Language Change in Progress:
Evidence from Spelling in Computer-Mediated Communication

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Words: 11,771

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Contents

Dedication

This dissertation is dedicated to the memory of my father,

Brian Richard Jones.

πίστη, ελπίδα και αγάπη

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Abstract

The main purpose of this dissertation is to examine the relationship between spelling systems and Computer-Mediated Communication (CMC). It investigates the importance of 'correct' spelling in today's society through qualitative and quantitative data collection to ascertain whether are moving away from a standard orthographic system. It describes the reasons behind non-standard spellings in CMC and asks whether this is merely language play or highlighting a much larger language change. It is undeniable that technological developments result in linguistic developments and this dissertation investigates the possibility of CMC as the agent for spelling reform from a bottom-up approach. It concludes that language use in CMC is a partly-isolated linguistic variety; however, the frequency of non-standard forms may indicate a future orthographic revolution in a non-CMC context.

1   Introduction

In a small village on the island of Crete there are two signposts indicating its territorial boundaries; coming down from the mountains you are welcomed to <Δωριες> 'Dories' and approaching from the nearest town you are greeted by <Δοριές> (see figure 1.1). These road signs exist for the same village yet the spelling differs from one to the other: omega <ω> and no *τόνος* 'stress mark' in the former, omicron <*o*> in the latter. This inconsistency appears on government-funded signposts where one might expect uniformity and meticulousness. This provided the dissertation's basis: who can control a spelling system and who is entitled to make any prescriptions about it? Thus, what is happening in the domains with no centre of control such as Computer-Mediated Communication (henceforth CMC) where individuals have ample space to spell as they wish? Language is changing faster than ever before and these changes are pervasive and momentous. CMC has unprecedented scale and significance which easily gives rise to new social practices and therefore stands as a possible agent in spelling change.

Figure 1.1 Dories signposts, Crete, 2010

1.1   Aim of study

To investigate the questions mentioned above this paper focuses on a specific area of orthography: spelling in CMC. By confining its use to this setting the researcher will explore the importance and uses of spelling in CMC with one particular question in mind: 'Is society starting to move away from standard spelling systems through the opportunities presented by CMC?' This bottom-up approach looks at the idea of standard from a collective perspective and its symbolism in this synergy between language and technology. It argues the importance of 'correct' spelling in contemporary society and the role CMC plays. This paper looks beyond the well-noted creativity of non-standard spellings in CMC and theorises about a much wider implication: are societies gradually reforming their respective spelling system through CMC?

By analysing the results from a qualitative questionnaire distributed to 18-24 year olds and investigating the degree of non-standard spelling on the Internet this paper explores attitudinal shifts regarding the 'standard' spelling system and the influence of CMC. This level of freedom and power might indicate something more than mere language play, perhaps a potential orthographic revolution.

1.2   Research questions

In light of the aims mentioned above, this dissertation has four specific research questions:

i.   Why do non-standard spellings occur in CMC and what do they represent?

ii.   Is 'correct' spelling important in today's CMC?

iii.   Who is controlling the English spelling system and how can it change?

iv.   Are spelling systems changing due to CMC?

1.3 Context of study

One of the core motivations for this study is that previous research into spelling in CMC does not always look beyond language play and creativity. Non-standard spellings are approached differently as it is evident that new forms are emerging and practices associated with spelling no longer obtain in CMC, however, this may be more than a language variety confined to a single domain. With such a huge amount of data now at our disposal through corpora and online domains we could be studying diachronic changes of spelling choices in CMC. A number of studies are devoted to the role spelling plays in society, such as Sebba's (2007) *Spelling and Society*, and others look at the evolution of the spelling system itself, such as Baron's (2000) *Alphabet to Email*. However, until now, the two ideas have not been merged. Explanations for non-standard spellings range from the difficulty of the English spelling system to language play to the physical effects of CMC and synchronic studies highlight highly diversified language that technological developments have created, but are all these variations slowly changing the spelling system for younger generations outside of CMC?

A further motivation for this study is the notion of a 'standard' in language and consequently the highly contended question of control; for decades we can trace the changes in the ideal pronunciation, grammar, vocabulary, and spelling. How did these standards form? And more importantly, how did they change? Could CMC be the agent to change spellings systems? Past technological inventions have shown this to be true but what is happening today's global communication? Beyond English we can see non-Latin based scripts adopting a Latin-based transliteration for CMC and non-standard spellings arising in languages with academies, for example French. This paper considers the effect of CMC on spelling not only in English but in French, Greek, Chinese, and Albanian to achieve a wider perspective on the situation.

1.4   Overview of the chapters

This dissertation is divided into six chapters; Chapter 2 is an overview of the relevant literature, which will outline the basic concepts required for an investigation into CMC, spelling, and language change and provide theoretical frameworks. Chapter 3 describes and justifies the choice of methodology illustrating how this project was performed. The questionnaire results are shown in Chapter 4 with basic conclusions and explanations, whilst the results and online data are discussed in Chapter 5 with suggestions for future studies. Finally, Chapter 6 concludes the dissertation with an evaluation of the project.

2   Literature Review

The four research questions previously mentioned derive from four specific areas of language and linguistics, the first involves spelling in its most general sense and the impact it has upon society (see 2.1), the second forms the relationship on which this paper is based: CMC and its effect on language (2.2). The third topic comprises of English spelling changes due to technological developments including a brief history to form contextual background knowledge (2.3), and finally the philosophical perspective of language change and control is considered to explore the likelihood of an orthographic revolution through CMC.

2.1   Spelling and Society

Spelling raises its head in so many different aspects of society not only the world of linguistics, it is taught, debated, analysed, hated, loved, learnt, and often generates high emotion. It is the cause of controversy for many individuals and institutions as the importance of 'correct' spelling is argued persistently. The Times[1] held an online debate on 24th March 2010 which invited members of the public to discuss the emphasis on correct spelling and show their reactions. Jack Bovill (chair of the UK Spelling Society), Robert Groves (American lexicographer for Harper Collins Dictionaries), Masha Bell (author of *Understanding English Spelling* 2004), and Katie Krais (teacher, writer, author) were available for questions regarding spelling and its current standing. This is a debate amongst many; it showed enraged comments to indifferent, arguments for and against, advantages and disadvantages, the option of reform and its counter-arguments. The complexity of the topic and the reactions it provokes illustrates that everyone is affected by spelling in some way, and a great deal of these people have strong opinions about it.

It has been suggested in the past that orthography is not usually subject to systematic change. Milroy and Milroy (1991:67) claim that 'spelling in the most uniform level of language use, and

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[1] The Times holds an annual spelling bee and encourages the use of 'correct' spelling.

contrasts in this respect with the variability of its counterparts in speech - pronunciation... twentieth century English spelling is almost absolutely invariant'. However, there is much evidence to the contrary, standard orthographies *can* change, and reforms demonstrate this.[2] Spelling is subject to variation and has been for centuries, it also plays an important role in society by controlled and uncontrolled changes. They represent political, social, linguistic, and cultural aspects of society and can show assimilation or rebellion (Sebba 2007, Androutsopolous 2000).

To focus on spelling in CMC requires us to consider the following points: its symbolism, its prescriptive and descriptive inspiration, where is 'correct' spelling important and for whom. If so, what is it still important? And why is it? Are non-standard spellings becoming acceptable in today's society? All these questions are explored within a general context in Sebba's (2007) *Spelling and Society.* Although it does not directly focus on CMC it provides a fascinating framework on which to analyse orthography and its consequences.

2.2   CMC: Language and the Internet

Over the last two decades, CMC has seized the spotlight in terms of its effect upon language; there is clear divide between purists who believe it is damaging language and those who believe it is ameliorating it (Baron 2008, Crystal 2006). In its most basic sense CMC is contact between human beings through computer devices (Herring 1996), it is a fast, cheap, democratic electronic medium that facilitates, shapes, and constrains communication. Different topics become the focus of different studies, for example gender issues, power, turn-taking, pronoun use, grammatical changes, and so on. As the editor, Herring (1996, 2004) includes linguistic, social, and cross-cultural perspectives of CMC which shows the wide spectrum it occupies. It is important to note the wider

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[2] There have been minor and major reforms in a large number of languages over the past hundred years, except in English. Some examples include Albanian, Portuguese, Chinese, Dutch, French, Finnish, German, Greek, Hebrew, Japanese, Romanian, Norwegian, Tok Pisin, and Turkish.

effects of CMC upon society and the opportunities it presents elsewhere; this paper illustrates the combination of all three areas.

Androutsopolous (2006) introduces CMC in a sociolinguistic setting by looking at the online community and discussing methodologies in which to study it. This is vital starting ground for research into CMC as it tackles the notion as a whole and divides the complex topic into manageable themes for further investigation. The most relevant part to this paper is 'Language Variation' which summarises the linguistic varieties found in CMC and the quantitative studies to illustrate their significance. It is clear that each domain is an opportunity for a new kind of language and that we can characterise this linguistic behaviour.

Returning to the central theme of this paper it is vital to mention Crystal's (2006) *Language and the Internet*. Crystal is a strong believer in the benefits of CMC and disagrees that it is damaging the language. His (somewhat outdated) book discusses how the Internet is affecting the way in which people use language; it covers a wide range of Internet genres which subsequently can be divided by their synchronicity. In terms of non-standard varieties found in CMC, the focus lies almost exclusively on creativity. Crystal (2006:84) states that 'it is unusual to see material on the Net written in non-standard English - such as regional dialect... the vast majority of webpages are in standard English'. Unsurprising, Crystal's inbox consists of 'emails in standard English - some very colloquial, but nonetheless respecting the conventions of the standard written English'. Both Crystal (2006) and Baron (2008) do not consider non-standard spellings as language change but as a minor variation.

Indeed, in the majority of research found indicated a similar vein of belief, that it is uncommon to find conscious non-standard spelling in CMC. The explanations for them rely solely on creativity, illustrated by the use of emoticons, abbreviations, and so on. Guides to emailing support this view (Flynn and Flynn 1998) by encouraging correct spelling throughout CMC, however, even Crystal (2006) admits there has been a linguistic revolution and the researcher does not agree that is has only formed merely a 'variety'.

2.3 Past spelling changes and the effect of technology

Technology always changes a language, for example the creation of the printing press in the 1400s which encouraged new styles, spellings, punctuation and so on. In 1876, Bell's telephone changed the language again with new patterns of dialogue (even the coining of *hello*) and his rival Edison invented the phonograph. In the 1920s broadcasting made its entrance which had a huge prescriptive impact on English and selected voices became the 'norm'. These developments are well attested in linguistic analyses (Scragg 1974), thus CMC was to suffer the same fate, especially with the unprecedented scale of communication via the Internet.

English *orthography* (literally 'correct writing' from the Greek *ὀρθογραφία*) has undergone a number of substantial changes since its first appearance as 'Futhark' around the fifth century (see Figure 2.1). Chronological accounts (Scragg 1974) identify the main changes to result in our present system. From Old English manuscripts that we see a heavy Latin influence which has shaped the system we still observe today. The middle ages saw the most variation and absence of a standard; and Chaucer's and Shakespeare's era saw a time of orthographic freedom and choice.

Perhaps the most relevant part of Scragg's work is the focus on the printing press and its effect upon spelling; it became a mark of education and class by clearly marking an individual's social standing (Crowley 2003). By considering the effects of past technological developments we can relate the impact of CMC upon language as a whole and spelling in particular. Many historical reports of English spelling concentrate on the 'power of the press' (Scragg 1974:64) as the turning point for standardising the system, it showed the beginnings of wide state censorship.
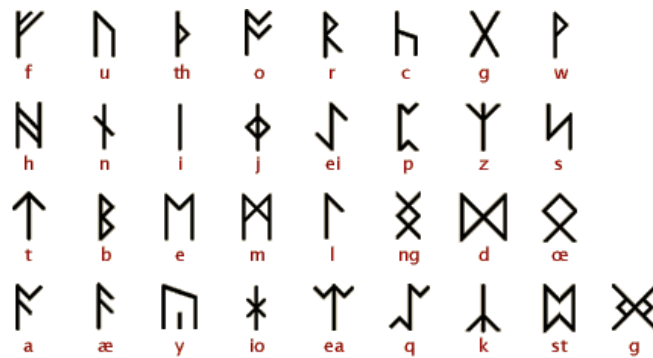
Figure 2.1 Futhark

The pivotal moment in regards to prescriptivism and spelling was Dr Johnson's (1755) dictionary which could be used as a point of reference to gauge the 'correctness' of a spelling. However, this was not Johnson's intention and the dictionary was a representation of synchronic variation, yet Addison, Pope, Defoe, Dryden, and Swift would agree that this helped to 'fix' the language.

From the time of King Alfred's reign there exist a sufficient number of contemporary Old English texts that indicate a gradual standardisation process, however, it also shows the level of variety a single spelling can have. A strong standard only emerged due to the location of book production; with little dialect variation and a high level of institutional control. This reiterates the importance of change and control by showing the level of assimilation to the standard. Conversely, which may prove more important than assimilation, the Norman invasion brought with it an attack on this emerging standard and encouraged regional varieties based around the North-South divide. Again, this is relevant to the topic as it shows the possibility of rejecting the standard spelling system and following a different variety (Bell 2004)

As mentioned previously, the printing press was the biggest influence on the spelling system, it consolidated and established the rules to avoid confusion and provide nationwide mutual intelligibility (Ives 1979). Even Caxton himself mentioned the complexity behind choosing the 'correct' form and its consequences; however, the act of putting identical books into houses across the country ensured a standardising effect. This encounter between technology and spelling signifies

the importance of CMC in today's society; the Internet is a type of uncontrolled printing press with ample space for creativity and publishing without censorship.

Overall, by looking briefly into the history of the English spelling system, and more specifically at the effect of the printing press, we can see the possibility of change and its agents. Technological developments have ensured linguistic developments. It is worth mentioning the enthusiastic efforts of past reform proposals, outraged at the complex and unnecessary nature of the spelling system. In regards to English, Noah Webster was the most successful in the attempt to change a state's spelling system. These scenarios show that both the power of technology and one individual can be a successful force in language change.

2.4   Language Change and Control

It is natural and inevitable that language is constantly changing. This area of linguistics is greatly divided and contested; with the abundance of features from across the spectrum there comes an abundance of explanations. Machan (2009) focuses on systemic and social pressures which is the perspective of this dissertation. The former is defined by Bickerton (cited in Machan 2009) that language change is intimately situated within evolutionary and social change; the latter is exemplified by the works of Trudgill and Labov with their studies on universals and stigmatisation.

Undoubtedly, changes in speech are favourably explored in literature; insightful investigations such as Aitchison (2001), Lass (1997), Keller (1994), and Nerlich (1990) are all related examples. These authors discuss language change in depth, providing frameworks on which to analyse both minor and major changes. They also reiterate how the social meaning of the change is distinct to the change itself, which is important to consider for this study. However, there is lack of research into written changes, or to be precise, lack of theories for these changes.

Since the development of CMC a number of scholars have investigated language change in a specific domain, as seen above in section 2.2, yet few have directly analysed the wider implications of the

relationship between spelling and CMC. This paper will employ Weinreich et al's (1968) framework for investigating the causes of linguistic change (as discussed in Chapter 5) to test the likelihood of a major orthographic change. The researcher is aware this framework was designed for changes in speech but feels they are adequate for hypothesising changes in spelling as seen in CMC.

Language change materialises in a number of situations, from internal and external pressures (Jones 2002), from social, political, and economic demands (Johnson 2005), and from the individual to the collective (Lass 1997). Speech has changed dramatically, from the early historical invasions to the more recent depreciation for the 'standard' Received Pronunciation. Many scholars identify prescriptive beliefs held by speakers of the particular era and attempt to explain these changes. As seen in the previous section, scores of historical recollections of spelling system changes exist, for English and for other languages around the world. The strongest arguments for past change and control are political and technological developments, however, Keller (1994) focuses on an 'invisible hand' which also plays a significant role but cannot be accurately identified. This dissertation concentrates not on top-down control of spelling systems but on the bottom-up control seen through CMC.

By combining the ideas and theories of these four research areas and their respective literature, the researcher hopes to form a twenty-first century view of spelling in the domain of CMC to determine is we are moving away from a 'standard'. The following chapters explore the data collection procedure and results of a questionnaire and online data to formulate a theory on the future of spelling.

3. Methodology

This chapter's objective is to clarify, outline and evaluate the research methods used for the purposes of this paper. Both qualitative and quantitative methodologies have been employed in an attempt to balance subjective and objective views of the topic. The first stage involved carrying out a self-completion questionnaire and the second entailed collecting data from Internet usage through WebCorp and across a range of domains.

3.1 Questionnaire

Fundamentally, there are two types of questionnaire: self-administered and interview-administered. The former was chosen due to time and financial restraints and because it can be completed by the participants on their own without the presence of a researcher. This exploratory questionnaire (see Appendix A) was designed to investigate the following main issues:

- to ascertain the importance of 'correct' spelling in today's younger generation

- to explore the uses of spelling in different Internet domains

- to investigate this idea of control over language, namely its spelling system

- to determine the reasons behind non-standard orthography in CMC

- to test attitudes towards spelling in general

3.1.1 Data collection procedure

The questionnaire sample consists of British informants aged 18 - 24 as these are the most like candidates to represent language change (Wardhaugh 2006). Of the 214 participants 116 are female and 98 male and their mean age is 21.6 years. The questionnaires were distributed across the following areas of the United Kingdom from January - March 2010 (see figure 3.1):
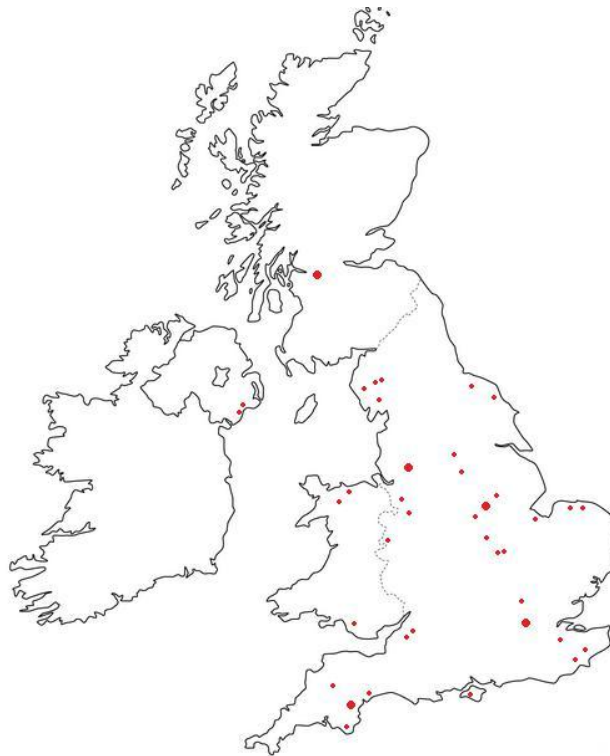
Figure 3.1 Locations of questionnaire participants

All the participants were born in the UK and lived, worked, or studied in the above locations.

Questionnaires were sent by post to the following areas: Devon, Northern Ireland, Wales, Avon, Isle

of Wight, Kent, Norfolk, and Tyne and Wear. The researcher was present in London, Nottingham,

Manchester, Cumbria, and Glasgow to oversee the procedure. In terms of education and

employment equality the questionnaire was distributed to people of various education levels, for

example, GCSE, A level, and University. Answers were collected from shop assistants, unemployed

individuals, students, and so on, to avoid attribute extremes.

There was a project information sheet (see Appendix B) explaining the details of the questionnaire

to the respondent, this included: title of the study, university course and address, name of the

researcher, general aims of the questionnaire, brief instructions and a time approximation it would

take to complete the questions. This doubled as a consent form, stating the questionnaire could be

stopped at any time and all information would be treated in the strictest confidence. No names were

needed for this investigation, only age and gender, and the researcher's contact details were made available for any further enquiries.

Firstly, the participants were asked to state their gender, nationality, first language, and age. The choices were narrowed to collect responses relevant for this study, for example no comparison is needed between gender, age groups, and nationalities. Also, English as the first language became compulsory to avoid second language learner difficulties and foreign influence. The first five spelling-related questions covered their opinions about spelling in general, its complexities and importance, how they would feel about a hypothetical reform and their ideas on who controls the English spelling system. It also asked how frequently the participants use the Internet. This relates back to the main research questions for this paper and the results will be discussed in Chapter 5.

The participants were then asked to complete a short spelling test on ten troublesome English words (as stated by the UK spelling society). This required the questionnaire to be on paper as electronically the spelling test could have been spoilt by a spell checker. Four spelling variations were provided for the following words (see figure 3.2):

Embarrassed	Accidentally
Liaison	Separate
Millennium	Attempted
Definitely	Appeared
Accommodation	Friend

Figure 3.2 Spelling test words

Then the participants were provided with a series of statements to which they could select 'strongly agree', 'slightly agree', 'neither agree nor disagree', 'strongly disagree', or reply 'don't know'. These statements covered attitudes towards 'bad' spelling, rules and standards, alternative and variant

spellings, freedom of choice, confidence, and spelling on the Internet. 'Don't know' was supplied to make sure all the questionnaires could be completed even with uncertainly, and therefore acquire a higher number of results.

To investigate specifically the topic of spelling on the Internet, the participants had to state how important 'correct' spelling is in a range of different domains. A scale from 1-5 (1 representing not important at all, 5 representing very important) was provided for domains to investigate synchronicity and formality. Finally, the participants were given a list of possible reasons behind non-standard spellings found on the Internet (see figure 3.3). They selected all they thought applied as it could prove difficult to choose any one answer.

It's fun

It's faster

It's become the norm

It's fashionable

People are unsure of the correct answers

People want to represent their dialects and/or accents

Don't know
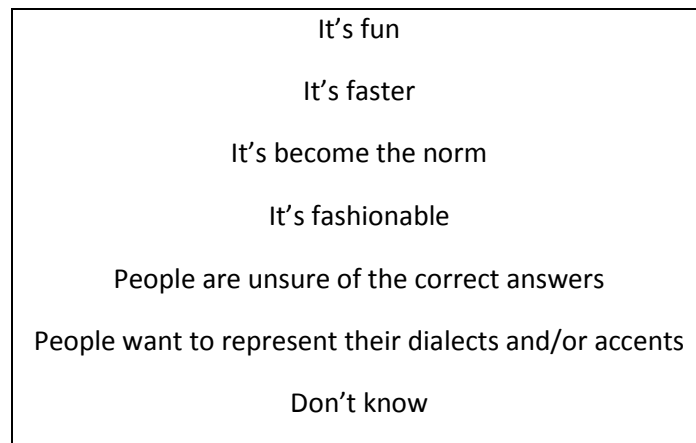
Figure 3.3 Possible reasons for non-standard spellings in CMC

Informal language was adopted in the questionnaire by contractions such as *don't* and *it's*, and simple constructions in the question choices. This was to reduce the level of formality and correctness often associated with spelling.

3.1.2 Discussion for choosing methodology

The questionnaire was designed on Dillman's (2000) three data variables: opinion, behaviour, and attribute (usually one or all three are investigated). This questionnaire considered all three. Opinion questions aim to discover what the respondents think or believe, behaviour questions clarify what

the respondent does (in this case test their actual spelling ability), and attribute questions present the status of the participant (gender, age, language, nationality).

3.1.3 Advantages and disadvantages

The design of this questionnaire ensures anonymity and privacy for the participants, which may encourage honest responses. The lack of interviewer bias relieves the pressure on the respondents with no timescale or face-to-face stress. However, there are a few disadvantages to this type of data collection, especially one that focuses on spelling. Firstly, almost double the number rejected the invitation to complete the questionnaire and the majority of these did so with the knowledge that it was spelling-related. Also, some respondents stopped halfway through the questionnaire so that their results could not be counted. Secondly, despite measures taken to prevent this, the results could represent attribute extremes, for example a certain education level or employment status. 54% of the participants were female which may account for a slight bias but comparison between genders is not relevant to this study.

The questions were designed to be simple and concise to avoid confusion and quick guesses, the study needed a substantial number of responses to investigate the main research questions. Relying on quantitative data alone would have been insufficient. As with most methods of research there is always the possibility that a person is not truthful about their age, nationality, and so on. The participants were taken at face value but this must always be considered.

3.2 WebCorp and online data

WebCorp is a specially-designed web crawler, parser, tokeniser, and indexer which processes large sections of the web and updates the corpus at regular intervals. This allows for real-time searches across a range of search engines, for example Google, Bing, and AltaVista. By taking a list of URLs from the user it extracts concordance lines from those pages with the word or phrase under investigation. This is more advantageous than a normal search engine as it specifically retrieves

linguistic data and links to the source. Using Google normally provides a 'hit list' but cannot be used as a corpus linguistics tool and does not fully cover the requirements for this paper. WebCorp allows the user to customise the concordance span for example, and change the output format, which can be altered to fit the purpose of the research. In addition to searching for English words and phrases it also shows results in French, Albanian, and Latinised Greek. WebCorp is provided by The Research and Development Unit for English Studies (RDUES), based in the School of English at Birmingham City University.

3.2.1 Data collection procedures

WebCorp and online data searches lasted from December 2009 to March 2010. Discussion examples were taken from Google and Bing to provide back-up evidence of real-life usage. The researcher also looked at the spelling varieties found in social-networking sites (for example Twitter and Facebook), blogs, chatrooms, emails, and bulletin boards or webpage comments. This was not intended to form a corpus as the questionnaire is the main focus of the dissertation; however, the data was used to exemplify claims discussed in Chapter 5.

3.2.2 Limitations

All studies of CMC data must note that it is an ever-changing corpus; the behaviour of language on the Internet is such that only snapshots are used to form an argument or theory. Until diachronic studies start to illustrate changes from the invention of a specific CMC medium until the present day then we can only observe the current situation and hypothesise future developments. This is the outlook of this paper. It is also important to be aware of the problems users of CMC create, for example, are they stating their true identity? Thus, it was difficult to collect non-standard spellings from 18-24 year olds on the Internet. Finally, by studying CMC data we are reducing the effect of the Observer's Paradox, however, it does not completely disappear.

4.   Results

4.1   Description of results

This section will describe the main findings from the self-administered questionnaire. The most significant results will be presented in numerical order from the questionnaire itself (see Appendix A). Chapter 5 includes a discussion of the findings, with reference to previous research and implications of the results, alongside the results from WebCorp and online.

To clarify, 214 participated in the questionnaire: 116 females and 98 males. They are all aged from 18-24 with English is their first language.

4.2   Questionnaire results

For the purposes of this paper and to remain loyal to the research questions there was no comparison of answers between genders and age groups. However, it was necessary to identify the level of Internet use by the participants to gauge the degree of input into the virtual world. The majority of the young adults (89.7%) use the Internet everyday, while the rest use it 3-4 times a week (9.3%) and less than 3-4 times a week (1%). Answers are illustrated below in Figure 4.1.
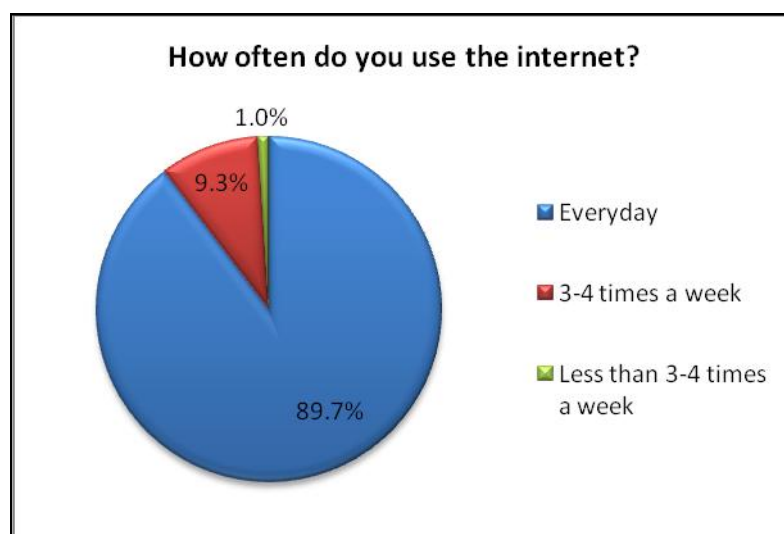
Figure 4.1 Level of Internet use by participants

The general attitude towards the notion of 'correct' spelling showed that the majority (80.8%) thought it was important, whilst 41 (19.2%) did not agree. The participants were also asked if they had any trouble with spelling, the majority (78.5%) said they did not, whilst 46 respondents (21.5%) acknowledged they did. Answers are illustrated below in Figure 4.2.
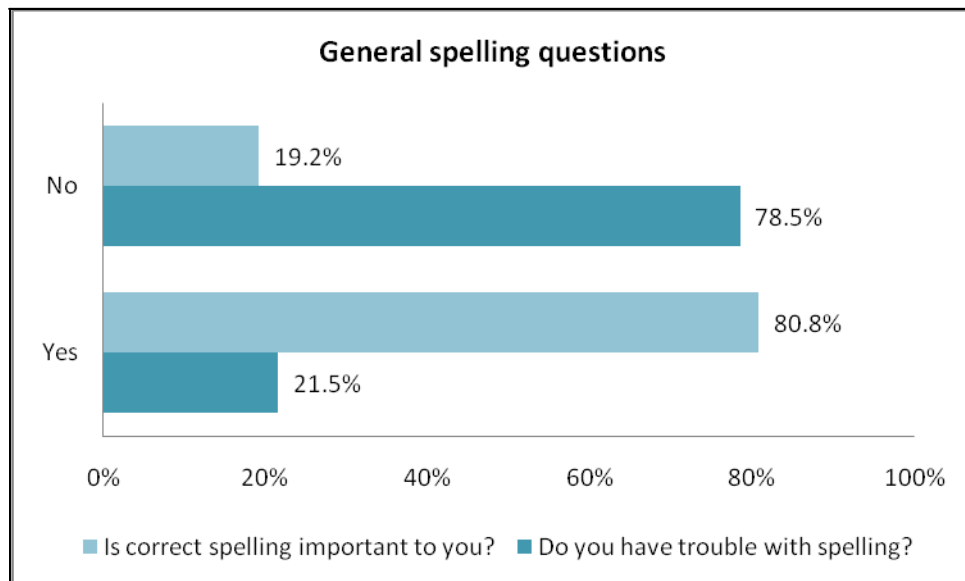
Figure 4.2 Participants' general attitudes towards spelling

Following the questions about the importance of 'correct' spelling and any trouble it may bring, it was important to note the combinations of the two questions. Thus, only 22 replied they had problems with spelling and that correct spelling was not important to them. Vice versa, 66 replied that they did not have trouble with spelling but that correct spelling was important to them. The clear majority, 94 participants, responded that they did not have trouble with spelling and that correct spelling was important to them, whilst the remaining 32 said they did have trouble and correct spelling was not important to them. Answers are illustrated below in Figure 4.3.
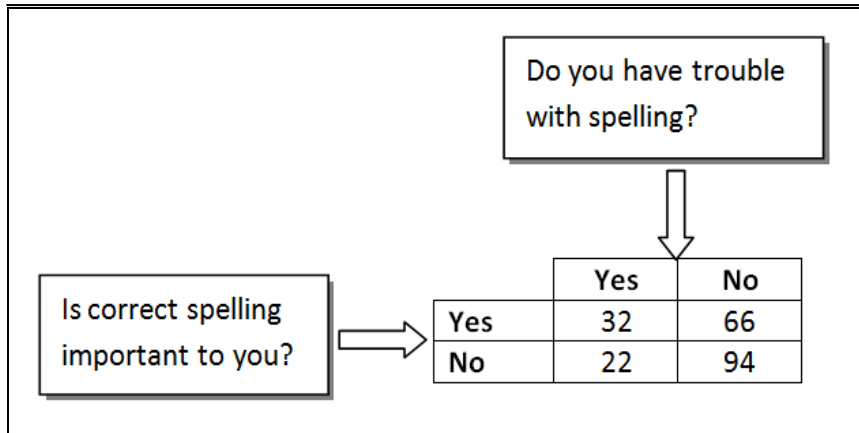
Figure 4.3 Combinations and number of participants for the general spelling questions

To ascertain the participants' attitudes towards a change in the spelling system they responded to the hypothetical proposal of a reform. The clear majority (64%) said they would oppose the reform, whilst some (22%) said they would support it. 26 people (12%) said it would not matter to them either way and the minority (2%) did not know how to feel about a reform. Answers are illustrated in Figure 4.4.
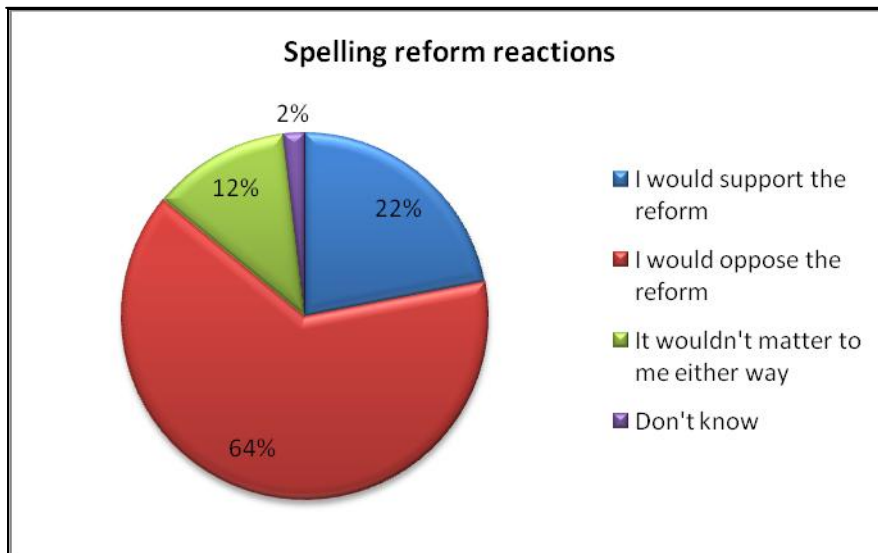
Figure 4.4 Attitudes towards a hypothetical spelling reform

To explore the idea of control over the language a list of possible sources were provided to ascertain who or what has power over the spelling system. The top answer, with 68 people (31.8%), was dictionaries. Following closely behind with 53 participants (24.8%), was the general public. 42 respondents (19.6%) did not know, 28 (13.1%) thought the government did, 17 (7.9%) claimed that no-one does, and surprisingly only 6 (2.8%) thought it was schools. Answers are illustrated below in Figure 4.5.

Who controls the English spelling system?					
Government	Schools	General public	Dictionaries	No-one	Don't know
13.1%	2.8%	24.8%	31.8%	7.9%	19.6%
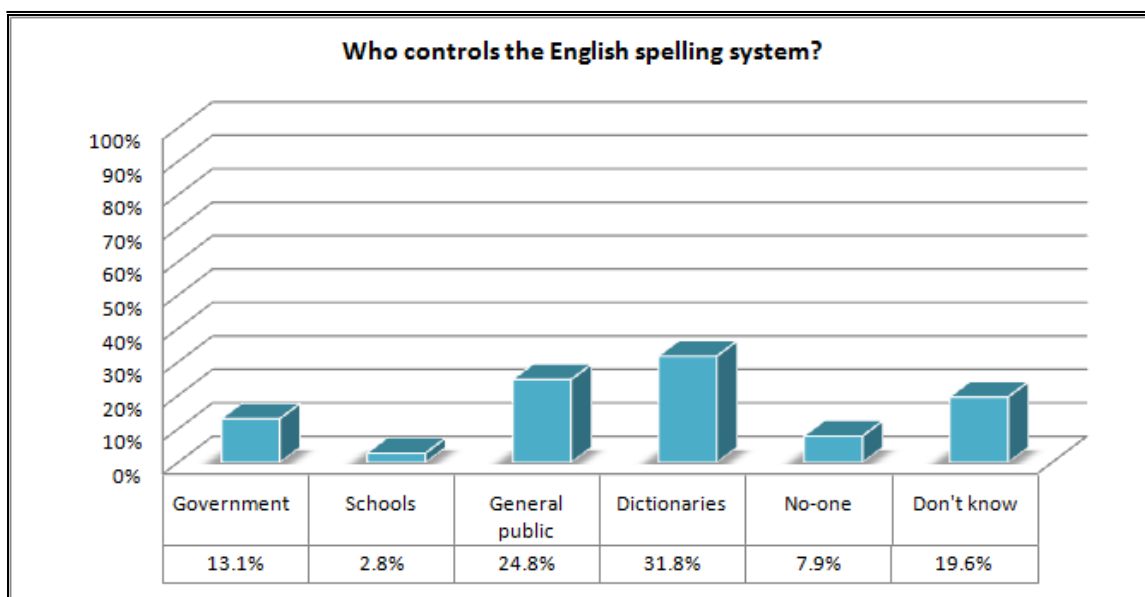
Figure 4.5 Participants' opinions on language control

In 2008, the UK Spelling Society made a list of ten troublesome words in the English spelling system. These were added to the questionnaire to gauge the general spelling ability of the participants and also to compare their responses about what they believe against their actual performance. None of the words scored 100% success rate; however, *friend* resulted in the highest number (90.7%) of correct answers. The words that resulted in over half of the participants answering correctly were *friend, appeared, accidentally, attempted, liaison,* and *embarrassed*. The word with the most incorrect answers (72.4%) was *separate* with *accommodation* following closely behind (65.4%).

Millennium had the most even number of correct (44.4%) and incorrect (55.6%) answers, whilst the

majority (62.1%) spelt *definitely* incorrectly. Answers are illustrated below in Figure 4.6.
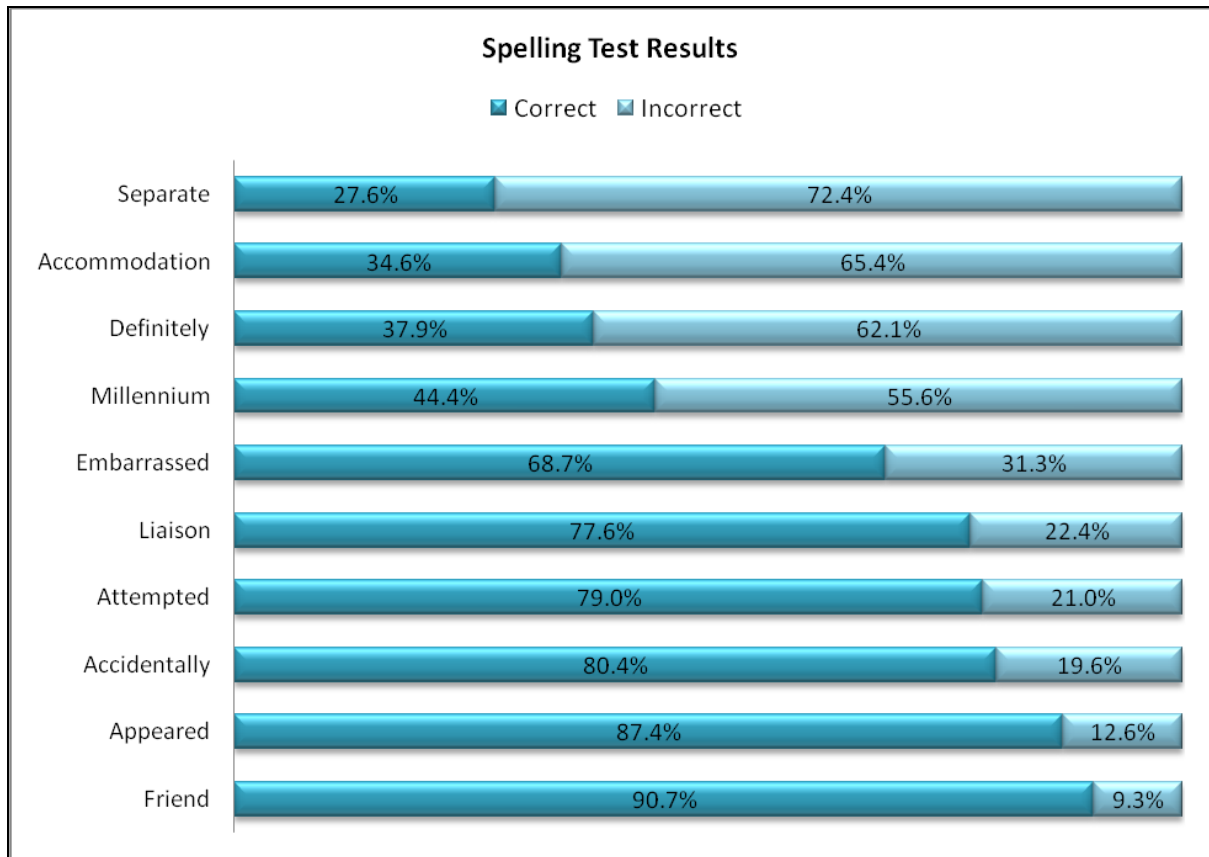
Figure 4.6 Results of spelling test

Then the participants were given a series of statements and asked to select 'strongly agree', 'slightly

agree', 'neither agree nor disagree', 'slightly agree', 'strongly disagree', or 'don't know'. For the sake

of clarity the categories have been divided into *agree, indifferent,* and *disagree*. Results that showed

a majority in *agree* were:

- 'dictionaries should include unconventional and variant spellings' (66.4% agree)

- 'bad spelling on the Internet irritates me' (67.5% agree)

- 'the English Language should have a standard spelling system' (63.2% agree)

Results that showed a clear majority in *disagree* were:

- 'we should spell the way we speak' (59% disagree)

- 'my spelling makes me nervous when sending an email or posting a message on the Internet' (71.2% disagree)

- 'bad spelling should be ignored in job or university applications' (83.8% disagree)

- 'we should be able to spell the way we want' (73% disagree)

Three statements yielded a more even result, most notably 'alternative spellings are completely unacceptable' to which 31% agreed, 37% disagreed, and 32% were indifferent. The statement 'we should judge level of intelligence on a person's ability to spell' received little agreement (14%) but closer result between indifference (37.7%) and disagreement (48.3%). Finally, 'spelling rules are stricter now than they were in the past' had an almost equal number in agreement (41%) and disagreement (44%) with the minority indifferent (15%). Answers are illustrated on the following page in Figure 4.7.

Level of agreement to statements

■ Agree ■ Indifferent ■ Disagree

Statement	Agree	Indifferent	Disagree
We should spell the way we speak	38.0%	3.0%	59.0%
Alternative non-standard spellings are completely unacceptable	31.0%	32.0%	37.0%
My spelling makes me nervous when sending an email or posting a message on the internet	16.0%	12.8%	71.2%
Dictionaries should include unconventional and variant spellings	66.4%	11.1%	22.5%
We should judge level of intelligence on a person's ability to spell	14.0%	37.7%	48.3%
Bad spelling on the internet irritates me	67.5%	23.5%	9.0%
Bad spelling should be ignored in job or university applications	15.0%	1.2%	83.8%
Spelling rules are stricter now than they were in the past	41.0%	15.0%	44.0%
We should be able to spell the way we want	25.0%	2.0%	73.0%
The English Language should have a standard spelling system	63.2%	12.0%	24.8%

Figure 4.7 Level of agreement towards specific spelling statements

To compare the importance of 'correct' spelling in different Internet domains the participants were asked to rate it on a scale from 1-5 with 5 representing 'very important' and 1 'not important at all'. The only situation to receive the majority (201 respondents) in 'very important' was *formal emails*. The three domains that resulted in a band 4 'quite important' majority were *bulletin boards/webpage comments/newsgroups* (142 respondents), *blogs* (172), and *personal emails* (159).

The domain to receive the most band 3 results (middle of the scale) was *social networking websites* (157 respondents). Lastly, *chatrooms* was assigned the lowest level of importance with the majority (140 respondents) choosing band 2 'not important'. However, none of the domains resulted in a majority of band 1 'not important at all' result. Answers are illustrated below in Figure 4.8.
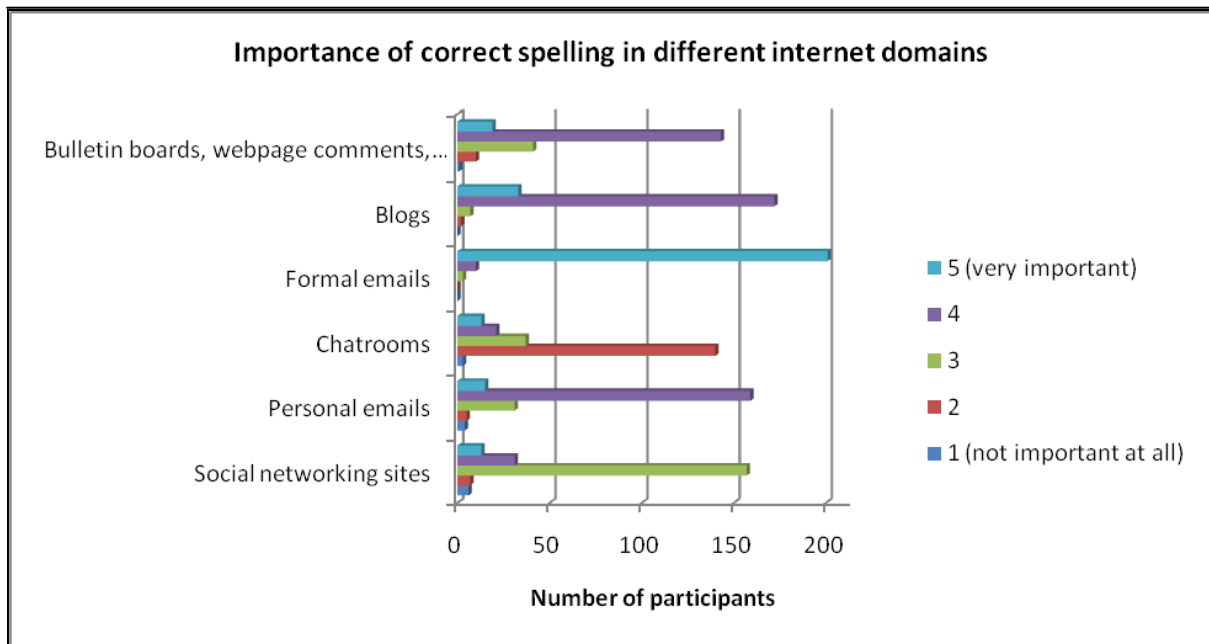
Figure 4.8 Spelling in different Internet domains

To gauge the level of the participants' confidence in their spelling they were asked how they would feel writing an important email without the help of a spell checker or dictionary. The majority, with 134 respondents (77.7%), replied they they would be confident without any help, the remaining 80 (22%) said they would not. Answers are illustrated befow in Figure 4.9.
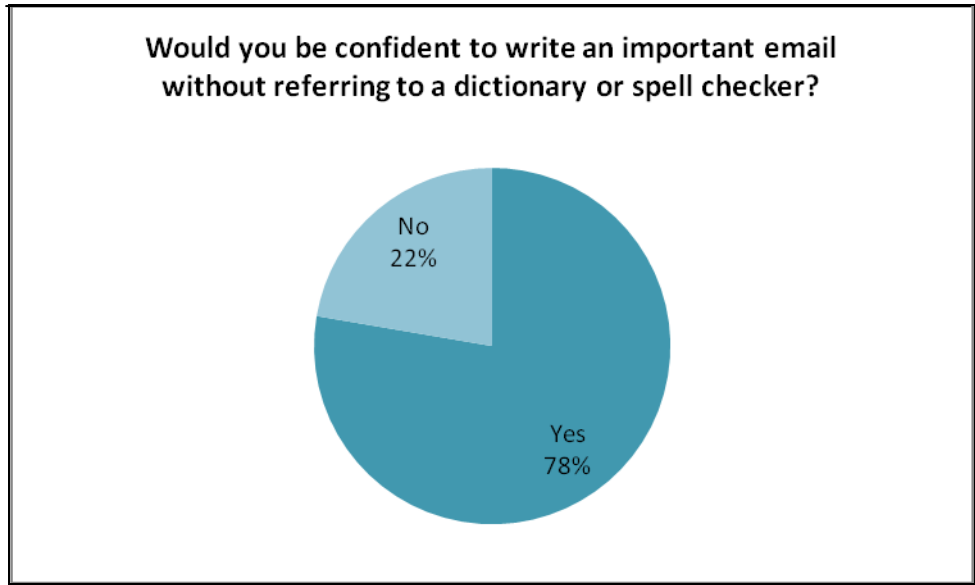
Figure 4.9 Confidence levels without a spell checker or dictionary

The final question involved a multiple-answer scenario, they were asked to choose from a list of reasons why they thought non-standard spellings are found on the Internet. Marginally, the response with the highest amount was 'it has become the norm' with 197 out of the sample agreeing. Following closely behind were 'it's faster' (183 respondents) and 'people are unsure of the correct spellings' (170). Around half the sample agreed that 'it's fashionable' (112 participants) and 'people want to represent their dialects and/or accents' (132) and 61 people noted the creative side of unorthodox spellings by selecting 'it's fun'. Only 2 people responded that they did not know the reason for unconventional spellings. Answers are illustrated below in Figure 4.10.

	It's fun	It's faster	It's become the norm	It's fashionable	People are unsure of the correct spellings	People want to represent their dialects and/or accents	Don't know
	61	183	197	112	170	132	2

Figure 4.10 Reasons behind non-standard spellings in CMC

The following chapter will discuss these findings in relation to the main research questions and consider their wider implications.

5 Discussion

5.1 General remarks

This section will deal with the results presented in the previous chapter and relate their significance to the four main research questions. Any broader implications will be stated at the end prior to concluding and evaluating the study in Chapter 6.

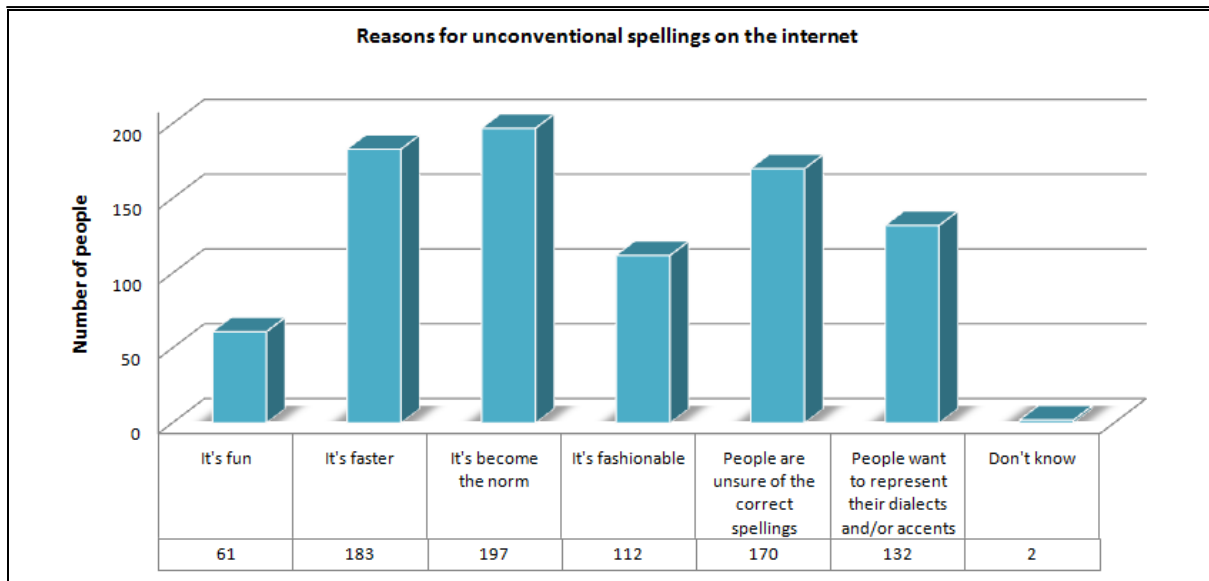### 5.1.1 Why are there non-standard spellings in CMC and what do they represent?

By combining Androutsopolous'(2000) framework of non-standard spellings in German fanzines with Crystal's (2006) analysis of language and the Internet and Thurlow's (2004) study of texting, the researcher proposes the following common orthographic variations in CMC (see Figure 5.1):

Phonetic spellings	Rebus and syllabic use of numbers and letters
Colloquial spellings	Abjad characteristic of omitting vowels
Regiolectal spellings	Reduced punctuation
Prosodic spellings	Acronyms and initialisms
Interlingual spellings	Abbreviations, clippings, and abjad characteristic of omitting vowels
Homophone spellings	Transliterations

Figure 5.1: Types of non-standard spellings found in CMC

These features are common amongst analyses of linguistic features in CMC and can easily be found in printed articles and online websites. They have obviously evolved from Lass's (1997) three explanations: *garbage spellings, purely graphemic variations,* and *phonologically signiicant spellings,* much so that they are becoming 'the norm' as shown by the questionnaire results. 92% of the participants chose 'it's become the norm' from a list of possible reasons for non-standard spellings in CMC. Williams and Gibbs (1968:209) define the notion of norms:

'A norm is a rule, standard, or pattern for action... Social norms are rules for conduct. The norms are the standards by reference to which behavior is judged and approved or

disapproved. A norm in this sense is not a statistical average of actual behavior but rather a cultural (shared) definition of desirable behavior.'

Some of the deviant spellings are so widely used that they have become virtually the standard for this variety and are accepted due to 'situational constraints' (Sebba 2007). Despite its relatively short existence, the Internet has made such an impact on society and language that it has integrated into the everyday lives of many people. Increasingly in countries are gaining access and levels of literacy are rising; this means an even bigger number of CMC users that are able to change spellings.

A similar point is reflected in the response for 'it's fashionable' which 52% of the sample chose, and 'it's fun' which only 29% selected. The level of excitement shown towards the Internet, and specifically its linguistic creations (for example, emoticons :) and initialisms *lol* 'laugh out loud') has decreased, they have become a commonplace feature, especially for younger generations. We are now witnessing the effect these linguistic variations are having on children born into the computer age with such a high level of access in and out of schools, they do not question their existence.

It was unsurprising for the researcher to discover that the reasons 'it's faster' and 'people are unsure of the correct spellings' would follow closely behind the top answer mentioned above. Speed is one of the main explanations for non-standard spellings on the Internet (this relates to synchronicity which is discussed in section 5.1.2) and language change in general (Labov 2001). Complexity of the English spelling system is undoubtedly a significant argument to justify non-standard forms in and out of CMC. As seen in Chapter 2 there are been countless reform proposals and attempts, today we have the UK Spelling Society advocating for simplification and change. By the eighteenth century changes to the English spelling system had come to a halt, which explains why some may view it as outdated today. The UK Spelling Society explain that the reason we may find spelling so difficult now is because it is based on the pronunciation of several centuries ago with only 26 letters for 43 sounds.

Yet, only 22% of the questionnaire participants claimed they had trouble with spelling, it seems to be ingrained into the mind that spelling reflects on a person's intelligence. Perhaps this opinion has formed through spelling tests in childhood, seeing people mock misspelt signs, even witnessing famous figures being ridiculed for their inability to spell. However, the results show a different attitude, only 14% of the participants agreed that 'we should judge level of intelligence on a person's ability to spell'. The researcher believes this is not a true reflection of the situation as 67.5% then agreed that 'bad' spelling on Internet irritates them. Again, perhaps this is due to an underlying and deep-rooted prescriptive attitude, associating 'correct' spelling with being top of the class or avoiding ridicule. Support for this claim can be seen in the popularity of such books as Truss' (2006) *Eats, Shoots, and Leaves.*

To provide further evidence for the complexity of the English spelling system, a short spelling test was included in the questionnaire. This enabled the researcher to draw a comparison between those who claimed they were not troubled by spelling against their actual ability in the area. Although it is not a comprehensive test and many factors may have affected the results (stress, dyslexia, distractions, and so on) it does reflect the tendency for an individual to overestimate their ability. The same words were distributed across Britain in 2008 by the UK Spelling Society to justify their ultimate goal of introducing a spelling reform. The results from both questionnaires do not show 100% incorrect or correct responses for any of the ten words, however, some findings are extremely close to that number. This explains partly why non-standard spellings are found in CMC, that the same complexities and problems children and adults have outside the domain are transferred into CMC. Spell checkers contribute to this area of research but it is only recently that one can be applied to entering text into a chatroom or onto a website (available from Google Chrome).

There have been a number of phonetic spelling reform proposals to create a shallower relationship between phoneme and grapheme (like the *Suomi* 'Finnish' system).[3] Similar behaviour is seen in CMC and from the questionnaire results, a large number of responses claimed 'people want to represent their accents and/or dialects', 62% agreed with this reason. This is partly due to the fact there is a single written system representing all the dialect variations. In contrast to this finding is the majority (59%) of the sample disagreeing that we should spell the way we speak, it seems that a closer phoneme-grapheme relationship is needed but also controlled.

5.1.2 Is 'correct' spelling important in CMC?

Crystal (2006) notes that all language-using situations create constraints which we must learn and abide by if what we type/say is to be judged as acceptable, this is true across the discipline. Baron (2008) illustrates the importance of 'correct' spelling outside of CMC; schools in most countries encourage and reward correct spelling (even this dissertation will be marked according to grammar and spelling). Only 15% of the sample agreed that 'bad' spelling should be ignored in job or university applications, however, this is hardly the case.

It is important to distinguish between synchronous (real-time) and asynchronous (postponed) forms of CMC as this can greatly affect the theories behind and frequency of non-standard spellings. Originally, the researcher focused primarily on asynchronous domains, this was due to the belief that if non-standard spellings frequently occurred here then they were reflecting a more permanent change. However, it is necessary to also consider the use of immediate and direct communication as this reflects a more genuine usage with even less control. It is not surprising that the questionnaire participants placed more importance on 'correct' spelling in the asynchronous domains, for example blogs, bulletin boards, newsgroups. Vice versa, the synchronous options such as social networking

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[3] The earliest proposal for a shallower relationship in English appeared in The Ormulum, 1200.

sites and chatrooms resulted in a much lower score on the importance scale. It is interesting to note that not one of the domains resulted in a majority of the first band on the scale (representing 'not important at all').

Crystal (2006) notes that there is a 'readiness to depart from the standard rules of spelling and punctuation' and 'many users, typing at great speed do not bother to correct any typing errors they make'. This is a revolutionary convention, one that would have been frowned upon only a few decades ago. Thus, it is recognised that speed plays an important role in non-standard spelling; however, this applies not only to the individual themselves but the domain they find themselves in and its level of synchronicity. Either way, both provide evidence that the importance associated with correct spelling has decreased due to CMC. We must remember that there is *always* the opportunity to edit and correct.

Crystal (2006) describes a *laissez faire* attitude in his personal emails, recalling his amazement at the lack of correction from colleagues, students, friends, and family. Interestingly, Crystal states 'I have no problem ignoring the errors I receive. I do not draw any conclusions about the lack of education or carelessness, which I might do were I to see them in a traditional letter'. Perhaps this indicates an underlying difference in the way we view online language usage to real-life physical writing, that the former is not 'proper' communication and is allowed to contain mistakes. This links back to the previous section and the high level of disagreement that we should judge intelligence by the ability to spell. Crystal indicates here that we should view online non-standard spellings differently to 'real-world' spellings, attributing less importance to the former.

81% of the sample claimed 'correct' spelling was important to them. Despite the impossibility to generalise on such a wide scale, this does seem to mirrors the situation for the majority of people, seen in online data, research, debates, and so on. This notion of adhering to the standard is not a new development, it has existed (with documented evidence) for centuries as seen in Chapter 2. For this dissertation it important to focus on the influence of technology, printing set the spelling wheels

in motion, providing a point of reference to compare and adhere to. The questionnaire asked if the English Language should have a standard spelling system to which 63% agreed, it also asked if non-standard spellings are completely unacceptable to which only 31% agreed. It appears that some degree of uniformity is desired, however, some variety should be allowed. This reflects a more recent societal attitude, one of following the rules but with a high level of individualism. Dictatorship has lost its command in the modern society, different levels of revolution are occurring across the world and people are becoming less frightened of speaking out against the 'system' and do not accept 'standards' so readily (Sebba 2007).

5.1.3 Who is controlling the English spelling system and how can it change?

There are two directions of spelling control: the bottom-up collective and democratic approach and the top-down governmental/institutional approach. As this dissertation focuses on the former this will be discussed first, however, it is worth mentioning the top-down examples of control seen in the past and subsequently the role it plays today. It seems that with the rapid development of global communication that languages and English in particular, have gone beyond being 'owned'.

Dictionaries form an interesting argument in the control of a spelling system, they the central point of reference in any spelling argument or Scrabble game but how do the editors choose the 'correct' forms to include? The majority of the questionnaire sample (32%) thought dictionaries control the English spelling system; again, this seems to be ingrained. However, in The Times' (2010) online spelling debate (as mentioned in Chapter 2), Robert Groves describes the job of a lexicographer as observing and describing what language users 'actually *are* doing' and goes on to hypothesise that if a large number of English speakers began using <there> for both the words traditionally spelt <there> and <their> they would 'simply add that spelling as an acceptable variant'. This was echoed in the questionnaire results: 66% agreed that dictionaries should include unconventional and variant spellings.

Perhaps, this explains why the choice with second highest number of responses (25%) was the general public; there is clearly confusion over the power of the dictionary. Having studied Samuel Johnson's monumental work it is easy to see why this happens, the dictionary became associated with an individual and subsequently prescriptivist connotations, much like the printing press did. However, none of the choices received a clear majority for control over the English spelling system; schools received an ever lower response (2.8%) than 'no-one' (7.9%). This is surprising considering the influence school spelling tests have on both children and adults, yet there seems to be some recognition that this is the standard being taught, not created. A significant amount (20%) claimed they did not know who controls the system which ultimately summarises the situation, following a dictated standard with little understanding of why.

Interestingly, the government received a small amount of the votes (13%) which indicates the level of influence attributed to this institution. However, as seen by German reform in 1996 (Johnson 2005), the government plays a huge role in changing a spelling system. These seems to be a widespread rebellion against governments altering standard spellings, and the results of the questionnaire show the majority 64% would oppose a reform. A great number of reforms result from political changes and tension, whole scripts can change due to an exchange of power (for example when Turkish changed to a modified Roman alphabet from Arabic in 1928). There are complaints about the current state of the English spelling system, there are people consciously changing it in CMC, yet they remain adamant again a hypothetical spelling reform. There have been numerous proposals that would be advantageous and beneficial not only to the language but also to economy; however, no reform idea has succeeded. Judging by the strong opposing reaction in Germany, little acceptance would result here either.

To conclude this section, there seems to be three types of change available for orthography: hierarchical, contra-hierarchical, and wave-like. CMC will only succeed in reforming the whole spelling system if it takes a contra-hierarchical route.

5.1.4   Are spellings systems changing due to CMC?

The most important point of the spelling reform examples in the previous section is that spelling can and does change. Perhaps we have moved beyond top-down alterations, however, CMC is rapidly proving to be the necessary agent in any major future changes.

Over the past decade evidence has gradually built up to show that spelling systems are undergoing significant changes due to CMC. None more so than for the languages with non-Latin alphabets who due to physical, social, economic, and political constraints and complex personal preferences have transliterated into a Latinised linguistic form. This paper considers the effect upon Greek, however, it must be noted that this phenomenon is widespread and growing.

Although there is a difference between the alphabet and the spelling of a language Greek illustrates a type of spelling change in CMC that involves the formation of words. It could also be said that the changing from one script to another is one of the biggest alterations possible. Physical constraints of the keyboard were a major factor in the first phases of transliteration, it determined the productive linguistic capacity (Themistocleous 2008), whilst social, economic and political factors have also been investigated (Koutsogiannis and Mitsikopolou 2007). Nonetheless, this shows the collective changing the spelling system of Greek to fit the needs of not only CMC but their personal preferences.

Examples of transliteration are as follows (see figure 5.2). These are extremely common and can be seen across a range of domains in CMC, they are even reported to be showing in students' schoolwork. The newspaper *Kathermerini* (March 2009) described a study by the University of Macedonia investigating schools from 2008-2009, their findings showed that 64.3% of the students were using 'Greeklish' in their work, and that 58.5% of the teachers believed it could be a threat to the language. Another interesting report (2009) showed Cypriot MEP Matsakis proposing a Greek

spelling reform for the vowel system; he wanted to simplify the different 'e' vowels to just one: <η> 'ita'.

Greeklish 1: <kalimera, pos iste;> (phonetic)
Greeklish 2: <kalhmera, pws eiste;> (reconciling with spelling rules)
Typing by the rules of a UK English keyboard: Kalhm;era, p;vw e;iste;

Greeklish 1: <thita>
Greeklish 2: <8hta>
Greeklish 3: <uita>

Figure 5.2 Common Greeklish transliterations

Chinese provides an illustrative logographic example of reform and change. This has occurred between the changing of a script and the alteration of spellings. In the 1950s the characters were simplified and in CMC we are seeing transliteration to a Latin-based alphabet. Gao (2008) explores the possibility of language change as a whole for Chinese in CMC, this covers a wider linguistic spectrum from grammar, lexicon, phonology, and so on. This supports the claim of language change in CMC but also provides evidence that spelling systems in particular are undergoing rapid alterations, not only in script but in formation.

France is one of few countries with a language academy (L'Académie Française), yet interestingly non-standard spellings are still apparent in CMC. Despite a much higher level of control than English for example, it still indicates a freedom of spelling choice on the Internet. From the WebCorp results and from searching across websites, social networking sites, and chatrooms generalisations can be made that there is less non-standard spelling in French than English (see figure 5.3). The most common features are omission of vowels, abbreviations, and lack of punctuation. Despite a lower degree of variation it must be noted that it does exist, that CMC users alter spellings for a number of reasons including phonetic, regiolectal, and idiolectal preferences. This again questions Crystal's belief that this only indicates positive creativity, yet where can we draw the line? Do the younger

French generation have the same attitudes and beliefs as the English questionnaire sample? Does the top-down control of the Academy have an effect?

Gt	J'étais	I was
Je c	Je sais	I know
Jé	J'ai	I have
Je le sa	Je le savais	I knew it
OQP	Occupé	Busy
Oué	Ouais	Yeah
Savapa	Ça va pas?	Is something wrong?
VrMan	Vraiment	Really

Figure 5.3 Common non-standard spellings in French

The researcher would also like to explore the use of Albanian in CMC, especially as a recommendation for future research (see section 5.3). This country and its language illustrate the beginning of the process of possible spelling change in CMC. Internet access has not grown as quickly here in comparison to England, Greece, and France. In 2007, the International Telecommunication Union (ITU) estimated that there were 471,200 Internet users in Albania - 15.3% of the population. There has been a growth in the number but nothing similar to some of the number of users found elsewhere in the world (see figure 5.4). ITU also provided 2007 statistics for other technological inventions which shows a much lower usage than other countries (see figure 5.5).

Year	Number of Internet users	Population total	Percentage of population using the Internet
2000	2,500	3,083,300	0.1%
2002	30,000	3,084,586	1.0%
2006	75,000	3,087,159	2.4%
2007	471,200	3,087,159[4]	15.3%

Figure 5.4 Internet usage in Albania from 2000-7

Cellular subscribers	28 in 100
Internet users	0.4 in 100
Personal computers in use	1 in 100
Telephone landlines	7 in 100
Telephone landlines and cellular subscribers	35 in 100

Figure 5.5 Number of CMC users in 2007

According to the CIA World Fact Book 2010, the current population stands at approximately

3,639,453. As the population has grown so has the number of Internet users, almost every sizeable

town in Albania has public Internet access, usually via an Internet cafe. Some hotels, especially in

Tirana, have broadband connections and few have Wi-Fi. This is relevant in terms of its effect on

spelling from an earlier stage, from searches on WebCorp and across the Internet it is clear to see a

similar pattern of change. Diacritics are absent, spellings take on a phonetic appearance and others

show a general deviance from the standard as shown by official dictionaries and language textbooks

(see figure 5.6). Unfortunately, the researcher is not fluent in Albanian but would like to highlight

the importance of this example, the later emergence of CMC (namely the Internet) and its number

of users allows us to document the level of change and its variations.

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[4] The researcher would like to point out the unlikelihood of this statistic being exactly the same number as the previous year. However, population references are often unreliable for Albania and vary between 3,000,000-3,300,000 for 2007.

Albanian in CMC	Standard Albanian
1.000.000 shqiptare dhe te hyjme ne rekordet guinnes. Na ndihmoni!	Shqiptare dhe një milion të dhënat hyjnë guinnes. Na ndihmoni!

Figure 5.6 An example of non-standard Albanian spelling in CMC[5]

To summarise the findings presented above we can now use Weinreich et al's (1968) framework for

investigating the causes of linguistic change (see figure 5.7)

Problem	Explanation	CMC Evidence
The constraints problem	What kind of linguistic change cannot take place? Is it an impossible change?	Spelling variations are well documented across a range of languages, is it most definitely possible. Such a huge number use non-standard forms that they could be adopted in the non-CMC world. Spelling changes and reforms support this in non-CMC terms.
The transition problem	How does the language change? What processes does it undergo? Is it abrupt or gradual?	The Internet was a relatively abrupt change but the linguistics variations have been gradual and steady. They have become the 'norm' for many societies in CMC.
The embedding problem	How does the environment influence the change?	CMC has encouraged non-standard spellings and orthography with no centre of control.
The evaluation problem	How do individuals feel about the change? What are the effects on the overall language?	Attitudes are contradictory to usage. Many disagree with the non-standard spellings but use them regularly. This may support the argument that the change is confined to CMC.
The actuation problem	Why and where is the change taking place? What started the change?	CMC crossed social, geographical, and temporal barriers; it allowed unprecedented levels of communication that increase daily.

Figure 5.7 Weinreich et al's (1968) framework for investigating the causes of linguistic change

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[5] Facebook group 2010, translation 'We need 1,000,000 Albanians to enter the Guinness Book of Records. Help us!'

Clearly these specifications are interrelated, however, by analysing non-standard spellings in CMC through this type framework it is viable to say that a linguistic change has taken place. However, the issues that arise include the attitudes towards the alterations and whether the non-standard spellings are merely part of the CMC language variety.

5.2 Evaluation of the methodology

As the previous section shows there are many arguments to consider in providing an overall context for this study. All four of the main research questions have been directly addressed to cover the topic substantially. Due to the highly philosophical and subjective nature of this dissertation it has resulted in some strengths and weaknesses. Language change is a controversial area of study with an abundance of theories and opinions which makes it difficult to provide a concrete and stable conclusion for this study. The advantages and drawbacks are mentioned briefly below.

5.2.1 Strengths

Overall, the results from the questionnaire have provided a fairly successful analysis of non-standard spelling usage on the Internet. By combining the subjective and the objective, and the qualitative with the quantitative it has provided an overall account of spelling change in CMC. It appears that a gradual shift is taking place in the importance of 'correct' spelling with the CMC as its instigator and the results provide evidence for this claim. The questionnaire and suggestion of a corpus will hopefully be a starting point for further investigation into age differences, frequency tests, gender comparisons, and so on. Finally, a significant strength of the study is the recognition of this phenomenon in other languages, by showing it is not confined to English provides further evidence that this is a collective change.

5.2.2 Weaknesses

Despite the researcher's efforts it is important to point out that a larger sample would have been beneficial to make more secure generalisations. However, due to the prescriptive nature of spelling

and its role in society it becomes hard to generalise at all. There seems to be a divide between the attitudes towards non-standard spellings and actual usage as data collected from the Internet indicates a much more rapid change than illustrated by the results. The questionnaire was suitable for this level of investigation; however a corpus is required to analyse diachronically if there is an increase in the non-standard varieties than ten years ago for example. This dissertation has formed into a snapshot of the current situation and the opinions and attitudes of a relatively small number of people. Looking at data in CMC has exemplified the claims of this study but the researcher had hoped for a solid framework on which to explore future data analyses.

5.3   Possibilities for future research and investigations

Several recommendations for future studies can be made on the results of the investigation and the weaknesses of the methodology. Due to the dissertation's broad approach to the topic of spelling change in CMC there is also the opportunity to expand the research questions and their subheadings.

Firstly, in regards to the questionnaire, comparison between gender and age groups could be drawn. By investigating spelling usage of different age groups in CMC a diachronic study, much like Labov's New York study into preconsonantal or final /r/, we could investigate spelling under Labov's apparent time constraint. This would provide further evidence to the theory that younger generations are the main instigators of change, especially in this domain. Frequency of non-standard spellings could be measured for the age groups to see if we are moving away from a standard in an age-related setting. Gender could also be explored to see if females are using more non-standard spellings than males, or vice versa.

As seen in section 5.1.4 languages such as Albanian that do not have the same levels of access to CMC could be studied to record the behaviour of non-standard spellings. For example, frequency, varieties, reasons, and so on. By considering and theorising the changes seen in English spelling

through CMC we have an awareness of what the future may hold for the Albanian language in CMC. Therefore, we can track the changes from an earlier stage. English was the first to be affected so widely by CMC so it would be interesting to note from an earlier point if Albanian is following a similar route or staying closer to the standard, like French.

Clearly, with any investigation of this type a corpus would be beneficial. Due to time and space constraints this dissertation focuses more on the subjective views of spelling in CMC, collecting a large amount of data to analyse (either synchronically or diachronically) would be advantageous. This also applies to the number of languages studied; a wider range would provide more evidence to contradict or support the theory that we are perhaps beginning to spell the way we want through CMC. Noting the types of non-standard spellings and varieties found or being to emerge in CMC will allow for wider generalisations and frameworks.

Another suggestion for further research focuses on past spelling reform proposals for English. By using a corpus of material we could explore the varieties of spelling found in CMC in comparison to the proposals. For example, are non-standard spellings based on phonetic motives and do they follow the ideas of Pitman, Follick, Shaw, Malone, and so on (Coulmas 2003).This dissertation has avoided the term 'reform' due to its connotations and negative reactions, however, this type of investigation could take an objective perspective of the types of change proposed against the types of change occurring today.

One topic of further study that the researcher particularly recommends is investigating non-standard spellings of CMC leaking into other areas of society. Much like the University of Macedonia's report that Greeklish is leaking into schoolwork, this could be another measure of language change for the spelling revolution claims. Having a wider perspective on the situation allows a stronger response to the question: 'are we beginning to spell the way we want?'

Finally, in relation to this particular study, it is worth mentioning that the questionnaire would be more beneficial with a higher number of participants. Regardless of age or gender, the more responses the more generalisations can be drawn, this is true for a number of studies. Both qualitative and quantitative data are necessary for this type of investigation, subjective philosophical views are as important as raw data.

The researcher believes there are many opportunities for further investigation in relation to this topic, the main questions and theories can be divided into much smaller and specific areas of interest. However, this dissertation provides an introduction to the topic of spelling in CMC with the focus of bottom-up control and change.

6   Conclusion

This dissertation has explored and evaluated subjective and objective data to ascertain whether a possible language change is taking place in spelling systems through CMC. By focusing on the attitudes and opinions of 18-24 year olds alongside data from the Internet it illustrated a slow divergence away from the 'standard' spelling system. The results from the questionnaire show that there is still a high regard for assimilating to the standard but little understanding of who controls English spelling. It provided further evidence that the synchronicity of an Internet domain has effect on the importance of 'correct' spelling, however, data drawn from WebCorp and other permanent websites also show a huge variety of non-standard spellings.

Furthermore, this study shows the phenomenon that is not confined to English. This orthographic revolution is widespread and seen in other languages such as French, Greek, Chinese, and Albanian. The changes seen in the respective examples occur for a variety of reasons such as physical constraints of the keyboard, economical, political, and social motivations, and largely phonetic reasons. There will always be individuals who see language change as language decline and believe in a 'Golden Age' that we are ever-moving away from. It is futile to resist language change (Trask 1994:72) and no conservative speaker is going to stop it, especially with the power behind CMC. Soon yesterday's change will become today's norm and the change will unravel itself in younger generations.

It is undeniable that non-standard spellings appear frequently in CMC; however, asynchronous domains are largely to blame. This is due to speed, fashion, and that non-standard spellings have become the norm. Yet increasingly they are appearing in synchronous domains, seen by searches on WebCorp, hits on Google and Bing, and looking generally across the Internet at controlled websites. Language has adapted to its new environment of CMC, however, it will be interesting to see if these new forms leak out into the non-CMC world.

It seems that 'correct' spelling is still important to the younger generation; however the lack of a centre of control in CMC allows users to avoid ridicule for 'bad' spelling as it becomes more and more acceptable. By asking the participants who they think controls the English spelling system it showed that there is a high level of confusion about where these standardising rules emerge from. The majority indicate dictionaries are the most powerful force; however, dictionaries are based on the actual use of language by the population. If the collective were to begin using a different form to the 'standard' then that 'standard' would change. Importantly, it has been illustrated that spelling can evolve without official sanction.

By following four main research questions closely it allowed the researched to remain focused on the specific domain of spelling in CMC. Related linguistic topics such as language control and change, spelling and society in general, and the role of technology all warrant much deeper analysis. Therefore, answers to the main questions are thus (see figure 6.1):

Research Question	Answer
i. Why are there non-standard spellings in CMC and what do they represent?	They occur due to a number of factors: creativity, physical restraints of a keyboard, fashion, accent representation, and so on. They can represent a variety of things, including rebellion, situational-constraints, fashion, etc.
ii. Is 'correct' spelling important in CMC?	Yes. However, the lack of control is allowing non-standard forms to become the norm.
iii. Who is controlling the English spelling system and how does it change?	Technology has played a huge role in spelling standardisation and change. The invention of the printing press and the dictionary has resulted in a power struggle between the collective and an officially recognised body. This illustrates the top-down and bottom-up control over the language, that ultimately they are influencing each other equally.
iv. Are spelling systems changing due to CMC?	Yes. Extreme exemplification is illustrated by Latinised alphabets; however, non-standard spellings are becoming so common in CMC that they may well leak out into other areas of society.

Figure 6.1 Answers to the main research questions

The opportunity for further investigation is available for this topic by considering the effect of CMC

on other languages' spelling systems and the countries' variation of non-standard forms. WebCorp

provided examples for arguments made in this dissertation but a larger corpus is needed for both

synchronic and diachronic studies. It is also necessary to look beyond the belief that spelling is purely

creative (Crystal 2006) and stop denying its larger role in language change outside of CMC.

Overall, this study aimed to show a gradual power shift in the control over a standard spelling

system and that CMC is the agent for this change. There is opportunity for improvement and further

investigation but the researcher hopes this has provided an introductory glance into a potential

orthographic revolution. As time passes and younger generations born into this unprecedented

technological world grow older with these non-standard spellings we will see if the forms are bound

to the context of CMC or if are showing the first signs of reformed spelling systems across the world.

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APPENDIX A

Gender: Male / Female

Nationality: British / Other

First language: English / Other

Age: 18 - 24 / Other

Question 1.

How often do you use the internet?

Everyday
3-4 times a week
Less than 3-4 times a week

Question 2.

Do you have trouble with spelling?

Yes
No

Question 3.

Is correct spelling important to you?

Yes
No

Question 4.

The ways in which we spell, and the rules governing how we spell, have remained the same for several hundred years. Some people say the English spelling system is now 'illogical' and 'chaotic' and needs to be updated. How would you feel about a spelling reform?

Please choose one of the following:

I would support the reform
I would oppose the reform
It wouldn't matter to me either way
Don't know

Question 5.

Who controls the English spelling system?

Government
Schools
General public
Dictionaries
No-one
Don't know

Question 6.

Which one of the following words do you think is the correct spelling?

1. Embarassed
2. Embarrassed
3. Embarrased
4. Embarased

1. Liason
2. Liasion
3. Liaison
4. Liassion

1. Millennium
2. Millenium
3. Milennium
4. Millenneum

1. Definately
2. Definitely
3. Defanately
4. Defanitely

1. Accommodation
2. Acommodation
3. Accomodation
4. Acomodation

1. Accidently
2. Accidentaly
3. Accidentally
4. Acidently

1. Seperate
2. Separate
3. Sepparate
4. Sepperate

1. Attempted
2. Atempted
3. Atemmpted
4. Attempeted

1. Appeared
2. Apeared
3. Appeered
4. Apeard

1. Friend
2. Freind
3. Freand
4. Frend

Question 7.

Listed below are a series of statements related to spelling in the UK. To what extent do you agree or disagree with these statements, please circle your answer.

The English Language should have a standard spelling system.

Strongly agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Strongly disagree	Don't know

We should be able to spell the way we want.

Strongly agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Strongly disagree	Don't know

Spelling rules are stricter now than they were in the past.

Strongly agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Strongly disagree	Don't know

Bad spelling should be ignored in job or university applications.

Strongly agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Strongly disagree	Don't know

Bad spelling on the internet irritates me.

Strongly agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Strongly disagree	Don't know

We should judge level of intelligence on a person's ability to spell.

Strongly agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Strongly disagree	Don't know

Dictionaries should include unconventional and variant spellings.

Strongly agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Strongly disagree	Don't know

My spelling makes me nervous when sending an email or posting a message on the internet.

Strongly agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Strongly disagree	Don't know

Alternative non-standard spellings are completely unacceptable.

Strongly agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Strongly disagree	Don't know

We should spell the way we speak.

Strongly agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Strongly disagree	Don't know

Question 8.

How important is correct spelling in the following internet domains.

Please circle your answer on the 1 to 5 scale where 1 is not important at all and 5 is very important.

Social networking websites (for example MySpace, Twitter, Facebook)

1	2	3	4	5
Not important at all				Very important

Personal emails (to friends, family etc)

1	2	3	4	5

Chatrooms

1	2	3	4	5

Formal emails (to employers, bosses, lecturers, companies etc)

1	2	3	4	5

Blogs

1	2	3	4	5

Bulletin boards, webpage comments, newsgroups

1	2	3	4	5

Question 9.

Would you be confident to write an important email
without referring to a dictionary or spell checker?

Yes
No

Question 10.

Why do you think unconventional spellings are
used on the internet? Please tick all that apply.

It's fun
It's faster
It's become the norm
It's fashionable
People are unsure of the correct spellings
People want to represent their dialects and/or accents
Don't know

Thank you for your time.

APPENDIX B

BA Dissertation: Questionnaire Information Sheet

Title of Project: Spelling in Computer-Mediated Communication

Who will conduct the research?

Miss L.A Jones, BA student (Linguistics and English Language), Faculty of Humanities, Manchester University, Oxford Road, Manchester, M13 9PL.

What is the aim of the study?

To investigate the use of spelling in computer-mediated communication.

What personal information is needed?

Age, sex, nationality, and first language.

What would you be asked to do?

To fill in the short questionnaire on your attitudes and use towards spelling in general and on the internet. You will be asked to circle or tick your answers on the questionnaire sheet. It will take around 5 minutes to complete.

What happens to the data collected?

If you agree to take part in the project, your answers to the questions will remain anonymous and kept/analysed by me. A report will be written about the findings but no individual will be indentified the report.

How is confidentiality maintained?

All information you give will be treated in the strictest confidence. No personal or other details which could identify you will be released to anyone without your express consent.

What happens if you do not want to take part of if you change your mind?

You are free to withdraw from the project at any time without giving any reason and without detriment to yourself.

For any further questions or queries please contact:

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