# Digital English as a Lingua Franca

# Digital English as a Lingua Franca:

## *Shaping New Models through Question-and-Answer Websites*

By

Annarita Taronna

Cambridge
Scholars
Publishing

Digital English as a Lingua Franca: Shaping New Models
through Question-and-Answer Websites

By Annarita Taronna

This book first published 2022

Cambridge Scholars Publishing

Lady Stephenson Library, Newcastle upon Tyne, NE6 2PA, UK

British Library Cataloguing in Publication Data
A catalogue record for this book is available from the British Library



ISBN (10): 1-5275-8800-9
ISBN (13): 978-1-5275-8800-4

# TABLE OF CONTENTS

# LIST OF FIGURES

# LIST OF TABLES

# FOREWORD

FILIPPO LANUBILE AND NICOLE NOVIELLI
COLLABORATIVE DEVELOPMENT GROUP (COLLAB)
DEPARTMENT OF COMPUTER SCIENCE
UNIVERSITY OF BARI ALDO MORO

As researchers in the software engineering field, we are aware that developing software is not just a technical activity but a sociotechnical one: software development involves a large amount of social interaction, as programmers often need to cooperate with colleagues whether directly or indirectly. This social interaction goes beyond team collaboration in a shared office. In fact, social media have deeply influenced the design of professional online platforms that are popular among software developers, thus enabling and supporting collaboration in globally distributed settings. Stack Overflow is an example of an online community where software developers exchange information by reading and answering each others' technical questions, thus participating in the creation and diffusion of crowdsourced knowledge and software documentation. The success of Stack Overflow and, more generally, of community-based question-and-answer (Q&A) sites, such as those populating the Stack Exchange ecosystem, mainly depends on the will of their members to answer each others' questions. In fact, when formulating requests on Q&A sites, we are not simply seeking information, but also asking for other people's help and feedback. Understanding the dynamics of the participation in Q&A communities is essential to improve the value of crowdsourced knowledge.

This book is the last but not the least deliverable of an ambitious multidisciplinary project aimed at understanding the role of emotions in social-media-based knowledge sharing, specifically in online Q&A sites. One of the main issues in effective online Q&A activity is the assessment of the quality of an answer, also in light of the reputation of the users in the community. To address this issue, we have built a general framework of the technical, linguistic, and human factors that predict the probability of receiving a successful answer in Stack Overflow. As a result of investigating the role of affect in Stack Overflow questions, we found that

the expression of sentiment, regardless of its polarity, might be detrimental to success. Contributions are not limited to software engineering but involve other disciplines: human-computer interaction, linguistics, and psychology. As far as human-computer interaction is concerned, a practical expected output of this research has been a user-driven netiquette for online Q&A sites, based on the findings of our empirical studies, to support both novice members in their activities as users and community managers as moderators. As for linguistics, it feeds this research with models about emotions and sentiment expression through language, upon which to develop new sentiment analysis tools. As for psychology, it allows researchers to build new theories and models of social emotion sharing, empathy, and trust in complex written interaction based on social media.

This is not the only prominent example of research that involves human aspects of software engineering. Over the last few years, we have investigated the topic of distributed software development. Following the trend towards business globalization, and the recent COVID-19 pandemic, software developers, like many other knowledge workers, have had little to no ability to meet in person. Distance has an especially profound impact on the development process, which relies heavily on interaction, and whose effectiveness is severely constrained by the geographical distance between stakeholders. For this reason, the need to develop the right tool infrastructure to support teams of geographically dispersed programmers is a critical challenge for researchers that should build upon theories of computer-mediated communication (CMC). Our research has also investigated the topic of English as a lingua franca in multilingual group communication as opposed to real-time machine translation, which might be used in countries with a dearth of English-speaking professionals. *Digital English as a Lingua Franca* is also the title of this book, which signifies that developing software-intensive systems extends beyond traditional technical boundaries and affects the human and social context where people experience their daily lives.

# ACKNOWLEDGMENTS

My sincerest thanks go to Sara Laviosa who, despite her heavy workload, read the whole book and provided invaluable comments, suggestions, and feedback; Filippo Lanubile and Nicole Novielli for their critical comments and helpful suggestions; Concetta Papapicco for her precious help on the use of Semantria; Antonio Mileti for his statistical expertise; and John Jacobs for his patient and accurate editorial assistance.

# ENDORSEMENTS

"Taronna's monograph is a very welcome original study of the ways in which different people express themselves and interact in synchronous computer-mediated communicative settings, with a particular emphasis on the languaging processes employed in establishing identity and fostering community ties. The many examples discussed, especially from the domain of question-and-answer websites, are illuminated from a comprehensive theoretical standpoint and help the reader appreciate the intricate genre-specific structures and moves involved. These data-driven accounts are convincingly tied together to describe what the author calls "Digital English as a Lingua Franca"."

**Nicos Sifakis**
***Full Professor, Department of English Language and Literature, National and Kapodistrian University of Athens***

"In our increasingly digital world, where communication is more and more mediated by computers and there is a strong need for developing emotional competence, the study of emotions in the sharing of knowledge through social media plays a key role in pedagogy as well as in our professional lives. Firmly grounded in theory and methodologically rigorous, the interdisciplinary research work presented in this book enhances our understanding of the challenges posed by computer-mediated communication and, in the long run, it helps us become judicious and responsible meaning makers."

**Sara Laviosa, PhD**
***Founder and Editor of*** **Translation and Translanguaging in Multilingual Contexts**

# INTRODUCTION

This book is the result of a part of a three-year multidisciplinary research project which was funded in 2016 by MIUR (Ministero dell'Università e della Ricerca) under the program "Scientific Independence of Young Researchers" (SIR). The title of the project was "Investigating the Role of Emotions in Online Question and Answer Sites," and its main goal was to understand the role of emotions in social media-based knowledge sharing, specifically in online Question and Answer (Q&A) sites. Though the main research domains of the project were Computer Supported Cooperative Work (CSCW), Human–Computer Interaction, and Software Engineering, expected outputs were also traced in Psychology and Applied Linguistics. An advancement of the state of the art for some of these disciplines was anticipated and achieved by the team members involved in the project.[1] Specifically, I was invited to join this ambitious project and to lead the applied linguistics unit, with the specific task of detecting and defining new models for emotion and sentiment expression through language, upon which to build new affect recognition techniques and sentiment analysis tools. For the whole duration of the project, the unit was very productive in

[1] The unit was composed by Antonio Mileti, research fellow in English as a Lingua Franca in Marketing Studies, as well as Gianluigi Guido and Maria Grazia Guido, involved as experts affiliated at the University of Salento and specializing in Marketing and Applied Linguistics, respectively. It must also be noted that Nicole Novielli was the principal investigator for the whole project. As she was specialized in the fields of Human–Computer Interaction and Software Engineering, her research unit composed of Fabio Calefato and Filippo Lanubile was able to set new empirically driven guidelines for how to improve emotional interface design for enhancing user experience and engagement in online Q&A sites, to provide new insights on the use of Stack Overflow for knowledge sharing in software development, to develop tools to embed emotional intelligence into effective online community management, and to support users and moderators of Q&A sites. The research unit in Psychology, led by psycholinguist Giuseppe Mininni, along with Rosa Scardigno, Valentina Lucarelli, Concetta Papapicco, and Mara Zagaria, shaped new theories and models for the social expression of emotion, upon which to build new analytical techniques for psycholinguistic research on emotion, trust building, and empathy in complex interactions among individual and groups, with a focus on social media.

its publication of research articles[2] and dissemination of results through conference papers.[3] Though the project officially ended in 2018, the applied linguistics unit has never ceased working in the field of language and communication in the digital age. Rather, a different choice has been made thus far. Since I have been teaching English for the Media and Communication Studies Department in undergraduate, graduate, and postgraduate courses for the last fifteen years, I was strongly motivated to share the results of the project with my students and to expand on some additional research issues in the classroom context. As a consequence, in the last two years I have mainly based my courses on such topics as the use of English in digital communities for online interactions, and I have provided students with the exploration of such helpful communication tools as Q&A websites. The pedagogical implications of teaching this content have contributed to a more comprehensive problematization and systematization of the theoretical and methodological issues which were investigated by the applied linguistics research unit during the SIR project. As a matter of fact, the students' feedback on these topics, so closely related to their academic pathway in the study of language and communication and to their future professional environment in the field of social media, has contributed to setting new empirical objectives and procedures in line with the new Q&A websites selected for linguistic investigation.

The early leitmotiv harmoniously intersecting with the content of my courses on English for the Media and Communication Studies Department and the students' learning expectations was the concept itself of communication. We agreed on defining communication as the process of information exchange *par excellance*, which refers to the rich, varied, and complex social encounters that people engage in with each other for various reasons, including the fostering of social relationships. Crucially, we expanded this definition by looking into and comparing the relevant entries in the *Merriam-Webster Dictionary* and the *Oxford English Dictionary*: the former states that "communication is the act or process of

[2] See Mileti and Taronna 2017; Taronna 2017.

[3] In November 2017 the applied linguistics research unit organized an international colloquium on "Language Devices and Communication Strategies in Digital Communities" (Department of Education, Psychology, Communication, University of Bari), and the results of the project were partially presented there. In December 2017 I co-presented with Antonio Mileti a research paper on "Digital interactions in Q&A sites: A research analysis on the language of golf tourism" delivered at the Clavier International Conference on *Representing and Redefining Specialised Knowledge*, University of Bari Aldo Moro.

using words, sounds, signs, or behaviours to express or exchange information or to express your ideas, thoughts, feelings, etc., to someone else; a message that is given to someone: a letter, telephone call, etc.;"[4] the latter views communication as "the activity or process of expressing ideas and feelings or of giving people information; methods of sending information, especially telephones, radio, computers, etc. or roads and railways." [5] As such, these two simple notions of communication apparently include both those verbal and non-verbal features which are also distinctive of the online communication that has entered our lives in the last twenty years. In its complex development, online communication resembles human interactions in the Bakhtinian dialogical sense: its subject (addressant) generates a text in a general sense, that is, including verbal and non-verbal components in order to change the informational state of a certain object (addressee), either individual or, more often, plural and consequently his/her behavior. In dialogism (Bakhtin 1981) human interaction is an open space in which an individual depends on making contact with other people and finding common ground in which a kind of agreement can be realized. Symmetrically, in online communication users interact in real time, with all of them operating by reading and writing through networked computers, simultaneously. Indeed, the dialogic character of digitally mediated texts not only makes reading and writing like having a conversation, that is, engendering immediate interaction and response between writers and readers, but also involves interaction between human users and machine algorithms which automatically alter texts based on the ways users use them or on certain characteristics of users such as location and predefined settings (Jones et al. 2015: 7).

Thanks to technology, new paths for interaction and communication have been opened up among people who may not know each other personally, which can cause at least some of the haziness in the barriers of time and space in computer-mediated discourse (Herring 2012). Users may not share the same physical, cultural, or linguistic background, but instead the same personal interests or concerns that drive them to communicate digitally. In this changing space of communication, some distinguishing features such as *immediacy* and *dialogicity*, as much as *orality* and *multimodality*, emerge by shaping a shared digital, rather than physical, space between the sender and the recipient of the message, facilitating a

[4] See the entry online at https://www.merriam-webster.com/dictionary/communication (last accessed November 2021).

[5] See the entry online at https://www.oxfordlearnersdictionaries.com/definition/american_english/communication (last accessed November 2021).

near-immediate exchange of communication (Knight et al. 2012). As this book will demonstrate later on, these new modes of communication are reshaping the spoken and written registers and reflect specific lexico-grammatical, discursive, and pragmatic features.

This digital environment has also blurred the boundaries between what we traditionally understand as being characteristic of spoken and written discourse through the reduction of the temporal and social distance between sender and receiver. No longer do we rely simply on speech and writing but also on a range of different forms of "e-language," defined as any communicative, interactive, and/or linguistic stimulus that is digitally based and incorporates multiple forms of media in order to bridge the physical and digital divide (Boyd and Heer 2006: 1). As a relatively new "genre" of communication (Herring 2002), the definition and description of the features of e-language and how it compares and contrasts with spoken and written genres of communication is an ongoing concern in studies of Computer-Mediated Communication (CMC), Applied Linguistics, Corpus Linguistics and beyond. This is something that will be examined in more detail in chapter 1.

On these premises, this study aims to understand and examine how social networks and interactions succeed by using structural and thematic features that facilitate communication and create what Castells (2000) has termed a culture of "real virtuality" (358), that is, the symbolic representations of everyday communicative routines that these social networks create for their users, so as to understand the significance of virtual architecture and multimodal aesthetics. While websites may include photographs, music clips, and immersive virtual worlds, millions of participants experience online communities through text: people go online to talk (write) and listen (read), and so written text is a key factor for the success of both online communities as a whole and their individual members. Indeed, people start conversations in the hope of deriving a benefit from the group; depending on the response they get, current and prospective members will either continue to participate or they will leave. In the midst of all this social activity, people are forming relationships with those whom they meet on the Internet, thus setting the tone for particular types of interaction and enabling both identity expression and community building. As a result, identity and community have long represented focal concepts of interest for new media researchers, who have recently focused on the private/public balance present in each social networking site, as well as on the structural and design elements of online social networks employed to foster connection-sharing, social capital generation, and effective communication (Boyd and Ellison 2008).

Against this background, chapter 1 provides an updated literary review of the evolution of language and communication in the digital age, as well as a definitional excursion into computer-mediated communication. In addition to these two research goals, the distinction between formal texts versus informal texts will be traced, along with the investigation of Q&A websites as a privileged model for shaping participants' views on building a community with a shared goal, mutual engagement, similar motivations, and communicative purposes. To this end, the analysis of authentic small units of informal, text-based computer-mediated communication will suggest a number of theoretical questions which are then discussed in the chapter from the perspective of genre: how individuals or organizations cope with this variety of communicative contexts; how the classification of communicative events sharing communicative purposes and recognized conventions can be accepted by a discourse community (Swales 1990 and 2004; Bhatia 1996 and 2004); and how the definition of text construction and organization, and the identification of the specificities and regularities of language use, can make digital discursive practices easily recognizable and more amenable to being categorized into genres. The chapter also shows that all these genre-related features have contributed to the growing success of digital communities, in which people increasingly participate both to ask about and to resolve domain-specific problems through Question and Answer (Q&A) websites such as Stack Overflow, Yahoo! Answers, GitHub, and Quora.

Since these Q&A websites have gradually become one of the major sources of information today, the scope of chapter 2 is to determine the roles that English plays in the digital age and the rules adopted by its users within digital communities. To this end, the label *Digital English as a Lingua Franca* (henceforth, DELF) is proposed here as a distinctive way to legitimate the international status that English has gained also thanks to the web (e.g., Jenkins 2007; Seidlhofer 2011; Mauranen 2012), in the sense that most information is available in English and users can have access to more data thanks to their knowledge of it. The Internet and web-related modes provide a myriad of occasions for "wider networking" (Vettorel 2014), of which Q&A websites are one but significant example, where people adopt (and adapt) DELF, namely, a commonly shared code that is at the same time part of transgenerational, transcultural, transnational, and translinguistic flows, and is accommodated to the semiotic repertoires of its users. Along with these premises, the overall theoretical goal of chapter 2 is to explore what sort of language politics rules over digital interactions and what kind of linguistic features and conventions, as well as pragmatic moves, may be detected throughout.

More specifically, chapter 2 aims to analyze the Q&A used in an international context by different English speakers and to detect whether the success of their interactions is also due to a set of powerful pragmalinguistic devices, which may reveal that clearly worded questions can make people more willing to help (Asaduzzaman et al. 2013).

More specifically, by adopting sentiment analysis as a tool for recognizing the positive/negative semantic orientation of texts and their emotional style (Novielli et al. 2014), chapter 3 attempts to demonstrate that the aesthetics of Q&A websites are shaped by how we associate emotions and opinions with certain linguistic aspects. In particular, Q&A websites emerge as a very resourceful and sophisticated genre where different sub-genres converge and where speakers from distinct linguacultural backgrounds can communicate through DELF. Thus, to start comprehending the architecture and rationale of the Q&A website, the prominent linguistic and discursive features, as well as the motivations for asking encapsulated in the more frequent questions and answers, will be explored through a data-driven approach, and their rhetorical structure will be identified via a functional analysis. This makes it possible to answer some specific research questions from the empirical viewpoint thanks to the use of *SentiStrength* and *Semantria*: whether a prototypical structure of questions and answers in terms of moves, communicative purposes, and discursive realizations can be detected in line with a distinctive emotional style, as well as whether a taxonomy devised according to a data-driven approach and including the most prominent narrative features in the corpus of Q&As can be inferred in terms of structural patterns (e.g., storytelling vs. subjectivity, opinion mining vs. emotion mining; personal vs. impersonal structures; problem-solving structures and more direct requests; self-reflexivity and metadiscourse; linguistic creativity).

In order to achieve these research goals, chapter 4 aims to explore and profile the Stack Exchange community, its fields architecture, and its code of conduct. The analysis focuses on the corpus collection of the most frequent questions selected from two specific fields related to the use of the English language:[6] https://english.stackexchange.com (English Language & Usage) and https://languagelearning.stackexchange.com (Language Learning). The former is a digital community of language professionals like "etymologists, linguists and serious English language enthusiasts" (i.e., experts in the field of linguistics, English Language Teaching (ELT), etymology, etc.), whereas

[6] The selection takes into account the questions and answers generated on the two Q&A communities on Stack Exchange from 2011 to 2019, approximately, and labelled as "frequent."

the second is composed of regular users and speakers of English and other foreign languages (i.e., language learners). Since both of them resort to DELF for their interactions, the overall research question is the investigation of linguistic factors, that is, looking at how questions, answers, and comments are formulated (Althoff et al. 2014; Mitra and Gilbert 2014), and at how they can influence the success or the failure of an interaction. In particular, by studying these two different communities of digital users gathered around the same topic of discussion (how to use and learn the English language, but not only that), but distinguished by their cultural background (i.e., professional language users vs. regular users and learners), chapter 4 aims to determine the overall occurrences of linguistic patterns adopted by these two Stack Exchange communities, the taxonomy of features identified at the level of ideational, interpersonal, and textual metafunctions and associated with positive and negative sentiment, and the DELF phenomena emerging from the questions collected in the two datasets. Findings have thus been organized and analyzed according to tendencies as identified in ELF research (Mauranen 2012; Vettorel 2014): processes of regularization; economy of expression and redundancy reduction; increased explicitness and lexical creativity; and appropriation and adaptation of the code to the participants' self-expressive and communicative needs, which are at times specific to their individual contexts. By exploiting the "potential(s)" of DELF as the ELF "virtual" language (Widdowson 2003; Seidlhofer 2011), the findings will show that this exploitation engenders different innovative language practices on the web which need to be increasingly investigated in their (social) communicative functions, rather than in terms of language variation *per se*, by looking at how different users resort to exploiting DELF as an expressive and interactional resource.

This last observation brings me to an important point that should be underscored again here. Though this book draws its conclusions from data related to two specific Q&A communities, the phenomena analyzed also have important pedagogical implications for language learning and practice in the fields of Media and Communication Sciences, in the way that students being trained along those educational pathways will be the future social media experts and managers, as well as virtual communities' designers or members, who will be expected to demonstrate an effective and successful command of DELF for achieving their own professional communicative purposes.

# CHAPTER ONE

# LANGUAGE AND COMMUNICATION IN THE DIGITAL AGE

This section takes a step back from the novelty of the technologies themselves to consider connections between how language is conceived and its modes and means of conveyance. To this end, one may generally ask how language changes across setting, medium, and genre, and how new settings, media, and genres change written language and interact with the spoken language. The search for answers to these questions, necessary for any full definition of language and communication in the digital age, must now account for social interaction as a contributing factor. In this light, the most important result of the digital revolution is that interpersonal communication has become independent of place and time and significantly faster (Schlobinski 2009: 6). Heijnk (2002: 16–18) lists five main distinctive characteristics of the Internet, or as he puts it, the "here-now-everything-medium": sharing up-to-date content (which therefore rapidly becomes out-of-date); enabling interaction (users can change content); providing theoretically unlimited storage capacity, that is, unlimited space for information; being multimedial and multimodal; and creating interconnection through hyperlinks.

However, of the general and linguistically relevant social characteristics of the digital age, the most commonly mentioned feature has been defined in terms of the *knowledge explosion* (Pscheida 2007: 9, 27), which means that the amount of available information is growing at an incredibly rapid pace. Similarly, the expression *information explosion* has been created to refer to the thought-provoking phenomenon that every year humanity generates double the volume of information throughout its entire recorded history. As a final result of such explosions, *collective knowledge* has been engendered by Internet users who have accumulated a vast amount of information, especially on popular open platforms like Wikipedia, where users can both read and edit. These freely accessible and editable knowledge bases have changed the traditional *author–editor–reader relationship*, which has become more direct and more dialogical as the reader becomes

an active co-author and co-editor of the digital texts marked by distinguishing features such as *immediacy* and *dialogicity*.[1] As a consequence, the bidirectional and instantaneous nature of today's interactions differs to a great extent from traditional written communication, often considered old-fashioned or dysfunctional in our new reality. That is why *digital genres* are taking over in everyday communication, and have created more dialogic ways of interacting on the web.

The Internet has triggered a broader spectrum of writing and discursive practices, since the distinctions between the spoken and the written modes have also become blurred in digital communication (Mauranen 2016). The acknowledgement of this "blurring" has provided the impetus for the focus of the current section with its examination of the evolution of language and communication in the digital age as observed from a definitional and conceptual perspective, thus considering the most common labels along with the scholars who have proposed them. Such an evolution inevitably starts from the overcoming of Lakoff's (1982) traditional binary opposition between written and spoken communication, advocated as the two end points along a continuum and described as follows: "while spoken language is more spontaneous and direct, written language is rather planned, organized and non-spontaneous" (238). Additionally, Lakoff argued that in the society of the late twentieth century ideal human communication started to shift from a literacy-based model to one based on oral discourse (1982: 240). She saw the reason for this in the benefits and drawbacks of literacy and orality: "spontaneous discourse" is characterized by immediacy and emotional directness but also the lack of clarity, slips of the tongue, hesitation, and repetition. By contrast, "planned discourse" avoids these pitfalls but also lacks the warmth, closeness, and vividness of oral conversation (Lakoff 1982: 242).

Comparing and transposing these last two definitions into the discourse generated by digital interactions, a new innovative variety of language that creates a kind of semi-speech fluctuating between speaking and writing emerges with its own features. Due to its rapid development, since the mid-1990s a proliferation of terms has been coined and used by several linguists[2] to label the language and communication generated in the digital age:

[1] As widely recalled by Dawn Knight (2015), these two features are encompassed under the more comprehensive terms "peer production" and "participatory media," which focus on the collaborative process of creating user-generated content rather than on the finished product and which also highlight, to a different extent, the potentially democratic nature of the Internet (Mandiberg 2012).

[2] See also Crystal (2011) and Jucker and Dürscheid (2012) for an overview of terminology.

"electronic discourse" (Davis and Brewer 1997; Panckhurst 2006); "electronic language" (Collot and Belmore 1996); "Computer-Mediated Communication" (Herring 1996); "interactive written discourse" (Werry 1996); "Netlish," "Weblish," "Internet language," "cyberspeak," "netling" (Thurlow 2001); "cyberlanguage" (MacFadyen, Roche, and Doff 2004); "netspeak" (Thurlow 2001; Crystal 2006); and "virtual language" (Pop 2008). For the purpose of this study, only a definitional excursus into electronic discourse (e-discourse), electronic language (e-language), and netspeak is provided since they are the labels most often developed and quoted in the literature (Bieswanger 2016), along with Computer-Mediated Communication (CMC), which is worth discussing in the next section not merely as a label, but rather as a new and dynamically evolving field and genre. By the way, it should be specified in advance that the definitional excursus into the three abovementioned terms is given here more for the purpose of terminological clarification in terms of usage than detecting concrete differences between these concepts and the features characterizing these terms. As conventionally occurs when dealing with new coinages related to ongoing and ever-changing phenomena such those labelling digital communication, the use of serveral terms for defining the same phenomenon depends on and varies according to the historical period and scholarly trends. This is precisely the way recommended here to understand appropriately the definitions of e-discourse, e-language, and netspeak, which reflect the development of language use as such and the different concerns and developments in the field itself, which are far from over.

Among all of these contributions, the term "e-discourse" originated in the mid-1990s when Perkins and Newman (1995) proposed it for the totality of communication employing e-text transmitted over computer networks, including its social context. One year later, Herring (1996), one of the pioneers in research on language use on the Internet, stated that "e-discourse refers to text-based CMC, in which participants interact by means of the written word, e.g., by typing a message on the keyboard of one computer which is read by others on their computer screens, either immediately (synchronous CMC) or at a later point in time (asynchronous CMC)" (1). She was one of the most influential linguists working in the field of digital language and communication and contributing to its very advancement. Indeed, in 2004 she first used the term computer-mediated communication (CMC), and in 2013, she argued that it should be adapted so as to incorporate the new use of multimodal means of communication.

Davis and Brewer (1997: 2) also adopted the term "e-discourse" to refer to a written talk, namely, a sort of "writing that stands in place of voices," and to focus on how individuals use language to share and exchange ideas

and views rather than on the medium or means by which they convey and deliver their communication. The original intent of their definition was the identification of e-discourse with conversation, in that it presented "a number of performance features generally characteristic of in process or 'in situ' communicative events and behaviors, such as repetition, direct address, disfluencies, and markers of personal involvement," including syntactic and lexical items. Similar conversational features have also been attributed to e-discourse by Lee and Williams (2009), as well as Toyoda and Harrison (2002), who noted the presence of non-standard pronunciation, orthographic reduction, abbreviations, clippings, shortenings, ellipsis, unconventional punctuation, and misspelling due to the spontaneity and informality of the medium, all of which point to a variety of techniques in the economical use of language.

In the light of these definitions and features, "e-discourse" has been envisioned as a controversial hybrid genre, something that is also the basis of its appeal, in several aspects (Beutner 2002: 105; Ferrara, Brunner, and Whittemore 1991: 10; Frehner 2008: 26–27). Using the term "hybrid" here seems particularly appropriate if we consider that electronic texts are typically multimedial and multimodal ones, such that they may incorporate images, videos, or sounds. Thus, electronic written texts are very often based on oral concepts, so they exhibit the conceptual features of orality; in fact, they may be considered as the written "mimesis of conceptual orality" (Kilian 2001: 69) on the grounds that electronic media are characterized by interactivity. This duality is synthesized in the term "oraliterality," from the German "Oraliteralität" (Döring 1997: 290), which is set in opposition to written communication in the traditional sense and builds on the dissociation of writer, text, and reader, thus featuring synchronous forms of temporal and spatial proximity.

At the same time, in the mid-1980s the label "electronic language" was proposed by Spitzer (1986: 19) in the special issue of the journal *IEEE*, where he quoted comments from colleagues in which they described this new variety as "talking in writing," "writing letters which are mailed over the telephone," and "a panel discussion in slow motion." He himself observed that participants "must use language as if they were having a conversation, yet their message must be written" (Spitzer 1986: 19). Messages delivered electronically are neither "spoken" nor "written" in the conventional sense of these words. But, in identifying two types of e-language (i.e., online and offline), Collot and Belmore (1996) clearly state that there is an easy interaction among participants and alternation of topics typical of some varieties of spoken English developed around six dimensions: informativity, narrativity, explicitness, persuasion, abstraction,

and elaboration.

A step forward in this discussion was traced by Biber's (1991; 1992) characterization of texts in terms of the relation between communicative function and linguistic features, thus revealing that there is no absolute distinction between speech and writing. His particular innovation was the analysis of computer-readable corpora to determine sets of linguistic features whose presence or absence correlates with what he calls "textual dimensions," namely, functional categorizations which cut across traditional genre classifications. Crucially, Biber's dimensions may play an important role in explaining the linguistic manifestations of Q&A websites as a particular form of e-language selected as a case study in this book. Among them, the emphasis engendered by Q&A interactions on the degree of shared interests and knowledge is a key situational feature in the way that users who have been using a Q&A website for a while know each other's nicknames, mannerisms, and ideas and have followed each other's posts on different subjects to accumulate a wealth of shared knowledge. Even people who are new to the platform know that their audience will be generally sympathetic because they are bound to them by a common interest. This may account for the high degree of mutual engagement in this e-language, as well as for its relative situation-dependency, despite the fact that participants' interactions are separated by time and space. A further situational feature concerns the purpose of the communication, which is to request and impart information and to discuss specific issues from which both the individual questioner and the whole community may derive a benefit. These purposes seem to play an important role in shaping e-language as a highly persuasive discourse type. A final component of Biber's textual dimensions which can be further applied to Q&A websites as an example of e-language is the tripartite nature of the active roles played by the participants, which include an addressor, an addressee, and an audience who can make better use of network resources with the language and achieve effective communication on the Internet.

The definitional excursus into terminology used to name the multimodal products derived from language and communication in the digital age necessarily includes Crystal's studies (2001; 2008: 13), in which he provides an accurate terminological review of other terms for the varieties of digital language, including "textese," "slanguage," "new hi-tech lingo," and "hybrid shorthand," and collects them all under a single umbrella like *netspeak*. Drawing on the Orwellian terms "Newspeak" and "Oldspeak" introduced in the novel *1984*, this word is a compound noun—*speak* involves both writing and talking and refers to speaking in ways commonly used to converse in text on the Internet. As mentioned in the definitions of

e-discourse and e-language, messages are usually written as if someone were really talking and might, therefore, not have the correct grammar or punctuation that formal writing should have. Along with the use of the label "netspeak," some newly coined words have proliferated and have already been included in the *Oxford Dictionary of New Words* since 1997 (e.g., *e-text, e-zine, e-cash, e-money*, *e-lancers, e-management, e-government, e-books, e-voting, e-newsletter, e-cards, e-shop*). As we can infer from these examples, the netspeak lexis is mainly characterized by neologisms, but most of them are everyday words used by netizens with a different meaning from the one already well known. According to Crystal (2001: 6), a popular method for creating Internet neologisms is based on word-formation by combining separate words to make a new compound (e.g., cyber-surfers). Among the most creative words that appear repeatedly in netspeak, he lists the following: bug (*bugfix, bugnet, bugtracker*); mouse (*mouse pad, mouse click, mouseover*); click (*click-and-buy, one-click, double-click, left click, right click*); web (*webcam, webmail, webmaster, Webster* (a person that acts like a dictionary), *webhead* (web addict); ware (*groupware, shareware, freeware, firmware*); hot (*hotlist, hotlink, hotmail, hotJava, hotspot*); the symbol @ (*at the rate of*, an abbreviation from accounting which sometimes has a prefixal function: *@ home, @ command*); blends (parts of different words joined make a new word, e.g., *cybercide*, that is the killing of someone in a virtual game; *infonet, hypernet, netleg, netiquette, netizen, netnews, netspeak, usenet*); and the substitution of a compound by an equivalent sounding entry (*e-mail, e-commerce, e-cruting*). These creative linguistic inventions are very popular because they have ended up becoming fashionable, especially among teenagers.

All of the features mentioned in this section and used to describe the three labels illustrated so far have served the purpose of asserting the linguistic status of communication produced in digital interactions and of examining how digital users can use language creatively in such text types as e-mails, internet forums, blog and vlog posts, tweets, message wall posts, comments, online chat messages and instant messages, and text and multimedia messages. Notwithstanding the eclectic and hybrid nature of such ever-changing text-typology, several attempts have been made by linguists in the last decades to systematize the distinctive theoretical and methodological issues affecting language and communication in the digital age and to investigate them within a discipline of its own. To this end, Austrian scholars Eckkramer and Eder (2000: 21–22) developed a special method known as "contrastive cyber-textlinguistics," which has emerged as an area of linguistics concerned with the texts of a society which communicates both through traditional print (so-called typographical)

media and through computers. It covers every dimension of the interaction between different medium spaces and also includes practical and literary texts in the analysis. The authors examined and compared ads, recipes, and job advertisements in English, German, Spanish, and French to document the changes in conventions associated with different multilingual text types and to demonstrate that the shift of medium also brings about linguistic change, resulting in a new, digital language register (2000: 273) known as *virtual* or *digital textuality*.

In 2001 Crystal published his outstanding book on *Language and the Internet* and presented it as only a "first approximation" to the definition of Internet linguistics. His efforts concentrated on the investigation of the role of language on the Internet and the effect of the Internet on language, which was relatively limited at the time, especially compared to today. As he was particularly aware of the fact that language had become increasingly central to Internet social practices, Crystal shaped Internet linguistics as a new interdisciplinary field which has since developed knowledge and skills for understanding, processing, and exploiting language content in the digital age. Since its early stage, this new discipline has been a fusion between linguistics and computing, creating powerful tools at the crossroads of traditional language studies and information technologies and opening the way to what Crystal defined in terms of a "linguistic revolution" (2001) to predict the more sophisticated models that would be needed to capture all elements of the variation found.

Among these models, it is worth mentioning another challenging attempt at systematizing and problematizing Internet linguistics as a discipline closely interconnected to discourse analysis. In 2015 Jones et al. published an inspiring book entitled *Discourse Analysis and Digital Practices: Doing Discourse Analysis in the Digital Age*, in which the authors answered such relevant questions, among others, as what are digital practices and what is the utility of discourse analysis for helping us to understand digital practices. The discussion they developed around these questions are in line with recent approaches in applied linguistics (Pennycook 2010), literacy studies (Gee 2012), and discourse analysis (Norris and Jones 2005), which take as their starting point not discourse per se, but rather the situated social practices that people use to perform in their daily lives, the kinds of meanings people can make in different situations, and the kinds of relationships they can form through interactions.

As a result, the inherent dynamism of digital texts has recently encouraged several linguists and scholars to undertake various academic initiatives to rethink texts, social interactions, and even the nature of language itself. Among them, new academic transnational networks have