by its use of methods of discourse analysis to address that focus.’ (Herring 2003: 612)

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Multilingualism on the Internet is not a straightforward notion either. In principle it can refer to two phenomena (see Androutsopoulos 2006a, 2007). On the one hand, it can mean the choice and diversity of languages as a means of communication on the Internet, and analyses of their visibility, accessibility and status (Wright 2004; Danet and Herring 2007). Such analyses are typically motivated by the language-political concern that a globally powerful language, particularly English, can become the dominant language in Internet communication. Motivations for such studies range from protectionism to active attempts at language revitalization by political or practical measures in and via the Internet spaces in which endangered or minority languages are used (e.g. Warschauer and Donaghy 1997). On the other hand, multilingualism on the Internet can refer to the practices of multilingual Internet users and the ways in which they draw on and use resources provided by more languages than one in their CMC. As indicated in recent research, a case in point is the way in which non-Anglophone writers – particularly in informal, popular and youth cultural contexts on the Internet – draw on both their first language (L1) and English (e.g. Leppänen 2007a). In research on this type of multilingualism the focus has often been on the investigation of strategies of codeswitching and the ways in which they serve as a discursive, social and cultural resource in Internet communication (see e.g. Androutsopoulos 2007).

Early developments in the field – the dream of a genuinely multilingual Internet

The study of multilingualism on the Internet is a relatively new field. One of the reasons for this is the simple fact that in the early days the dominant language of the Internet was English. This was due to a number of factors. First, in the 1990s the great majority of websites and Internet users were English-speaking (Alis Technologies 1997; Androutsopoulos 2006a: 420). Second, English was often selected as the vehicular language for Internet users who did not have any other shared language (see e.g. Durham 2007). Third, the early computer scientists who designed personal computers and the Internet worked on the basis of the 'American Standard Code for Information Interchange' (ASCII), which made computing in other alphabets or character sets difficult or impossible (Warschauer and De Florio-Hansen 2003). However, Internet users who chose to use their own languages or language in other than Roman alphabets soon learnt to adapt them to the character sets available – such as US-ASCII, Extended ASCII and Unicode (see e.g. Danet and Herring 2007: 8–11; Palfreyman and al Khalil 2007; Peel 2004; Gerrard and Nakamura 2004). Although such innovations often initially arise from technical difficulties, they sometimes also end up having other meaning potential, for instance as resources for humour and group solidarity, especially in settings of transnational and diasporic contact (Androutsopoulos 2006b; Tseliga 2007). Besides the technological factors, certain social factors, such as the participation structure favouring the use of majority languages in Internet Relay Chat (IRC), may have made it difficult for small language groups to use their own language in communication: in many cases an easier option for them was to choose larger languages, such as English or Arabic, instead (Paolillo 2005).

All of this meant that at this stage, in the overwhelmingly monolingual Internet there simply was not much for scholars of multilingualism to investigate. In the early 2000s, in contrast, the picture was quite different. According to some estimates (www.Internetworldstats.com/stats7.htm), by this time English was quickly losing its privileged status, with only a third of Internet users being English-speaking, with Chinese speakers occupying second place (22.1 per cent) and Spanish speakers third (7.9 per cent). The linguistic diversification of the Internet was soon noticed by language scholars; for instance, in 2001 it was already apparent to such researchers as David Crystal.

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Crystal (2001), whose work in the late 1990s did much to identify what were then often seen as the specific characteristics of Internet language use ('netlingo' or 'webspeak'), was also one of the first to point out the drawbacks of a genuinely multilingual Internet. In principle, for him the fact that English was losing its dominance on the Internet was a positive thing, but its potential dethronement also meant a new kind of global communicational challenge. This was because no Internet user could understand all the languages that the multilingual Internet spoke, and thus s/he still could not freely roam online. In Crystal's view (2001: 236), this kind of problematic multilingualism of the Internet posed a particular challenge to linguistics: in his opinion, it was the duty of linguists to provide the baseline information that would enable the development of programs with which Internet users could translate the other languages they encountered online into their own language. To ensure this, a great deal of linguistic, semantic, syntactic and pragmatic research was thus called for (ibid.). Although Crystal was aware that these kinds of translation technologies were too costly and commercially unviable to cater for all the world's (small, minority) languages, in principle he saw in machine translation a means through which the Internet could thrive as a truly multilingual space without sacrificing mutual comprehensibility or having to resort to a vehicular language (Crystal 2001; see also Climent *et al*. 2007: 215; Thurlow *et al*. 2004). Linguistics, combined with the right kind of technological solutions, could basically solve the problem of non-communication in the emergent multilingual Internet.

Technological advances have indeed been made towards developing translation services on the Internet. For example, the Google translator – one of the most developed of the translator applications on the Internet – claims in principle to be able to cross-translate 57 languages. Other examples of serious interest in translation as a key to creating a multilingual Internet include the BabelFish translation system (by Systran), and initiatives to develop machine translation systems between specific language pairs, such as Catalan and Spanish (Climent *et al*. 2007). In principle, Crystal has thus not been alone in his hope that linguistics can help to create a truly accessible multilingual Internet. In a way, this hope could even be seen as an echo of the techno-optimism of the early developers and advocates of the Internet as a democratic channel for the dissemination of information and knowledge, and a new kind of social force promoting international understanding and interaction (e.g. Hafner and Lyon 1996). In practice, however, translation systems on the Internet still need further development in order to work satisfactorily, in particular with languages that are typologically and structurally distant from one another.

Key issues of theory and method

As was mentioned above, research on multilingualism on the Internet can be divided into two broad categories – on the one hand, research into the choice and diversity of languages on the Internet and, on the other, research into the multilingual practices of Internet users (see e.g. Androutsopoulos 2006a: 428). Within these two general paradigmatic orientations, studies have drawn on a range of different theoretical and methodological orientations – these will be the focus of this section.

Measuring language choice and diversity on the Internet

One typical approach to investigating multilingualism on the Internet has been to attempt to *measure* how visible and accessible particular languages are. As suggested above, these studies have often been triggered by language-political motives, particularly by the concern that

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English, as a particular side effect of increasing economic and media globalization, may become the dominant language on the Internet (Warschauer and De Florio-Hansen 2003; Wright 2004; Block 2004; Paolillo 2007). Studies like these often emphasize that the Internet needs better to reflect the actual linguistic diversity in the world (see also papers in Cunliffe and Herring 2005; Paolillo 2007). They insist that measures need to be taken online for language maintenance and revitalization, and that the Internet can be used effectively for this task, especially in situations of language shift (e.g. Buszard-Welcher 2001). The Internet can even have a language-ideological function in that it can be a means for lesser used and smaller languages to strengthen their identity as independent languages and it can provide them with more prestige (Eisenlohr 2004; cf. Warschauer 2002). The online quantity, visibility and accessibility of a language have thus been regarded as important safeguards of its vitality and importance.

In this type of research, languages have often been approached from a macro-sociological perspective and regarded as entities with a measurable presence on the Internet, whereas less attention has been paid to the particular ways in which language resources have actually been used. One approach to measuring linguistic diversity online has been to *survey* what Internet users report on their language choices. For instance, this particular method was used by the research team commissioned by UNESCO (see Wright 2004), who administered the same survey to students of English in ten countries (Tanzania, Indonesia, the United Arab Emirates, Oman, France, Italy, Poland, Macedonia, Japan and Ukraine). Motivated by a wish to develop viable Internet language policies, the specific aim of this comparative project was to investigate whether the Internet is leading to greater contact across language boundaries and whether or not English is the preferred medium for such exchanges (2004: 5). More specifically, the survey questionnaire asked students (c. 3000) to self-report the language and purpose of ten consecutive Internet sessions (2004: 8).

The survey's findings indicated that there is a digital and linguistic divide between Internet users in richer and poorer countries, manifesting itself not only in the different degrees of accessibility of the Internet (see e.g. Mafu 2004), but also in the amount of resources available to provide services in local languages. For example, in poorer countries Internet users tend to rely on English-medium sources, whereas users in richer countries are able to access information in their own language (Kelly-Holmes 2004). Thus, it was shown how, as Internet resources become increasingly available in the users' own languages, English language use decreases. However, on the basis of the findings it is not clear how, or whether, this disadvantages or advantages either group (2004: 74).

Because the survey method is based on Internet users' self-reports, it has been criticized by some for producing biased evidence on linguistic diversity on the Internet. In another set of studies commissioned by UNESCO (2005), an attempt was made to solve this problem by suggesting the use of *quantitative measures* to study linguistic diversity online. However, the report also emphasized that much of the work done on measuring the situation on the Internet has been seriously flawed (Paolillo 2005: 50). One of the reasons for this was argued that for a long time the measurements were carried out by marketing companies whose intentions were quite different from those of the scientific community, and who were not very concerned to document their methods (Pimienta 2005: 27). As a consequence, it was suggested, the figures that are frequently used to depict for example the proportion of English-language Internet users continue to be far too high. Another problem in many studies was alleged to be that they basically collect their evidence from unreliable or limited sources, for example by extrapolating figures from search engines by language, or from samples of several thousand websites through a random selection of Internet Protocol (IP) addresses (Pimienta 2005: 29–30). In their stead, it was argued (2005: 33), measurements should be based on more advanced methods, such as

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programs basically operating in the same way as spyware, which can measure the languages used in a number of contexts relevant as indicators of language diversity.

Other suggestions made in the report recommend yet other methods of measurement: for instance, Paolillo (2005: 51) recommended the use of a linguistic diversity index, a statistical measure, which, as part of the measurement of the languages used online, can take into account the variety of languages and the proportion of a particular language group in relation to other language groups of any one country. With the help of this measure, he was able to establish for example that, despite the fact that the countries of Africa and Oceania show the highest and the USA and China show the lowest linguistic diversity offline, the USA and China nevertheless seem to dominate the Internet. Furthermore, on the basis of previous studies on the distribution of languages on the Internet (e.g. Lavoie and O'Neill 2001), Paolillo came to the conclusion that the Internet favours large languages (particularly English) and technical standards associated with these (Paolillo 2005: 54–5, 79; see also Danet and Herring 2007: 22–3). As a result, Paolillo (2005: 55) argued that the linguistic diversity of the world is not represented on the Internet. However, he also suggested that the Internet can have two quite different kinds of impact on the fragile presence of many small and minority languages online: in some cases, these languages may weaken as the status of larger languages is consolidated also on the Internet, whereas in other cases the online presence of smaller languages can actually strengthen them.

What the attempts to measure linguistic diversity online make clear is the immensity of the challenge involved in attempting to provide incontrovertible numerical evidence on the basis of which clear conclusions could be drawn on not only the status and proportion of different languages on the Internet, but also the implications of this and the appropriate language-political measures that should follow from them. The question is, then, whether it is possible to measure the massively rhizomatic Internet in a reliable way. It seems that the use of a single method – such as the use of the survey or quantification – is simply not enough if we want more reliable data about how, why and for what purposes individuals and groups make use of particular languages in their Internet practices (see also Paolillo 2005: 62–4).

Evidence provided by measurements of the linguistic situation on the Internet have often led to specific attempts to document and advocate the use of the Internet to archive (Bennett 2003; Hinton 2001; Kroskrity 2002; Kroskrity and Reynolds 2001; Parks *et al*. 1999), promote and teach small, minority and endangered languages (Warschauer and Donaghy 1997; Warschauer 1998; Benton 1996; Haag and Coston 2002). Although these initiatives can be very important in raising awareness and increasing the appreciation of small or endangered languages, their success often critically depends on whether or not speakers of the lesser used languages themselves have access to the Internet and, if they do, are committed to actually using its resources to maintain and revitalize their language (Androutsopoulos 2006a: 429; Mafu 2004; Ouakrim 2001; Sperlich 2005).

Describing and explaining language choice and multilingual practices on the Internet

The available statistics, which often represent English as the largest language on the Internet, can be somewhat misleading, in that they suggest that the majority of Internet users are people for whom English is their primary linguistic code. In reality, however, most are non-native speakers of English, for whom English is a resource on which they draw in different ways, for example, by using it for some specific purpose – instead of their first language, mixing it with their L1 or other languages, or alternating between the use of English and their L1/other languages (see e.g. Warschauer and De Florio-Hansen 2003; Danet and Herring 2007: 5).

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Besides the fact that most Internet users are non-native users of English, another increasingly crucial aspect of their Internet uses in the early 2000s is that for them the Internet is turning into a translocal affinity space. What this means is that, despite the different social, ethnic and linguistic backgrounds these individuals and groups may have, they have found on the Internet a place in which they can come together with other like-minded people to share their interests, concerns or causes (Danet and Herring 2007; Leppänen 2007a, 2007b, 2009; Leppänen and Piirainen-Marsh 2009; Leppänen *et al*. 2009). Thus, the translocal Internet has also become a linguistic contact zone in which multilingual resources and repertoires can turn out to be crucial capital for successful communication, action and interaction (Leppänen forthcoming). For researchers, this emergence of the translocal Internet in the early 2000s has meant a shift from globalization – measuring the global language and languages of the globe on the Internet, for example – to relocalization, to the investigation of local and situated language practices on the Internet (Warschauer and De Florio-Hansen 2003; Androutsopoulos 2007; Leppänen forthcoming). In this kind of research the focus is no longer on the measuring and surveying of the use of particular languages on the Internet, but on the specific multilingual practices of Internet users, the motivations behind their language choices and the functions and meanings these have for them in the specific Internet contexts in which they operate. What such language practices thus call for is research that can help us understand and explain them as situated and meaningful action: such as can be provided by qualitative discourse analytic, ethnographic, pragmatic and sociolinguistic investigations.

In research on language choice and multilingual practices by Internet users, important preliminary steps are to identify the language setting of the participants (Leppänen and Nikula 2007) and to specify whether or not they have a shared language(s), and to assess the functions the additional linguistic resources serve and the meaning potential they have in their particular setting.

Language choice in a setting with no shared language

In a language setting in which participants in an Internet space do not have a shared language, they must choose a vehicular language that will enable mutual communication, interaction and comprehension. In other words, in such a setting the participants need to find and use a language that they can relatively safely assume the other participants also know and are able to use in communication. This kind of setting is described by, for example, Durham's study (2007) on professional communication in multilingual Internet networks. In these networks the participants favoured English as their shared language because it ensured the widest possible understanding among the subscribers to the list. A similar case is also discussed by Wodak and Wright (2006): their study investigated the languages used in a European Union discussion forum, Futurum. Again, in a setting like this, where the participants' linguistic backgrounds vary a great deal, English was selected as the vehicular language that ensured mutual comprehensibility. Other languages were also used to some extent, representing the diversity of all the languages of the participants, but this trend was clearly a minor one compared with the use of English.

Language choice in a setting with a shared language

Another typical language setting in which participants in CMC can operate is one in which, despite the fact that they have a shared language, they nevertheless choose another language as either the primary communicative code or as an additional resource alternating and mixing with their primary language. In such a setting, the motivations for language choice can vary a great

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deal. Sometimes the choice can be an extension of the participants' multilingual language practices offline, but it can also be an outcome of an official or group-specific language policy or politics, specific to online communication. This is the case discussed in a study by Warschauer *et al.* (2002), for example, which showed how Egyptian professionals who have a shared first language prefer to use English in professional online communication and colloquial Arabic in informal emails and chats in almost a diglossic way. For this professional group their language choices online thus index the different goals, identities and discourses relevant in each communicative situation. These findings foreground, in fact, a recurrent strategy of language choice in Internet environments. There is evidence from different countries (see e.g. Warschauer 2002; Siebenhaar 2006; Androutsopoulos 2006a) that in the more spoken-like and dialogic Internet environments – in web discussion forums and different types of chat applications, for example – there is often a tendency for vernacular varieties to be used instead of more standard or formal varieties of the language.

Language choice as a semiotic strategy

At other times language choice can be a semiotic strategy through which participants seek to distinguish themselves and to create voices of their own in a multilingual online setting. Language choice can thus serve as a particular resource for the creation of stylistic and cultural effects, and for the negotiation of identity and communality. This kind of language situation is exemplified by Leppänen's study (2007b) in which she discusses a number of Internet and gaming settings where the participants draw not only on their L1, which they share with their anticipated audience, but also on English – which they can assume their anticipated audience will also understand. However, in each mediated setting the participants mobilize their language resources in somewhat different ways, for different purposes and different effects.

Example (1), a weblog entry from a young Finnish traveller in Mexico, can serve here as an illustration of how language choice can convey a range of meanings. In this blog entry the writer uses four languages to report on his travels to his obviously linguistically diverse audience. He begins his entry in English, but switches to Finnish in the second paragraph, and to French in the final paragraph. In each of these paragraphs he gives some of the same information about his itinerary, but he also reports on quite different things. In addition to the three languages mentioned, the writer also uses some Spanish. The English translations by Saija Peuronen of the Finnish and French sections are given in square brackets after the blogger's original Finnish text. (To protect the identity of the blogger, the link to his blog site is not included here.)

Example (1)

Greetings from Puerto Escondido, southern Mexico. We're spending our last latin days, 8 or so to go. At the moment I've caught a little cold, got some sun burn in the back and am tired of this same food everyday :) rice and beans, chicken, papa fritas, ice cream (either chocolate or strawberry), coffee tastes water.but hey! People are nice and this is pura vida. Tomorrow we are heading to Acapulco, which we have been warned about being way too touristic, oh well. Only reason to get there is the fact that we needed a compromising spot where everyone can find easily; to party. We're 30 altogether … Finnish invasion, happy new year dudes and dudettes!!!

Acapulco. Ei ihan viela mutta 10 tunnin paasta. Kuulin ekan kerran Acapulcosta jo vuonna 1988 kun Milli Vanilli esitti kyseisella nimella kulkevan kesahittinsa. Milli Vanillin kavi hassusti (musa-visa-knoppikysymys: Miten kavi?) mutta niin varmaan meidankin, onhan meita siella 30.

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[*Acapulco. Not just yet but in 10 hours. The first time I heard about Acapulco was back in 1988 when Milli Vanilli performed their summer hit with the same title. Things didn't turn out too well for Milli Vanilli (a quiz question: What happened?) and they probably won't for us either, after all there are going to be 30 of us.*]

[…]

C'est jolie quoi! Au Mexique, au pays des ahoritas et margaritas. Je m'amuse ici jusqu'au janvier 6. Je voulais vous dire bonne nouvelle année 06! Bis.

[*Isn't this great! In Mexico, in the land of ahoritas and margaritas. I enjoy my stay here until January 6. I would like to wish you happy new year 06! with love.*]

A traveller meets people from different countries, and for this one addressing these friends and acquaintances in their own languages is not only a means of staying in touch with them and telling them about his journey, but also of reinforcing the close relationship he has with them. The use of Finnish, for its part, serves as a way of keeping his Finnish family and friends up to date. The Spanish insertions in the blog have a somewhat different meaning compared to all the other languages: they function metonymically and referentially to emphasize the fact that he is really visiting Mexico – using the local language communicates his experience of actually being there and enjoying it (e.g. 'People are nice and this is pura vida'). Interestingly, in all of the four languages, the writer uses an informal, spoken-like variety, which is generally typical of personal weblogs (Leppänen 2007b). At the same time the extract illustrates how the blogger's multiple language choices also represent him as a cosmopolitan globetrotter who can elegantly and skilfully travel not only from one country and continent to another, but also from one language to another. Thus, the language choices he makes in his blog are also functional and meaningful as means of constructing identity.

Approaches to linguistically mixed CMD

As outlined above, one particular variant of a multilingual setting on the Internet may be one where, besides using their primary language code, the participants draw on resources provided by other languages, and thus produce linguistically mixed discourse. In the analysis of such language practices, scholars have typically drawn on two general methodological orientations: one is the close and detailed analysis of discourse, and the other the ethnographic investigation of online practices, participants and settings. To some extent, mixed methodologies have also been used to gain a wider view of specific data (Androutsopoulos and Beißwenger 2008: 2). For example, studies by Androutsopoulos (2007) and Siebenhaar (2006) combined *quantitative* and *qualitative approaches* to study language choice and codeswitching in CMD.

However, in quite a few studies that have focused on spoken-like, interactive CMD, linguistically mixed CMD has been approached through *methods originally developed for the analysis of spoken interaction*. This is largely because theories and methods designed specifically for studying language mixing in CMC where users most often communicate through written language, have not yet been developed (but see e.g. Hinrichs 2006: 29–30; Sebba 2012; Leppänen 2012). Instead, scholars have drawn on, for example, interactional sociolinguistics (e.g. Gumperz 1982), discourse analysis and conversation analysis (e.g. Auer 1995) to explain the mixed-language features of Internet discourse. What this means is that so far there has not been enough consideration of the particular effects that computer-mediated environments might have on language use and frameworks of interaction (Androutsopoulos and Beißwenger 2008: 1–2; Beißwenger 2008: 1).

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Perhaps not unsurprisingly, then, many of the findings concerning the types and functions of linguistically mixed CMD – especially in online discussions – are similar to those described in relation to conversational data (see Lam 2004; Androutsopoulos 2006b; Peuronen 2011). Participants in various modes of CMD have been shown to draw creatively on multiple languages and to appropriate them to their communicative purposes (Georgakopoulou 2006: 553). For example, drawing on interactional sociolinguistics, Lam (2004: 56, 58) has shown how Chinese students living in the USA used codeswitching between English and romanized Cantonese in their Internet chat and how their codeswitching had a number of functions, ranging from expressing modality to creating humour, selecting addressees and shifting their social alignments. The students were thus able to create a communicative style of their own, which helped them to identify themselves as bilingual Chinese emigrants. In a similar vein, Androutsopoulos (2006b) has shown how patterns of codeswitching in German-based diasporic Internet discussion forums conformed to findings in previous studies on offline codeswitching. Using conversation analysis, he investigated the sequential development of the online interaction and showed how codeswitching between German and the users' home languages was both interactionally and socially meaningful to the participants and was associated with performance-related activities, such as singing or joke-telling (Androutsopoulos 2006b: 532–3).

Whereas approaches to linguistically mixed Internet discussion formats that have drawn on models of conversational codeswitching have revealed similarities in the patterns and functions of codeswitching between off- and online discussions, other types of mixed-language genres on the Internet have called for quite different descriptive and explanatory frameworks. More written-like Internet genres such as blogs or fan fiction (alternative versions of such cultural products as TV series or films by fans) call for an analytic approach that makes use of concepts and methods developed in the context of *narrative analysis.*

For instance, the mixed-language features of a text such as the one illustrated in example (2), a snippet from a bilingual fan fiction story based on an American TV series, *Roswell*, by a young Finnish female writer, can be captured with the help of such stylistic and narrative concepts as point of view and narration. Example (2) describes a situation in which a young Finnish girl – not unlike the writer herself – wakes up one morning in the bed of one of the male protagonists of the TV series and realizes that the young man is, miraculously, her husband. (The sections originally in Finnish have been translated into English by Sirpa Leppänen and they are presented in square brackets after the Finnish sections. Again, to protect the identity of the writer, no link to the original site is included here.)

Example (2)
Mä makasin sängylläni ja ajattelin vanhoja tapahtumia. Mun poikaystävä jätti mut just kaks tuntia aikasemmin.
[I was lying on my bed thinking about what had happened. My boyfriend had left me two hours earlier.]
[…]
Aamulla mä herään taas. Mä huokasen.
[In the morning I wake up again. I sigh.]
'Good morning honey … ' mä kuulen tutun äänen. Ennekun mä ehin reakoida mä tunsin lämpimät huulet mun huulilla. Ja kun suudelma loppui mä huomasin tuijottavani suoraan Kyle Valentin silmiin.
[I hear a familiar voice. Before I have time to react I feel a pair of warm lips on my lips. And when the kiss is over I realised that I was looking straight into Kyle Valentin's eyes.]
[…]

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> 'Are you okay, Milla?'
> Milla?! Mitä nyt tapahtu?
> [Milla?! What's happening now?]
> 'Um … yeah.' 'Good … 'cause breakfast is ready.'
> 'Good, I will go to the shower first.'
> 'I can see that English isn't your language … '
> 'What do you mean?'
> 'Don't worry. It's hard because you're from Finland.'
> Mä hymyilin Kylelle ja menin suihkuun. Mä laitoin hanan päälle ja aloin miettimään asioita. Kun mä nostin käteni ylös mun naaman kohalle, mä näin sen. Mun vasemmassa sormessa oli sormus. Mä meinasin pyörtyy.
> [I smiled at Kyle and went to have a shower. I turned on the tap and started thinking things over. When I raised my hand towards my face, I saw it. I had a ring on my left hand. I almost fainted.]
> 'Noniin … nyt mä käsitän. Mä nään unta. Ja ihanaa sellasta … mä oon naimisissa Kylen kanssa.'
> [Well … now I understand. I'm having a dream. And it's a wonderful dream … I'm married to Kyle.]

This example illustrates how language alternation can be used as a narrative strategy: in this text, it functions as a resource with which the writer is able to depict both the fantastical situation and the identity of the protagonist in a believable way. More specifically, the systematic alternation between Finnish and English emphasizes the juxtaposition and coming together of two realms – the 'real' Finnish one of the young woman and the English-speaking fictional realm that the characters of the TV series inhabit. English is the language of the characters in the TV series, and by using it the writer can emphasize the fact that the young Finnish girl has really entered another reality – the fictional world of Roswell, where everyone speaks English. At the same time, the writer uses Finnish to represent the young female protagonist as Finnish and to underline her essential difference from the characters in the TV series. Furthermore, Finnish also serves to represent the young girl's thoughts and to narrate the story from her point of view, whereas English is used to report on the dialogue between the Finnish girl and the protagonist of the TV series. Both languages thus have distinct but complementary functions.

In this story, then, the two languages constitute a double identity for the Finnish girl: she is simultaneously an outsider, a Finnish fan, and an accidental insider in the TV series. The alternation of the two languages thus also contributes to the creation of a story in which the real and the fantastic intertwine. The alternation of Finnish and English is here one of the 'literary' devices with which the writer can create an appropriate and interesting fan fiction text. Importantly, however, it has been suggested (Leppänen 2012) that in many genres of CMD this kind of linguistic mixing is only one particular facet of their overall, heteroglossic character – of the mixing, alternation and combination of resources not only of different languages, but also of different registers, styles, genres and other texts. What this implies, then, is that, along with other semiotic resources, multilingualism is only one particular discursive resource for meaning-making for writers of this type of computer-mediated text.

What example (2) also illustrates is that in discursive analyses of CMD, *identity and social practice* have been central foci for researchers. In this kind of research identity is typically viewed as constructed and negotiated with the help of multilingual resources in which languages can both index identity and be sites for resistance, empowerment, solidarity or discrimination (cf. Pavlenko and Blackledge 2004: 4, 14). However, as Auer (2005: 407, 409) has

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argued, bilingual language varieties seldom directly express multilingual or multicultural identities; in order to be able to make claims about the relationship between language and identity, analysis is needed to find out what people actually do when alternating between two or more languages, also in the context of the multilingual Internet.

For instance, approaching the investigation of identity construction on the Internet from such a perspective, Georgakopoulou (1997: 148) found that participants in bilingual email discussions signalled 'their interpersonal relations and alignments' through codeswitching between Greek and English and style shifting between social varieties of Greek. She discovered that whereas codeswitches functioned as contextualization cues to negotiate personal footing, style shifting was used for evoking particular sociocultural frameworks in the context of this community. In this way the participants were able to position themselves in appropriate social roles according to each communicative situation as it rose, and create solidarity (mainly by means of humour) and consolidate their in-group membership.

Similarly, Hinrichs (2006: 89) explored social meanings connected to a certain language variety, Jamaican Creole, and the ways in which these meanings became activated when the variety was used in online interaction, in email and discussion forum interaction in particular. He (2006: 86, 137) argued that in CMD, which is more planned than speech, there were conscious switches to a vernacular variety (Jamaican Creole), which tended to have an 'added communicative value' in identity work. Codeswitching between two varieties was also used for creating a certain style, for example when performing 'the identity of a typical Jamaican in conversation' (2006: 110). On the other hand, patois was used as a resource for creating humour and irony, good-naturedly making fun of ordinary Jamaicans (2006: 113–14).

The particular nature of Internet practices as anonymous and yet public (Benwell and Stokoe 2006) naturally has an impact on language use and lays greater emphasis on the role of language in constructing identities, because such 'visible' identity markers as race, gender or social class are less evident there (Warschauer and de Florio-Hansen 2003: 5). At the same time, participants may index something of their real-life or desired identities by, for example, following certain specific interactional and cultural norms, by accommodating their language use to what is considered acceptable or appropriate in the particular online context to which they contribute and by using a variety of other highly indexical language features, such as the use of a group-specific register, or a socioculturally symbolic nickname, signature and slogan (Benwell and Stokoe 2006: 264–6; de Oliveira 2007; Panyametheekul and Herring 2007; Leppänen *et al.* 2009; Kytölä 2012).

Example (3) (see Table 22.1) illustrates how particular ways of mobilizing linguistic resources, including multilingual resources, are crucial in the negotiation of identity and the sense of belonging in CMD. This example is an extract from a discussion about football from a football forum based in Finland (for more details, see Kytölä 2012) in which a Finnish Swedish-speaking football fan uses three languages in his turn to both emphasize and comment on the forum's norms for language choice and linguistic mixing. The original (but visually modified) text by the fan is presented in the left-hand column, and its English translation by Sirpa Leppänen in the right-hand column. The middle column indicates the language choices made by the writer. Once more, for research ethical reasons, no link to the original site is included here.

In this example, the writer's alternation between Swedish, his first language, English, a foreign language, and Finnish, his second language, is an indirect, but very evocative way for him to comment on the constant language policing going on in this discussion forum. More particularly, his commentary is a reaction to the frequent outbursts of hate discourse in the forum about the use of other languages besides its default language, Finnish, (focused

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Table 22.1 Example (3)

1 2 3 4 5 6	Ja ja ni kan tjata på hur mycket ni vill om att RoPs, Jaro och TP har minst lika långa resor, men ni lär väl bli medvetna om våra färjturlistor när det är dags för ett ålandsbesök. Välkomna.	Swedish	yes yes you can go on as much as you like about how RoPs, Jaro and TP have at least as long journeys, but you must know our ferry timetables when it is time to visit Åland. Welcome.
7 8	Och ni som inte orkar läsa allt som står på svenska,	Swedish	And those of you who don't have the patience to read everything that is said in Swedish,
9	I don't give a fuck.	English	I don't give a fuck.
10 11	Minä puhun ruotsia, ja en ymmärrä paljon suomea.	Finnish	I speak Swedish, and I don't understand much Finnish.
12 13	That's why I write in Swedish. Simple as that.	English	That's why I write in Swedish. Simple as that.
14 15 16	Tänk på all finsk text vi måste traggla oss igenom för at ens fatta om, och hur ni jävlas med oss.	Swedish	Think about all the Finnish text we have to try and read to at least understand, and how you make fun of us.

particularly on Swedish, the second official language in Finland, but also for example on native-like uses of English), as well as about 'wrong' or socially undesirable dialects or registers. Such hate discourse can range from explicit direct criticism of the use of specific languages or varieties to implicit criticism by humour, mimicking, repetition and parody, for example.

This kind of hate discourse is tackled here by the Swedish-speaking fan: he does this, on the one hand by explaining (lines 10–11) in Finnish to his mainly Finnish-speaking audience that his use of Swedish has an explanation – he does not know much Finnish. Immediately after this he switches to English as a vehicular language (lines 12–13) to make his point even clearer. Interestingly, he himself states his opinions most clearly in the Swedish parts of his entry (which the Finnish-speaking participants cannot understand that well). In them, he says for instance 'tänk på all finsk text vi måste traggla oss igenom for at ens fatta om, or hur ni jävlas med oss' ('think about all the Finnish text we have to try and read to at least understand, and how you make fun of us'). This particular entry thus crystallizes key language ideological and identity issues in this forum: the use of Swedish is often criticized in the forum and its users are frequently attacked by Finnish-speaking fans. Finnish, in contrast, is the norm to which participants are usually expected to orient, and whose users are treated by other participants as authentic fans of Finnish football. Acceptance of this normative order is thus a prerequisite for full membership in the football fan community: if, for some reason, conforming to this is not possible for certain fans, they may very quickly find themselves ridiculed or attacked, or totally excluded from the community (Kytölä 2012).

Besides discursive analyses of CMD, *online ethnography* is also a popular approach to observing how Internet users' language practices contribute to the establishment and negotiation of affinity spaces or even communities with shared cultural and social conventions. Research making use of an online ethnographic approach can be divided into two main

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categories (Androutsopoulos 2008: 4): studies that concentrate entirely on investigating online activities, with very little or no contact with the participants (see e.g. Paolillo 1999), and studies in which the observation of online activities in the selected sites is accompanied by fieldwork in offline settings in which the participants' Internet uses are examined by means of, for example, surveys, interviews and observations (Androutsopoulos 2008; see also Kytölä and Androutsopoulos forthcoming).

A multidimensional ethnographic investigation of Internet users' practices can indeed be a useful way of elucidating and understanding the ways in which Internet users themselves make sense of and account for their engagement with the Internet and the affordances it offers them for meaningful social and cultural action. A good illustration of this is a study by Nikula and Pitkänen-Huhta (2008; see also Leppänen *et al.* 2009), which looked at a group of Finnish teenagers' activities with various electronic and digital media, with the goal of exploring the presence of English in their everyday lives. During the research process the researchers aimed at an understanding of their social reality and how they make sense of their uses of English. This was done by using multiple methods including group and individual discussions with the participants, a number of visual tasks (e.g. photographs, drawings and collages) and literacy diaries. Using such methods Nikula and Pitkänen-Huhta were able to give a detailed account of how the everyday activities of young people in Finland increasingly revolve around electronic and digital media, and how these media uses by them are accompanied by a constant flow of English, which further shapes their media practices and opens up a new world of international contacts and translocal activity spaces beyond the local networks with which they can connect. At the same time, the different kinds of data used in this study demonstrated a great deal of variation within the teenagers' actual practices. An ethnographic approach thus made it possible for the researchers to show how young people engage with the media in highly personalized and self-regulated ways in order to meet their individual needs and aspirations.

Policy issues

It is not uncommon to find in research on language diversity of the Internet (UNESCO Institute for Statistics 2005; Wright 2004; Crystal 2001), strong pleas for action to ensure that digital access and digital literacy are upheld especially on behalf of the many linguistically diverse and developing countries of the world. For example, UNESCO (see e.g. UNESCO Institute for Statistics) recommends that the national, regional and international levels need to work together

> to provide the necessary resources and take the necessary measures to alleviate language barriers and promote human interaction on the Internet by encouraging the creation and processing of, and access to, educational, cultural and scientific content in digital form, so as to ensure that all cultures can express themselves and have access to cyberspace in all languages, including indigenous ones.
>
> *(2005: 11)*

At the same time, researchers are aware of the fact that no top-down, globally applicable Internet language policy is possible, because of the differences between the cultural, sociolinguistic and technical contexts of Internet use. Therefore, a more bottom-up approach to policy is usually recommended. For example, the UNESCO report (ibid.) recommends that it may be preferable that language policies are formulated by regional bodies whose studies could then be combined into an overall global perspective. A further factor complicating the

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formulation of a universal Internet language policy is the differences between different national language policies, which regulate language choice and use on official state and municipal websites. For instance, in officially bilingual Finland, citizens need to be given information on the Internet in both Finnish and Swedish, as well as in English. Thus, regional language policies may often be too general for regulating language choice and use in the varied local contexts in which people actually communicate on the Internet.

However, many Internet sites, although they seldom spell out an explicit language policy of their own, often in fact develop some kind of regulatory mechanisms that can also affect language choice and use. These might take the form of a collectively established and monitored etiquette, but also moderator and participant comments can effectively police the ways language or languages can and should be used in the Internet setting in question (Leppänen 2009; Leppänen and Piirainen-Marsh 2009). Thus, despite the fact that these kinds of regulatory mechanisms are not always spelled out, they are often a key factor in shaping language choice and use on the Internet, and thus something that a researcher on Internet language policy needs to find out about by means of surveys, interviews or participant observation, for example.

New research directions

The kind of research on multilingualism on the Internet outlined in this chapter suggests some possibilities and questions for future research. On a programmatic note, it could be argued that the diversity of the Internet as a linguistic, discursive and communicative space necessitates studies that can provide answers to such questions as

- What language(s), and forms and patterns of language are used on the Internet?
- In what ways and how frequently are these different languages actually used by Internet users?
- When, where, by whom, in what kinds of technological, social, cultural and generic contexts, and for what purposes are specific language(s) used on the Internet?
- Why are specific language(s) used, and how do Internet users themselves assess their language choice and use?
- What is the use of vehicular languages and linguistically mixed discourse like?
- What effects do language choice and use have, and what (discursive, semiotic, social, cultural, aesthetic, etc.) meanings do the language choices and uses have for the participants, and more generally?
- How does multilingualism on the Internet relate to offline realities, to e.g. societal, group, institutional and individual mono-multilingualism?

In other words, the multidimensionality of Internet multilingualism calls for studies that can approach it from a wide variety of perspectives and with various methodologies that can shed light, incrementally and complementarily, on both the specificities of and differences between the languages used, and the functions and meanings of these languages in the varied linguistic, communicative and discursive spaces of the Internet. In so doing, research on Internet multilingualism could benefit considerably from multi- and cross-disciplinarity: from approaches and insights provided by other types of Internet research (e.g. cybercultural studies, cybersociology, usability research, gaming research). Innovative interfaces between language-based research, and different strands within it, and with other forms of enquiry can also enrich our picture of the role and significance of language in communication, social interaction and cultural production on the Internet. For instance, bringing different methodologies into a dialogue – ethnography with discourse study, corpus analysis with close analysis of discourse data, survey

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research with the study of perceptions and assumptions by actual language users, ideologies of mono-multilingualism and actual language uses by individuals and groups – can help us understand and explain how complex the choice and use of languages on the Internet is. To account for this complexity, research on Internet multilingualism has a lot of ground to cover: it needs to find out not only about the types, dynamics, characteristics and meanings of specific language uses, types of communication and discourse on the Internet, but also about what Internet users themselves think about what they do – both as situated practices and as more general tendencies and frequencies – as well as about what structural (technological, social, political, cultural, economic) constraints and affordances there are for their activities.

Other, and more specific, future challenges in research on Internet multilingualism derive from the ongoing evolution of the Internet, or, more generally, of electronic and digital social media, as well as the ways in which these media are used. For example, it is argued by Androutsopoulos and Beißwenger (2008: 5) that it would be particularly useful for language-focused researchers 'to examine methodological differences between synchronous and asynchronous communication modes, and to consider whether different social uses of the same technology can be examined with the same methodology'. For them, this kind of a mission statement translates into research tasks that centre on the uses of CMC technology in different social situations, different platforms for social networking (e.g. Facebook, MySpace), content sharing (e.g. Flickr, YouTube), collaborative authoring (e.g. Wikipedia, Wictionary), the commonalities and differences among different types of online communities, and the use of multiple digital communication tools.

At the same time, in view of the variety of modes of communication and discourse on the Internet, an additional challenge for researchers into Internet multilingualism is to develop a more nuanced understanding of the specific characteristics of the different modes and genres on the Internet and the kinds of methodological tools their investigation necessitates. For example, textual genres such as blogs, websites, webzines and fan fiction clearly require different methods of analysis from dialogic and interactive CMD modes and genres. Another issue here is the central role that visual, video and audio material increasingly has on the Internet, which, in turn, underlines the importance of analytic approaches that have not traditionally been part of language scholars' repertoire. In other words, to capture the kind of Internet multilingualism that is conveyed in modalities other than the written language, scholars need to go beyond linguistic analysis and draw on methods suggested by other fields of research, such as multimodality, cinema and TV.

Finally, language scholars should also begin to pay more attention to the fact that the Internet is no longer a medium that is used on its own, and separately from other media. In at least the more affluent and ICT-saturated countries of the world, people lead increasingly mediated lives, surrounded by, operating and interacting actively with different types of media, in inter- and crossmedial spaces. What this means in terms of Internet multilingualism is that the kinds of language uses, types of communication and discourse that researchers have traditionally associated with the Internet only, may, in fact, be typical of other electronic and digital media contexts as well. A good example of this is the way in which chat shares many features with texting. Furthermore, the Internet is often used in relation to, or embedded in and embedding other media. An illustration of this could be the use of an Internet application to make a phone call in an environment that also offers other communicative modes and modalities (e.g. chat, webcam, file sharing). In an environment like this, communication and language use can take a range of different forms, spoken, written, telephonic, or face-to-face, for example. Analogously, in such a setting, multilingualism can be manifested in various ways, which poses yet another new challenge for its research.

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Conclusion

In this chapter we have attempted to discuss the study of multilingualism on the Internet, looking at key concepts, approaches, developments and future challenges. Because this is a relatively new field of research, and because the technologies as well as the social and cultural spaces of the Internet keep changing constantly, anyone hoping to provide a definitive account of multilingualism on the Internet can only hope to offer partial, and partially out-dated accounts. Nevertheless, it is also true that the constant and dynamic change of the Internet also makes this research all the more timely, and the research-based evidence provided by language scholars can help us to understand, relate to, and act in and on the increasingly meaningful and powerful linguistic and sociocultural reality that the Internet is for many of the world's people, communities, institutions and societies.

Related topics

Multilingualism and popular culture; multilingualism and the media; codeswitching; heteroglossia.

Further reading

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(This collection of articles includes empirical studies on language use, online communities and social identities in CMD, paying attention to diverse multilingual contexts on the Internet.)

Danet, B. and Herring, S. C. (eds) (2007) *The Multilingual Internet: Language, Culture, and Communication Online*, New York: Oxford University Press.

(A collection of studies that focuses on the ways in which different languages are used in different forms of CMD. The themes of the book include creative use of writing systems, language choice and codeswitching.)

Hinrichs, L. (2006) *Codeswitching on the Web: English and Jamaican Creole in E-mail Communication*, Amsterdam: John Benjamins.

(Hinrichs uses email and online discussion forum data to analyse discourse functions between Jamaican Creole and Jamaican English. He describes situational, metaphorical and identity-related codeswitching and also considers the differences between spoken language and CMC in terms of the functions of Jamaican Creole.)

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