

INTERNET: CULTURE, DIVERSITY AND UNIFICATION

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Abstract

The practice of Internet usage is ambiguous as it gives rise to both unification and diversity. This paper analyses cultural specifics of the Internet. The analysis is a preliminary work for an application of socio-historical theory of human mental development. The parameters include techniques of hypertext browsing, the status/position/rank of communicators, the influence of the Internet on communication practices such as holding the floor and turntaking rules, the way emotions are expressed, and the way the English language serves the functions of a world-wide medium.

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Culture Relatedness

The impact of the Internet on human beings is ever increasing. The Internet is a mediator in person-to-person communication patterns, in consuming, booking and banking transactions, in remote group activities including pen-pals chatting, entertainment and game playing, problem discussion and solving, and numerous types of co-operative and/or conflict situations. The psychological aspects of this profound impact might be investigated using Vygotsky's (1962) socio-historical theory of psychic development.

Among the fundamentally basic notions that Vygotsky introduced is the mediation process, which includes the acquisition and usage of instruments: material tools, signs, and semiotic systems. Another fundamental notion is the internalisation process, which means that the external instruments are internalised, thus forming the core of the higher psychological functions. The external instruments are usually presented to a human being in social contexts. Communication is thus essential for human psychic development, for acquiring cultural norms and behaviour patterns. Culture, presenting to a person socialised material objects and socialised rituals, norms and behaviour patterns, is yet another fundamental notion introduced by Vygotsky.

The most complex and genuinely human forms of activity are mediated. Primitive reactions and simple generalisations give way to specific reactions and most abstract generalisations, mediated by culture-related sign systems. Thus, the acquisition of tools and social norms is the mainstream of human psychic development. Information technologies ("high tech") represent the newest and perhaps the most complicated tools that influence psychic development. As Salomon (1990, 27) phrases it, "the computer affords activities rarely possible with preceding technologies, suggesting that it may have the potential of affecting minds in interesting and important ways." By its nature, computer software is a semiotic instrument. This sign system is an inherent mediator in both human cognition and communication, in business or work activities, and in entertainment. Therefore, information technologies as a universal mediator are of primary interest to cognitive and developmental psychologists, and to communication researchers.

The concept of remediation is introduced by Vygotsky's followers (Cole, 1996). It refers to psychologically significant changes in the mediation process; for example, to the transfer from syllabic to alphabetical writing sign systems. The remediation processes might be traced in the same way the mediation process is investigated. In the era of overwhelming changes in communication technology and verbal behaviour patterns, (re)mediation is a research area for both psychology and communication theory.

There is another reason for using Vygotsky's theory. Global computer networks give universal access to new ways of communication and cognition. At the same time, representatives of diverse cultures have specific culture-related patterns of cognitive and communicative behaviour. Since the 1960s, global networking is an activity familiar for North Americans mostly. However, the period of monocultural network activities has ended. Now that all nations have (or will soon have) adequate access to the Internet, will the newcomers adopt previously worked-out patterns and "weak ties" (Constant et al 1997), or will they try to adapt the new mediator to their specific interests and traditions? The description and analysis of the various ways that different cultures transform closely similar, or even identical, mediating instruments form the core of Vygotsky's theory. We might therefore expect that possible remediation prob-

lems centred on Internet-driven activities would be best explained using the paradigm of the socio-historical theory.

The aim of this paper is to stress some culture-related problems inherent in communications via global computer networks (Voiskounsky 1996). The discussion of these problems seems to be an essential prolegomenon to psychological investigation aimed at finding new cognitive and communicative mental functions and strategies, new ways of internalisation and/or externalisation, etc. The most important question addressed in this paper might be phrased as follows: Do Internet-driven practices lead to a greater cultural diversity or to a greater cultural unification?

Deep Truths

The most global ideas and concepts of today are multifaceted and dependent on widely differing opinions and beliefs. One might mention such multi — faceted ideas as moral and legal concepts and practices, political views, religious beliefs, some notions in science and humanities, estimations of art pieces, and so forth. Since global politics has now abandoned the practice of bipolarity, the new tendency is evident — to embrace the whole multitude of mosaic-like views and to come to a competent decision. Differing and opposing views do not necessarily mean confrontation or inadequacy. In the nuclear physics field, Niels Bohr suggested that two apparently opposite views might be both true when put in a broad enough paradigm. These views constitute what he called “deep truths.”

Web users have to gain experience in hypertext browsing, which is obviously different from reading linear texts. At least one point of differentiation needs to be stressed: while one is performing hypertext navigation, individualised and not forced routes are welcomed. Thus, Web surfing gives a chance for diversity as opposed to unification.

For browsing, one needs to be interested in investigating various referential and connotative meanings associated with the interlinked notions, or following various views on certain topics. Having learned various points of view, one is encouraged to make a choice and to elaborate (or adopt) the seemingly correct view. To determine the individualised position, one needs to acquire background dispositions and to gain a high enough educational level and complex cognitive patterns to deal with multiple meanings and with multifaceted and multioptional information.

It is believed (Adorno et al. 1950) that those with an authoritarian background are best suited to adopt a one-sided view, “the only correct” meaning. People with minor cognitive complexity, with routinised perception habits and reduced personal initiative, as well as lacking in personal responsibility for competent decision-making, tend to take limited navigation routes and to select a restricted variety of information pieces. “Deep truths,” introduced by Niels Bohr, are alien to the majority of the residents of authoritarian societies.

Leaving the territory of physics, the Web seems to be the means for saving all alternative facts, concepts, meanings, and interpretations. To find opposites, one has to take an overwhelmingly complex navigation route. To avoid the alternatives, a highly reduced route will do. The latter route leads the Internet users to unification. To seek for, and to gain, diversity while hypertext browsing is believed to be characteristic of the representatives of the cultures within the democratic tradition. These people prevail on the Internet, which is a sort of projection of their democratic attitudes and values. Usually, the democratic tradition relies on the elaborated psychological mecha-

nisms of cognitive complexities, on estimating, comparing, and handling alternatives, and on sophisticated decision making. But the access to the Internet is globalising very rapidly, and most of the newcomers to the Web, especially those speaking Chinese, Swahili, Russian and other Slavic languages, Arabic, Spanish, or Portuguese, have a definitely authoritarian background. Thus, the Internet might turn out to be ambiguous: whenever the majority of its users consists of the former authoritarianists, browsing techniques will be restricted to the simplest selection methods. The Internet and the Web, therefore, might give rise to both uniformity and diversity.

Views on Status

When discussed in terms of diversity and unification, the status of human beings on the Internet is a multidimensional factor. We shall discuss the problem from three different standpoints: diversity, unification and culture.

Status and Diversity

Computer-mediated communication (CMC) is often expected to be especially democratic in a sense that one is rarely concerned with the rank, status, age or gender of communicants (Sproull and Kiesler 1992). The “equalising” effect of CMC is widely believed to be a virtue, since in Listserv and Usenet discussions, e-mail correspondence, ICQ or IRC chats, or MUDs, no subordination takes place — all that counts is the quality of the opinions expressed. The stutterers, the younger participants, those of minor administrative rank and position and, of course, women and ethnic minorities, have the opportunity to express their views and to not feel ashamed or embarrassed to contradict, disagree and argue the views expressed by people who are older or of a much higher administrative status. If this is true, the Internet promotes the diversity of alternative views.

Moreover, communicators on the Internet are believed to be friendly and open-minded: since they are communicating “long distance,” they escape the social pressure to align themselves hierarchically with one another. According to Sproull and Kiesler (1992, 13):

In some companies that use computer networking, communication is strikingly open as employees cross barriers of space, time, and social category to share expertise, opinions, and ideas. In a democracy, people believe that everyone should be included on equal terms in communication; no one should be excluded from the free exchange of information ... New communication technology is surprisingly consistent with Western images of democracy.

Other researchers strengthen this view, saying: “What people are creating on the Internet is a conversational, demassified, non-representational democracy that transcends the nation-state” (Nguyen and Alexander 1996, 111).

The argumentation base of Internet discussions is high due to the fact that newsgroup and discussion list subscribers have devised a tradition of explicit citations — excerpts from other discussants’ previous messages that are opposed or agreed to are usually inserted into the new message in a prefixed form. This tradition leads to more solid argumentation than usually takes place in face-to-face polemical discussions. This tradition resembles publications in research journals, but newsgroup citations are widely used in contexts going far beyond scientific discussions. Thus, the projective diversity of opinions is fundamentally based in the forms and habits of newsgroup and discussion list exchanges.

Status and Unification

The optimistically democratic view of CMC meets strong objections based primarily on the fact that group communication via global or local area networks is a part of the existing social hierarchical networks. "The 'faceless' nature of CMC may often reinforce bureaucratic or hierarchical dimensions of interaction for this reason" (Spears and Lea 1994). Analysing the problem, Mantovani (1994, 50) supports the finding that opinions expressed by networkers of high or low status positions might be agreed upon, ignored or confronted, depending on the amount of attention given to a message:

How can we monitor and evaluate the quality of the attention given by the audience to a speaker in an electronic situation? Will the audience pay equal attention to the messages of a low-status member of the group and to those of a high-status member?

Moreover, there is experimental evidence that high-status networkers dominate group discussions (Weisband et al. 1995). "Social status is usually detectable," concludes Ma (1996, 185).

Unlike face-to-face communication, subscribers to newsgroups may "hold the floor" as long as needed. When real-time discussions occur, the groupware includes functions that are analogous to "turntaking" rules. Some experimental results suggest that explicitly stated turntaking rules are more efficient than anarchical and voluntary multiple interruptions (MacKinlay et al. 1994). Neither status nor age and gender of the preceding discussants influence the networker when it is his/her turn to hold the floor.

Still, Perrolle (1991, 357) believes that gender differences lead to an increase in the effectiveness of holding the floor. She hypothesises that "computer-mediated communication reduces the social solidarity in existing social groups, but it facilitates conversations among strangers." When strangers differ from indigenous people in their cultural background, they face special problems, one of them mentioned in Ma's (1996, 178) paper:

East Asians do not always verbalize "no" to turn down another's proposal. The "yes" or "no" message can be encoded and decoded by varying the level of enthusiasm associated with an ambiguous "yes" message ... It would be much more difficult to create such a variation in computer-mediated conversations.

Mantovani (1994, 58) believes that e-mail is "of little use in the first stages of the formation of a new group or of the earlier development of a new project." This view is supported by the fact that CMC is rarely or ineffectively used for negotiations, which is an essential part of democratic traditions. Mantovani (1994, 57) gives two strong conclusions: first, that "CMC does not generally foster democracy in organizations," and second, that "CMC is not friendly toward all its potential and actual users." These findings validate the idea that rank, position, status, gender and age factors reduce diversity on the Internet and lead to unification. The gender-related issues need more detailed discussion, but they are out of the range of this paper.

Status and Culture

The above-mentioned considerations are entirely consistent with the principles of the Western democratic tradition, as Sproull and Kiesler (1992) identified it. To grasp an idea of an alternative position, imagine the uneasiness of a newsgroup discussant born in, say, Far East Asia. The etiquette and even linguistic structures of his/her mother

tongue demand that age, gender, status and position be known precisely before addressing other participants. Although all this is not needed when using English, that sort of uneasiness might form a certain psychological barrier for the discussant, and thus might restrict, or influence in some other negative way, his/her participation in newsgroup discussions.

This might be true for Japanese-born networkers. Their linguistic politeness rule system (*keigo*) includes a continuum of attitudes towards other discussants, whose positions (as well as a great deal of other necessary data) are to be definitely and precisely known beforehand. As well, the attitudes of discussants towards the problems being discussed might influence the choice of verbal formulae. If a networker is forced to ignore etiquette and politeness rules, his/her verbal habits may change radically. It is worth mentioning that the unique emoticons developed by Japanese network communicators "show an affection without any specific indication [of the modality of emotions, or even] to apologize for some possible offense" (Aoki 1994). The forced or deliberate change of verbal habits certainly leads to decreased diversity.

Perhaps the uneasiness of this type is reduced and hardly noticed among those who most easily adopt the existing Internet culture; that is, the most cosmopolitan samples of networkers within any non-English speaking ethnic group. When discussing important problems, the world-wide Internet community would prefer that the less cosmopolitan samples within every particular nation expressed their views too. Diverse views tend to result in more creative and more original decisions than those one would expect to be made by the Internet community, which is unified and slightly cosmopolitan in nature. Culture-related barriers do not add benefits to effective group discussions via global computer networks. Thus, the status-related ways of increasing both diversity and unification on the Internet are dependent on culture-related factors.

Expression of Emotions

Generally, CMC is supposed to be personal and spontaneous. The former means that, unlike the process of official document exchange, the discussions in newsgroups, e-mail, bulletin boards, IRCs, ICQs and MUDs contain personal opinions and feelings. The views expressed during these group or one-to-one discussions are usually rather laconic, and avoid explicit reference to background knowledge. The latter, spontaneity, means that the networkers react to opinions and beliefs expressed by their partners very rapidly, sometimes even before reading the message to the end. In personal spontaneous dialogues, there is plenty of room for expressing feelings and affects. This is surely the case with human-to-human links mediated by global computer networks. Investigations show that 25% of e-mail messages produced by undergraduates (newbies to e-mail correspondence) contain fragments of intimate communication (McCormick and McCormick 1992). One obstacle to emotional richness in these interactions is poor command of the English language. Another obstacle lies in the differentiation between written and oral speech, stressed by Vygotsky (1962). In the oral mode of communication, emotions are most easily expressed paralinguistically and kinesthetically. To restrict oneself to the written mode of emotion expression, one needs to have a good command of the language and, even more, special skills that are supposedly inherent in creative writing and practical journalism (Voiskounsky 1998).

Special signs expressing emotional states — "smileys," or "emoticons" (Panko 1993; Rice and Love 1987; Sproull and Kiesler 1992) — are intended to compensate for the

lack of adequate means of expressing emotions when using Internet services. The nearest analogue of smileys is the facial expressions of a human face. Basic emotions such as joy, surprise, contempt, suffering, fear and anger are conveyed; sometimes the list of basic emotions includes more positions (Izard 1977). Each emotion has its own conventional image depending on the shape of the eyes, eyebrows, nose, mouth and other facial elements.

The perception of basic emotions by means of facial expression may differ according to age and ethno-cultural origin. The psychological concept of the emotional intellect has been defined as "the ability to monitor one's own and others' feelings and emotions, to discriminate among them, and to use this information to guide one's thinking and actions" (Salovey and Mayer 1994, 312).

This concept is close to what Vygotsky (1962) and his followers have stated earlier. The researchers point to the three facets of emotional intellect: accurate appraisal and expression of emotions, adaptive regulation of emotions, and utilisation of emotion-based knowledge. From numerous studies (Davitz 1969; Izard 1977), it is known that the meanings of emotions are acquired during the developmental process. When children grow older and socialise, they learn to express and comprehend emotional states with increasing accuracy. They recognise emotions, classify and verbalise them more precisely, and their reactions to a whole range of affects expressed by their communicative partners become more appropriate. Besides, people differ in their ability to identify emotions accurately from facial expression (Buck 1984). These psychological findings support the idea that comprehension of smileys is age-dependent, and culture-dependent.

Since children become interested in the Internet and accustomed to CMC from an early age, the age-dependency of emotional intellect in its CMC-related applications needs to be investigated. The accuracy of children's perception of facial expressions of six basic emotions has been examined experimentally (Voiskounsky 1996). The conclusion is that the perception of emotions (according to the pictographs of facial expressions) is age-dependent. At 7 years of age, the necessary cognitive skills are less formed, complete and exact as compared to 10-year-old children. Differences in relative easiness of recognition of certain basic emotions have been discovered. For example, joy and suffering are recognised best. In the younger group, the meaning of contempt is not separated and selected from meanings of other emotions.

The culture differences have not yet been fully investigated. To recognise smileys, developed mental skills of rotating pictographs (90 degrees, clockwise) are required. Thus, recognition is facilitated for those whose cultural habits include left to right writing and reading. This mode of reading and writing is habitual for native English (or another European languages) speakers, but it is not universal. Billions of people have been trained to read and write from top to bottom, or from right to left. Will these people easily recognise the face-like pictographs when introduced to the Internet, or will they find these ways of expressing emotions to be extremely uneasy and unnatural? There is some evidence that the latter is the case. Emoticons used in the Japanese language are vertical; that is, there is no need to rotate the symbols to recognise its meaning (Aoki 1994).

Returning to the main question of whether the Internet leads to an increase in uniformity or diversity, the answer, based on the discussion of the emotional intellect problem, might be phrased as follows. The cyberworld population has developed a seemingly universal system of conveying emotional states while communicating via

global computer networks. This system is based on the use of smileys, or emoticons. Active use and recognition of emoticons is age-dependent; and ethnic “dialects” of the smiley lexicon have emerged. However, the expected expansion into the cyberworld of ethnic groups that have now only limited interest in and access to the Internet might result in major changes in the current non-verbal language of emotions. Another possibility might also emerge: a switch to an oral mode of communication via the Internet. If or when that occurs, Internet users will need considerably more competence in comprehending dialects of English, but at the same time they will have fewer problems in expressing and decoding emotional states. This option resembles the technological switch from silent to sound films that took place in the 1930s. For the two or three decades before sound films, caption writers for silent films experimented with different ways of expressing oral dialogues (Tsivyan 1988). When the technology of the sound films advanced, there was no need for their findings.

Languages in Contact

Adaptation within Newsgroups

The messages produced in newsgroups, or in IRCs, ICQs and MUDs, might be thought of as being close to professional English texts. Though the situation is partly analogous to adapting English as a means of professional communication in numerous technical fields, the difference is that Internet users cannot be treated as representing any single profession. Some similarity with language usage in Medieval Europe is noted: all educated people spoke and comprehended classical Latin, although their professions differed greatly. With not a single native speaker, Latin functioned as a means of education, religion, and research.

The within-newsgroups language adaptation takes two main forms. First, an increasing proportion of Internet users, not having a good command of English, use simplified grammar constructions and a limited vocabulary. Second, fluent English speakers (maybe, writers) need to simplify and to censure their speech in a manner appropriate for addressing foreigners. This makes sense. Non-native speakers of English would otherwise face even greater problems with comprehension and, at best, would be able to only guess the meaning of non-simplified phrases generated by native speakers of English. It is known that non-native English speakers, particularly those who first learnt non-alphabetical writing systems, tend to transfer their literacy processing skills from their mother tongue to English, and have serious problems when encountering unknown words (Holm and Dodd 1996). Unknown words might be inserted into messages both by newsgroup subscribers and by those who compile “action list” words, or “generic actions” — the terms that denote simple and sometimes physical actions (Argyle and Shields 1996). Lists of these words are at everyone’s disposal whenever one needs to express feelings, actions, and so forth.

In other words, complex, laconic, and metaphorical expressions might prove to be impractical; experts in English need to adapt to those whose command of English is much poorer when communicating via the Internet. Poor comprehension of genuine English messages might result in mass unsubscribing of those newsgroups where native English speakers do not self-censure the messages produced and avoid high redundancy. The mechanism described leads to reducing the variety of opinions expressed in newsgroups. Mutual and easy comprehension is a prerequisite for

multiethnic discussions in newsgroups. Because even experts in English should not use the most sophisticated styles when communicating via the Internet, one might deduce that there are rather strong prerequisites for the unification of world-wide Internet communication.

War of Words

The language used for interethnic communication via the Internet and for seeking instructions on how to get access to numerous databases and for navigating through hypertexts is mostly English. When the Internet was developed, and networkers were almost solely North Americans, the use of English seemed more than natural. Now that CMC connects people around the globe, however, the predominance of English presents problems. The problem is sometimes called the "war of words" (Pollack 1995a). This war is intensive and takes place mostly in the popular press (Mandel 1996; Pollack 1995a; 1995b; Specter 1996).

English seems to have no alternative in the computer networking field, but the real problem is that the mother tongues of the ever-increasing number of networkers differ, and for the majority of them English is a second language. Another aspect is that many societies are not happy with the fact that to have access to the most favourable Internet services one needs to comprehend and to speak English. However, they try their best to install and maintain valuable distant information sources and lively newsgroups using national languages.

The problem is not connected exclusively with Internet use. The same problems face initiators of the world-wide exchange of TV entertainment programs, popular music pieces, technological documentation, and so forth. Tourists usually find it most practical to have at least a limited command of English to make inquiries when abroad. Commanders of ships and aeroplanes have to communicate in English. Some countries (France, for example) make considerable efforts to protect their native languages, and to restrict the expansion of English. Other countries, though, make efforts to enhance their residents' skills in effective use of world telecommunication links. Malaysia, for example, is offering "more education in English to prepare its citizens for the information age" (Pollack 1995a). The strategies and tactics thus differ.

There are, in fact, many other "wars of words" — for example, between the poor and the rich, the illiterate and the educated, and the feminist critics of "man made language" and its defenders (Spender 1980). The Internet in a way accelerates actual linguistic problems inherent for modern mankind.

The levels of mastering English vary greatly. The top level would be the ability to use and understand laconic style and witty phrases, including metaphors, epithets, and many other rhetorical figures. This is perhaps the prerogative of qualified journalists and writers, and verbally gifted persons, especially if they have taken creative writing courses. Moreover, a perfect command of English presupposes the knowledge of cultural realities, slang expressions, and different layers of language usage. It is unlikely that this level is useful for CMC. Currently, Internet messages are composed of a peculiar form of speech that combines attributes inherent in written and oral speech, and in dialogues and monologues (Voiskounsky 1998). Moreover, Internet users differ greatly in their language skills and foreign cultures' expertise. This differentiation impacts on the effectiveness of Internet use and the distinctness of psychological dimensions in cyberspace.

Network English

The dominant language of Internet communication is sometimes compared to Basic English. And why not to a pidgin English (Voiskounsky 1995)?

When two or more languages are in contact, there are several ways in which a pidgin language can be formed. To illustrate one of them, imagine that two adolescents from different countries find themselves on an inhabited island; both of them learned English at school for one year only (Trudgill 1983). This is an example of the speakers of three languages forming jointly a pidgin or a lingua franca. Where one of these three languages is dominant (e.g., English), the pidgin will keep developing while non-natives communicate to one another using this dominant language. There are other principles of pidgin formation. One example is when communities of speakers share a certain geographic area (e.g., speakers of Bantu languages in Central and Southern Africa). Another example is when two non-cognate languages come into contact on a permanent basis (e.g., a local and a European language such as Portuguese, English, Spanish, or French).

Pidgins often preserve the lexical system closest to European languages, although some local lexical items are usually added. The phonetic system is modified and adapted to local articulation habits — usually diphthongs are reduced to monophonemic sounds, and fricatives are changed to explosives or affricatives, and so forth. The grammar system of most European languages is simplified — copula verbs may disappear, case and number of nouns and adjectives may disappear, verbs retain a single, unchangeable form, and analytical tendencies strengthen (e.g., connections between the words in phrases are marked by special words instead of affixes).

Global networking creates similar situations of English usage by non-native speakers. By simplifying and erroneously introducing some features of their native languages (e.g., different word order), Internet users create an entirely new form of pidgin English, which might be called “Network English” (Voiskounsky 1995). It is a unique example of a written form of a pidgin since, traditionally, pidgins have been formed from spoken communication (Bell 1976; Trudgill 1983).

Impact on Non-English Communication

Both network and non-network versions of English are influencing non-English communication patterns. Journalists are discussing CyberSpanglish — the Internet-related Spanish language spoiled, or maybe enriched, with English terminology (Rives 1996). The same might be said of Russian language use in teleconferences (i.e., newsgroups). This might be illustrated with some examples derived from actual network communication protocols. English words, phrases and abbreviations are inserted, both in Cyrillic and Latin alphabets, in Russian Cyrillic messages. This process enhances a certain vocabulary layer; that is, English terminology used in computer programming and in computer networking fields. This layer is different from the usual layers in traditional pidgin formation; namely, trading and daily life vocabulary layers.

In a series of surveys administered in the 1990s, Russian networkers estimated the proportion of their Russian, English and non-English network communication. Only about 20% of respondents reported using Russian exclusively. Equal proportions of Russian and English correspondence is characteristic for 25-30% of respondents, and

10% use mostly English. Thus there are a considerable number of Russian networkers who are regular users of English and are possibly able to prod, along with many other non-native English speakers, the formation of pidgins.

In Russian-language teleconferences, the alphabets are mixed (i.e., both Latin and Cyrillic are widely used). Research in the fields of culture studies and psycholinguistics has found the use of intermixed alphabets with partly common, partly differing and partly ambiguous letters (Lukatela and Turvey 1998). Latin alphabet insertions include names of foreign people and companies, terms which do not have Russian equivalents, and citations from messages originally in the Latin alphabet. Other reasons for using intermixed alphabets include humour and the desire to make messages more elaborate and argumentative. Humour can be observed in signatures of messages, which very often include maxims and/or witty phrases in foreign languages (mostly in English). These signatures function as a kind of motto or logotype, which characterise in some way the individual networker (Tsang et al. 1994).

English phrases and words are used in national-language computer conferences in order to shorten the messages. Two ways of shortening might be noted. First, foreign phrases are inserted into Russian messages, sometimes as abbreviations (e.g., popular abbreviations like IMHO ["in my humble opinion"] and BTW ["by the way"]). The abbreviations are mostly in Latin notation, but sometimes in Cyrillic as well. Second, English words in Cyrillic notation are used as a kind of stem. In combination with common prefixes and suffixes, these wordstems constitute Russian-like words. Combined with adequate Russian prefixes and suffixes, the following English terms are constantly used in Russian-language messages: PC, message, mail, mailbox, crosspost, hub, telnet, voice, login, routing, node, sysop, direct, source, flame, spam, programmer, point, link, user. Although these terms may have adequate Russian language equivalents, the English terms are preferred.

Impact on English Language Use

The standard method of pidgin formation is the simplification of English and its adaptation to a Russian-speaking population that has limited knowledge and expertise in English. The adaptation and simplification processes include limiting the vocabulary to two main compounds (simple English taught in high school and professional English), and simplifying the grammar (using present tense only, loan translations, and Russian word order in a phrase). The occurrence of simplified language usage can be observed in English messages produced by native Russian speakers within newsgroups.

One might expect that similar processes take place in other geographic areas where networkers speak different languages. When Russians and other non-native English speakers collaborate and correspond, the "standard" sociolinguistic situation emerges. Namely, the speakers of two non-dominant languages correspond in (dominant) English. It can be argued therefore that computer networking provides the necessary environment for the formation of a pidgin Network English — non-native English speakers born in diverse geographic regions and under diverse sociolinguistic settings communicating in simplified English. This is the method whereby verbal unification occurs on the Internet. The unification is based on the prevalent diversity of ethnic group members that might participate in network English formation. Thus, the more diverse the cultural settings, the less evident is the effect of the unification process.

Conclusions

Culture impacts Internet usage. There are factors that lead to both diversity and unification of Internet-related communication and cognition. In relation to the factors discussed, unification might prevail but the result is not yet certain. Along with the parameters discussed in this paper (i.e., hypertext browsing techniques, status and adaptation within newsgroups, expression of emotions, and the formation of pidginised Network English), many more parameters need to be analysed.

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