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Thesis

Literature Review for thesis 'Conversational Analysis of Chatroom "Talk"' – Terrell Neuage PhD thesis University of South Australia

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2. Literature Review

2.0 Abstract

In examining the literature of conversational analysis and related techniques for describing language in use, it is my intention to discover what such techniques can tell us of how chatroom 'talk' works. In what ways is it similar to or different from natural conversation? Is it, even within its short history, one or many communicative forms? Are there common, "core" elements, present on all web-based chat sites? Are there specialist elements on specialist sites – and if so, is this limited to lexis, or does it extend to other elements of "texted talk"? The aim of this literature review is firstly, to search the literature pertaining to current theories of conversational analysis. I will draw on these to see whether it is possible, and useful, to establish a theoretical framework and methodological focus for examining how dialogue in electronic talk operates as a system of social meaning making within cyberculture. Secondly I will explore the research on electronic chatrooms that is available, seeking existing insights into how texted talk works, and whether these can be extended by a fuller deployment of any of the language in use theories I have examined.

In the first instance I will critique books and articles by researchers in linguistics and social anthropology, including, in the field of <u>Reading-Response theory</u>: Wolfgang Iser (1978, 1989, 2000), Stanley Fish (1980, 1990), Umberto Eco (1979, 1986, 1995) and J. Kristeva (1980); <u>Computer-Mediated Communication (CMC)</u>: Charles Ess (1996, 2000), Mark Poster (1988, 1990, 1995) and Michael Stubbs (1996, 1998); Mikhail Bakhtin (1981, 1997), <u>Semiotics, Semantics, Pragmatics:</u> Roland Barthes (1970, 1975, 1977, 1981), Ferdinand de Saussure (1916), M. A. K. Halliday (1978, 1994), Robert Nofsinger (1991) and Chandler (1999, 2001); <u>Speech Act Theory</u>: John Austin (1962), John Rogers Searle (1965, 1969) and Deborah Schiffrin (1987); <u>Discourse Analysis</u>: Deborah Tannen (1989, 1998) and N. L. Fairclough

(1982, 1989, 1993, 1995) and <u>Conversational Analysis (CA)</u>: Paul ten Have (1999), Suzanne Eggins & Diana Slade(1997), Donald Allen and Rebecca Guy (1974), Erving Goffman (1959, 1971, 1974, 1981), G. H. Mead (1934) and Sacks, Jefferson and Schegloff (1974); Theorists are not strictly always in one 'camp' for example Eco I discuss both in Case Study 1 where I use Reading-Response theory to analyse the chatroom dialogue and in Case Study 3 where I use Semiotics, Semantics, Pragmatics. Here I aim to construct a both a general theory of how the interactivity of chatroom talk-texting relates it to both the "readerly" or the "lisible" elements of dialogism, emergent in mid-twentieth-century reading theory; and an account of how far the socio-linguistic theories of post-Saussurian language studies (including especially "speech act" theory, Halliday's "Systemic and Functional Linguistics", and Harvey Sacks's "Conversation Analysis") can provide explanations of the communicative strategies observable in chatroom's (quasi) synchronous talk-texting.

In the second more specific area of direct or primary research into chatroom discourse, I locate and systematise more than three-hundred articles online on chatroom communication, 71 of them discussed in the second section of this literature review. In particular, I wish to re-focus the direction of many of these studies, from the specifics of their research goal – most often to "explain" a particular chatroom "culture" – to the more generalised and methodological goals of this study. For example, though much has been written about applying the theories of conversational analysis to forms of person-to-person communication in the areas of cybersex, cyber-communities, and gender online, (Cicognani (1996, 1997, 1998, 2000), Rheingold (1993, 1994, 1999, 2000), Turkle (1982, 1984, 1995, 1996) and Bays (2000)) very few researchers have applied these theories to chatroom conversation itself. While chatroom analysis is a rapidly growing area of academic research and more is available online daily, most studies are directed away from general studies of this type [1].

2.1 Introduction

This literature review is an overview of the literature both found in print and accessed online. The nature of my research, and the nature of rapidly changing technology have meant that the majority of sources have been found online, and furthermore, that some of these sources are no longer available. I have included copies of all e-journal articles in my appendix for this reason.

To establish means for rigorous analysis, I "export" my investigation of chatroom talk into the established linguistic methodologies of work on offline analytical linguistics. . There is a growing body of print material on hypertext, the Internet and the World-Wide-Web but there has been little work done on analysis of interactive online texted talk, which is as seemingly borderless as other on-line texted realms.

My field literature borrows from previous research into MUDs[2], (Multi User Dimensions) and Internet Relay Chat (IRC) which I have discussed in the Introduction to this thesis (1.3.5 MUDs vs. IRC).

Many academics have explored the online communicational milieu, including Anna Cicognani[3], who built her Ph.D. around the design of text-based virtual worlds (1998b) and Dr. Sherry Turkle[4] (1995) who looks at computer "talk" from a clinical psychologist's perspective. The field literature is growing, with several people a month e-mailing me to inform me that they are doing post-graduate study into computer-mediated communication. I have networked with these people and have included a report on this in this study. There are several unpublished theses and papers that explore on-line environments such as MUDs and MOOs as well as many discussion groups, but these discussion groups look at the topic mainly from a sociological or psychological perspective. Cicognani develops the architecture of MUDs (1998). Other writers who are working in an academic milieu are Bechar-Israeli (1999), Camballo (1998)[5], Cicognani (1996, 97, 98, 99), Cyberrdewd (1998)[6], Hamman (1996, 97, 98, 99)[7], Turkle (1996, 97, 98, 99), Paul ten Have (1999)[8] and Murphy & Collins (1999)[9]. There is a growing body of on-line journals (zines) which contribute to cyberculture and I have reviewed these further

down in this literature review (2.2.2.1).

Overall, work in this new area of study postulates two major features of the field:

> 1. that new ways of thinking about conversation will emerge with the growing widespread use of computers as a form of communication. (Charles Ess, 1996; Michael Stubbs, 1996)

> 2. that chatrooms involve exchange more hastily done than in any other form of electronic talk-texting, and so therefore more likely to respond to and reflect back the particular pressures and influences of on-line communication (Spender, 1995).

But how might such new forms of communication be captured, or new ways of thinking about communication itself be constructed? E-scholarship itself has provided one possible answer, in what is becoming known as the "re-mediation hypothesis" (Bolter & Grusin, 2000). Working to find ways to describe the evolution of the graphic design and textual navigation pathways of websites as they resolve into convention, Bolter and Grusin draw on earlier hypotheses concerning the establishment of new literary genres. Watt (1957) famously demonstrated that the novel, a comparatively new form of literary production accompanying the rise of extended literacy and a largely unclassically educated leisure readership in the eighteenth century, was built over a base of related textual forms: the essay, the sermon, the drama, the political pamphlet, the scientific report, the romance. Bolter and Grusin demonstrate how similar forces operate to produce website conventions, from magazine and press layout for the "self-directed" reader, to the "windows" formats of familiar software applications, to the screen conventions of television: "fenestration", the "talking head", image fades and dissolves.

If users of the new web-based chatrooms and related "docu-verse" sites are able to establish meaningful communication within these new realms, some degree of "re-mediated" familiarity must operate. Further, we can anticipate that this will arise only in part from the "production" work of technology designers and programmers. As with work from Watt to Bolter and Grusin, users extend and innovate within the frameworks provided, finding new ways to "use" the product in an active reception.

Such a view is a truism of electronic textual theory, Landow for instance suggesting an unparalleled compliance between CMC designers and avant-garde literary theorists in the last four decades of the twentieth century:

> "In a hypertext environment a lack of linearity does not destroy narrative. In fact, since readers always, but particularly in this environment, fabricate their own structures, sequences or meanings, they have surprisingly little trouble reading a story or reading for a story"

> "As readers we find ourselves forced to fabricate a whole story out of separate parts… It forces us to recognize that the active author-reader fabricates text and meaning from 'another's' text in the same way that each speaker constructs individual sentences and entire discourses from "another's" grammar, vocabulary, and syntax" (1997).

But this is to suggest that the "licensing" of the on-line chat user into a full developmental role in producing new communicative forms, is dependant first on reviewing and reforming ideas not of the relative accessibility of everyday talk, but the highly regulated field of literary theory. While it may seem curious to deal first with text, in a study which aims to show the relative fluidity of on-line chat as a form of talk, it does seem necessary to consider the degree to which comparatively recent moves to acknowledge the active role of readers as opposed to writers of literary texts have established legitimacy for views of language itself as made meaningful as much in reception as in production.

2.2 Literary theories

There are many literary theories; so many that theorist Joseph Natoli has labeled the field a "theory carnival", (Natoli, 1987, 5, 8, 13, 22). Literary theories overall have become more scientific and specialist, according to theorist Terry Eagleton, "… as North American society developed over the 1950s, growing more rigidly scientific and managerial in its modes of thought, a more ambitious form of critical technocracy seemed demanded." (1983 p. 91). By the 1980s what emerged is what were called "the theory wars" – a period of theory debate which raged across all Western academic fields in the humanities and social sciences, but established only

a loose consensus on a paradigm shift to poststructuralist or "postmodern" theories, without establishing a common set of epistemologies or methodologies (indeed, the position taken up within poststructuralist theory is in itself opposed to any possibility of stable or universal epistemology: see Foucault, (1994). Even within specific fields of study, such as linguistics, there is no agreement over study goals or tools.

One aspect of this period of conceptual turmoil centrally relevant to the current study has been the focus on what has been termed "the reader's liberation movement" (Ian Reid, 1996). Co-terminous with the rise of hypertextual logic and CMC technologies has been a move to replace interpretive focus on "authors" as agents of meaning, with consideration of the "active reader" (see Foucault, "What is an Author?" 1969 and Landow, 1992). Arising first through literary theory (Norman Holland (1975), Wolfgang Iser (1978), Umberto Eco (1979, 1986, 1995), J. Kristeva (1980), Stanley Fish (19990, See Case Study 1 http://se.unisa.edu.au/1.html) and

later extending to the concept of the "active audience" in media studies[10] (Ang, 1996; Nightingale, 1996; Tulloch, 2001) this theorises the act of "reception" as richly interpretive, and as firmly central to any communicative act as the "production" of that text in the act of writing or media construction.

2.2.1 Reading-response Theory

Norman Holland

There are many researchers, writers and schools that concentrate on Reader-response theory. One such researcher is Norman Holland[11] who is a scholar in English at the University of Florida, where he teaches and writes about psychoanalytic psychology, and cognitive science. He uses Freudian psychoanalysis as the basis for his theories on reading, which he formulated in the 1970s. He asserts that the reading process is a transaction between the text and the reader. He believes that we develop an identity theme based on what we received from our mother at birth and through our life experiences we personalize this identity. We use this identity to view the world, including the mediated world, and

textual interpretation becomes a matter of working our fears, desires, and needs to help maintain our psychological health (Holland, 1990, 1993). But the reader transforms the text into a private world where he/she works out his or her fantasies.

In _Poems in Persons, An Introduction to the Psychoanalysis of Literature,_ (1973) Holland gauges student responses to poems by H.D., Swift, Keats, and Frank O'Hara. He reveals that each reader recreates the poems in accordance with his or her own central myth. In the analysis section of Case Study 1 I will discuss how this could be seen to work within the chatroom milieu, where the reader is left alone to interpret what is written on the computer screen.

Holland himself is still writing as a Freudian and views the Internet as phallic[12]. In his online article 'The Internet Regression', (2000) Holland says, "Talking on the Internet, people regress. It's that simple. It can be one-to-one talk on e-mail, or many-to-many talk on one of the LISTs or newsgroups. People regress, expressing sex and aggression as they never would face to face." [13] The article is a descriptive one, rather than a research paper. Holland talks about 'flaming', sexual harassment, and describes an openness and generosity, which seem to occur when people are online. Without wishing to take up his psychoanalytic concerns, the present study will – along with almost all other studies of on-line practice: see for instance Turkle (dates) – comment upon the very strong degrees of identity play evident in on-line talk texts. At minimum, Holland's work shows us the ways in which text reception is as active a process of meaning-making as text production – and in the instant reciprocity enabled by CMC, that is a key insight.

Felperin for example has sought theory that would explain all discourse, and concludes

> The search for a theoretical metadiscourse has so far yielded only a proliferation of sub-discourses that shows no sign of consolidating into a common language and methodology comparable to that which lends a semblance of coherence to the practices of science and some credence to the notion of a scientific community (Felperin, 1985. p. 2).

Pennycuick (1988) returns us to the problem of the "specific analyses" outlined above, suggesting that in linguistic study generally there have been two opposed programs: one, to uncover the regulatory systems which govern language in use; the other, to discover the diverse and creative applications of language within use. Situated either side of the paradigm shift which still places humanities and social science practitioners as structuralist or poststructuralist, these two sorts of study create unresolvable dilemmas for those attempting to adapt existing methodologies for new areas of practice. While any analytical tool may help display some element of practice within a new context, is it the best or the most revelatory? What might it miss – or even act to conceal? And how should choices be made? there is not one theory that embraces all these concerns.

Conventionally, a literature review isolates those theories and studies of most relevance to the proposed new hypothesis, structuring them into those of central and peripheral use, and clearly linking the new hypothesis into established thinking. The current study however contains no hypothesis, beyond the view that the texted talk emerging in Internet chatrooms is so far undescribed, and requires a very broad review of all possible analytical approaches, in order to isolate which features of existing techniques best address its particular properties. This study is, to that degree, entirely empirical.

Wolfgang Iser

 To move beyond Holland's Freudian "fantasy enactment" view of text interpretation, it is useful to examine the reception theory of Wolfgang Iser. Born in 1926, Iser is a German theorist and literary critic who later taught at the University of California at Irvine. Iser takes a phenomenological [14] approach to reading. Iser argues that the text in part controls the reader's responses, but contains "gaps" that the reader creatively fills. There is a tension between the actual reader and the "the implied reader," who is established by the "response-inviting structures" of the text. This type of reader is assumed and created by the work itself. In other words, rather than seeking the entire act of interpretive reception in the psyche of the individualized reader, Iser allows us to detect strategies inside the text itself which pre-dispose not

only certain readINGS, but certain "preferred" readERS.

Iser reveals some of what we are looking for when we speak of 'The Reader'. He begins by noting two broad categories of readers: **real readers** and **hypothetical readers**. Iser refers to real readers as those who have been documented; their responses recorded in some way, while hypothetical readers are those "ideal" readers predicted within the text. Interestingly for the present study, this is very much the case in chatrooms, where there is "documentation" of the "real" reader's response by noting their response-utterance, as well as textual recording of the "hypothetical" reader, presented in the initial text evoking response (and requiring it in "preferred" ways).   Iser however further subdivides the reader, saying that hypothetical readers can be broken down into two groups: the ideal reader and the contemporary reader.

"There is no escaping this process, for... the text cannot at any moment be grasped as a whole. But what may at first sight have seemed like a disadvantage, in comparison with our normal modes of perception, may now seem to offer distinct advantages, in so far as it permits a process through which the aesthetic object is constantly being structured and restructured." (Wolfgang Iser, *The Act of Reading,* 1978, p. 112).

"By reading we uncover the unformulated part of the text, and this very indeterminacy is the force that drives us to work out a configurative meaning while at the same time giving us the necessary degree of freedom to do so" (Wolfgang Iser, *The Implied Reader,* 1974, p. 287).

> ...The significance of the work...does not lie in the meaning sealed
> within the text, but in the fact that the meaning brings out what had
> been previously sealed within us....Through gestalt-forming, we
> actually participate in the text, and this means that we are caught
> up in the very thing we are producing. This is why we often have
> the impression, as we read, that we are living another life (Iser,
> *The Act of Reading,* pp. 157, 132).why 2 page refs?

Not only then does Iser give text reception an active role within reading, but he sees that there are certain types of text strategy which optimize the chances of this "indeterminacy", and so invite interpretation at a level of self-consciousness which reaches out to identity-formation:

> The ability to perceive oneself during the process of participation is an essential quality of aesthetic experience; the observer finds himself in a strange, halfway position: he is involved, and he watches himself being involved. However, this position is not entirely nonprogrammatic, for it can only come about when existing codes are transcended or invalidated (Iser, *The Act of Reading,* p. 134).

Iser does not analyse actual readings of texts, but proceeds from an ideal "implied reader" to valorize readings both with and against the predispositions of the text. For Iser, the reader does not mine out an objective meaning hidden within the text. Rather, literature generates effects of meaning for an actual reader, in a shared virtual space created between reader and text. Although reader and text assume similar conventions from reality, texts leave great portions of that "reality" unexplained to the reader, whether as gaps in the narrative or as structural limits of the text's representation of the world. This basic indeterminacy itself "implies" the reader and begs her participation in synthesizing, and indeed living, events of meaning throughout the process of reading.

Iser writes of the interaction between a published text and its reader. If then we take this phenomenological approach to the reading process in a chatroom, we see how an interaction between the text and the reader can occur, and how it focuses attention onto the text. For meaning to occur [in a Chatroom] according to Iser, the underlying theory of a piece of work first consists of its author and an 'aesthetic' (reader) situated at equal poles, in equal measure, with meaning production situated somewhere in between, as a result of that interaction. The main motivation for the interaction between text and reader is for the 'space'- the 'fundamental asymmetry'

that exists between them, to be filled. All texts (and this is very evident in a chatroom) are thus made up of numerous spaces ("gaps") in the dialogue, which I refer to as "the chunk and chat segments", and these spaces denote that a piece of information has been omitted or only made implicit. This has the resultant effect of making the reader (the witness of the chat event) find connections and implications in what has been written, and thus become in turn "the writer". It is this combination of what has been written and what has been left out, that permits the completion of the whole picture, enabling the production of meaning. Moreover, this process is also dependant on certain terms set by the chatroom protocols [15] i.e. there is some structuring of the blanks and spaces, which the reader-witness-writer-witness has to follow. In other words, chatroom "texting", by both "author" and "reader-as-author" , is as complex and as reciprocal as Iser suggests of the reading act – and as close to identity formation.

Iser has further explored how literature functions in the human experience, saying that

> … if the reader is to identify with a text, then he or she must combine the artistic, which is the author's creation of the text, and the aesthetic, which is the realization that the reader brings to the text. Once the artistic and the aesthetic[16] are united then the reader will enhance the text, by allowing his or her intimate experiences to flow through the text. As the reader becomes more involved with the text, then meaning, which comes of experience, can be used to interpret the text (Iser, date, p.45).

Reading is an active and creative process (Iser 1974, Holland 1992, Kristeva 1989) with the imagination always the final interpreter. Even with no knowledge of who the person is playing, in both the reader or the writer's role, one can find whether other writers and readers in a chatroom share their views by following responses to what is being written. A person will be enticed to enter or continue the dialogue in a chatroom based on how this person reads the text, bringing his or her own

experiences to the reading. 'The reading process is an interaction between the text and the reader's imagination' . (Iser, 1972, p. 34).

Kristeva

Kristeva (1980, 1986) in "Desire and Language; a Semiotic Approach to Literature and Art" (1980), and *The Kristeva Reader* (1986) builds on the works of Jacques Lacan, Jacques Derrida and Mikhail Bakhtin to examine the speaking subject and the signifying structures of social practice. It is Kristeva's work on intertextuality, which is useful in this study of Internet "conversations".

Kristeva, like Holland (Holland being a Freudian and Kristeva, at least initially, a Freudian Feminist theorist) speaks of the child who must learn to differentiate self from other if it is to be come an individual. I discuss Kristeva in more detail in Case Study 4, when I use a semiotic approach to reading the text in a chatroom and examine her idea of Intertextuality, developed in part from Bakhtin's writings. In her writings, Kristeva (1986) charts a three-dimensional textual space whose three "coordinates of dialogue" are the writing subject, the addressee (or ideal reader), and exterior texts. Kristeva describes this textual space in a Saussurian paradigmatic/syntagmatic way familiar in semiotics, as intersecting planes that have horizontal and vertical axes.

> The word's status is thus defined horizontally (the word in the text belongs to both writing subject and addressee) as well as vertically (the word in the text is orientated towards an anterior or synchronic literary corpus) ... each word (text) is an intersection of words (texts) where at least one other word (text) can be read ... any text is constructed as a mosaic of quotations; any text is the absorption and transformation of another (p. 37).

Essentially, every text is informed by other texts which the reader has read, and the reader's own cultural context. The simplest articulation of intertextuality can be seen in the footnotes that indicate source materials to which a given text is alluding, or

which are known to have influenced the author. A constructive hypertext can make this notion of intertextuality an externally accessible "mosaic" of multiple texts, placing the internal connections about which Kristeva theorizes into a visible forum, which can be expanded by each subsequent reader.

The concept of 'intertextuality' was first developed by Julia Kristeva, in connection with the numerous implicit references in each text to other texts. No text is written in complete isolation from other texts nor can it stand entirely by itself. Hypermedia technology can express such intertextuality by linking selected parts of a text, image, sound or other multimedia format with other texts, image, sound or other multimedia format (Bolter 1991; Landow and Delany 1991; Landow 1992; Nelson 1993).

My own work seeks to extend Kristeva's modelling of the layering of text, into the ever more complex and shifting systems of talk-texts. By combining her highly theorised models with the analysis of conversation and discourse linguistics, I hope to establish both a theory-rich, and methodologically complex, means of analysing contemporary electronic talk-culture. And in particular, I aim to demonstrate that the "syntagms" or text-to-text comment-response patterns which in Chat are fragmented across multiple postings, are similarly paradigmatically fractured – not always relating to shared cultural contexts, even if "coded" within the para-linguistic online markers of consensus, such as syntactic abbreviations and emoticon graphics.

Fish[17] and Eco

From Kristeva's idea of a text as a "visible forum" occupied by cross-referencing textual elements pre-disposing the act of reception, we move to the work of Stanley Fish, who suggests that if texts are crossed by multiple interpretive potential, so are "readerships" as "interpretive communities". Stanley Fish in "Doing What Comes Naturally: Change Rhetoric in the Practice of Theory in Literary and Legal Studies" (1990) extends Vandergrift's belief that "interpretative communities are meanings internally experienced in the consciousness of the reader and not necessarily shared" (1987), mirroring what Fish says, "…interpretative communities are no more stable than texts, because interpretative strategies are not natural or universal, but

learned" (Fish, 1990, p. 172). Immediately we become able to see that in chatrooms, unless prearranged meetings are agreed to, "communities" are actually instant gatherings of strangers, and only if the flow of turn-takings has a shared meaning, i.e. others in the chatroom know what is being said, can there be shared dialogue which will continue as conversation. Fish reminds us that for all the talk of "liberation", play or individualizing interpretive reception, "reading" – on which chat depends – is a learned, acculturated behaviour. Not only can we expect to see such regulatory behaviours in action in online chat: without them no communication would occur. How then are those behaviours taught and learned? Which techniques and activities monitor them, control them, reproduce them? And since online chat is, potentially at least, non-proximous and even global, how overt must the regulation of its interpretive communities become?

Italian semiotician and cultural analyst Umberto Eco moves further, developing a somewhat complex formula to show how the reader engages in constructing meaning when reading a text. In *The Role of the Reade r*(1995), Eco states that natural language (or any other semiotic system) is articulated at two levels: the expression-plane and the content-plane. On the expression-plane, 'natural languages consists of a lexicon, a phonology and a syntax'. These are the regulatory foundations from which we draw in any expressive act. The concepts which we can express however are on a distinctive content-plane (Eco, 1995 pp 20-24). To explain the difference, Eco further subdivides these two planes into '*Form, Substance* and *Continuum*'. How we think and express ourselves, according to Eco, is dependent on our *'content-form'* – the distinctive ways we twine content into the expressive repertoires available in our language community.

In chatrooms where the content and depth of content   are both fragmentary and extremely reduced, *Content-form* is more than usually reliant on the "expressive plane" established by an "interpretive community". In Case Study One, I examine the role of the reader in a particular sample of chat discourse to discover how he or she must read a previous text in order to be able to express meaning. Before meaning can be expressed; in Eco's terms, before a Content-form can be

established, an earlier turn in the chatroom must be interpreted. Chat is establishing an "expressive plane" of possible talk-text strategies – or in Fish's sense, delimiting its particular "interpretive community" of actively-receiving "readers".

Following the review of the literature on Reader-Response theory I have chosen to review the literature in the already established disciplines of conversational analysis[18] (CA, Case Study 6); Speech Act Theory[19] (SAT, Case Study 4), Discourse Analysis[20] (DA, Case Study 5), Reading Theory[21] (Case Study 1); Computer-Mediated communication[22] (CMC Case Study 2), which includes; Electronic Communicated Analysis; Computational Linguistics; Text and Corpus Analysis; Pragmatics and Semiotics[23] (Case Study 3), and Schools of linguistic theory (Case Study 7), such as; Prague School of linguistics[24], Dependency grammar[25], Tagmemics[26], Stratification grammar[27], Systemic linguistics[28] and Optimality Theory[29], to establish techniques of reading and speech within chatrooms. Then I will review the 'field literature' and I will apply the methodologies from these already established disciplines to my findings to establish a specific "chatroom analysis". Within the methodology of each individual Case Study I will research the elements of differences and similarities in conversation between Internet chat and face-to-face conversation. It is within these areas of difference that my study will add to the new growing body of computer-mediated understanding related to social dialogue. What each offers to analysis of computer-mediated conversation will be discussed below. In the meantime, it is important to consider how computer technologies have been altering conventional concepts of what "chat" is. For example, the non face-to-face dialogues and the immediacy of conversations have already re-defined communication.

2.2.2 Computer-Mediated Communication (CMC)

Not long ago most communication, as Adler notes below, was done through non-electronic formats. Now with Computer-Mediated Communication how we 'talk' is changing.

> The primary forms of organizational communications are of written and oral character. Written communication includes formal typewritten memoranda and letters, and informal hand-written notes. Similarly, oral communication takes a variety of forms, occurring primarily by telephone and through face-to-face contacts (Adler, 1991).

However, a survey by WorldLingo[30] in April 2001 showed that as much as "91% of Fortune 500 and Forbes international 800 companies cannot respond correctly to a foreign language email" showing that Computer-Mediated communication is very much in its infancy.

How far might such a specialised "interpretive community" be established through the sedimentation of daily acts of talk-texting; how far by technical limitations set up within the design of the "applications" software which enables internet chat to occur? Case Study two will introduce technology into consideration of the on-line texted communicative act. Computer-Mediated Communication (CMC) has evolved to permit the analysis of any number of aspects of the use of computers in communication fields such as education and language learning, as well as in its own distinctive interactive communicative acts such as e-mail, bulletin boards and chatrooms. Within CMC studies, methods such as Computational Linguistics[31] and Text and Corpus Analysis make archives of texts and use computer programs to read and analyse large pieces of data. There is an ever growing mass of literature (Rheingold, 1985, 1991, 1993, 1994, 1999, 2000; Stubbs, 1996, 1998; Herring, 1994, 2002; S. Jones, 1995,1997; Donath, 1998, 1999; Schiano, 1997) which addresses CMC techniques and compares them to other modes of communication.

The first issue addressed in contemporary CMC studies is the insistence that CMC is not in itself an isolated "driver" of communicative innovation. Most theorists are opposed to technological determinism, and consider rather that CMCs are in themselves driven by precisely the same processes which structure the communicative acts which they subsequently enable. Charles Ess (1996), in 'Philosophical Perspectives on Computer-Mediated Communication' may talk about how 'Rhetorical Theories derive their basic orientation from the modes and

technologies of communication that prevail in a given society, and new technologies and communication practices propel the evolution of new forms of consciousness and culture' (Ess, p.237), but other theorists (see especially Landow, 1992) see only a simultaneity in the rise of new technologies and new cultural theories, while UK technology historian Brian Winston (1998) reminds us of the length of time new technologies – among which CMC technologies are prime examples – take to achieve cultural centrality. Without some "supervening social necessity" Winston suggests, many technological innovations remain inert. And when a technology achieves the centrality witnessed in recent CMC uptake, it must also demonstrate cultural sympathy to dominant conceptual paradigms – of the type uncovered by Landow whilst discussing Nelson, Derrida, Barthes and van Dam, Landow (1992) states:

> "All four, like many others who write on hypertext and literary theory, argue that we must abandon conceptual systems founded upon ideas of centre, margin, hierarchy, and linearity and replace them by ones of multi linearity, nodes, and networks." (1992: 63)

It is possible then to concede that online chat, one among many forms enabled by CMC technologies, may reveal equally dominat cultural formations within its otherwise distinctive meaning-making processing. But, as Landow recognises, meaning-making within the interactive paradigm enabled by CMC may permit and even participate in concepts of cultural dominance, but it does so from within a Gramscian view of "hegemonic" or contestational cultural formation. Castells (1997) points out that central to CMCs is a strong shift away from "institutionalising" identity formation which he terms "legitimation", and even beyond "resistance" identity, towards the "project" self of late consumer-led capitalist production, in which constantly shifting and multiple meaningful identity formations are made and remade daily, within variable and mobile locations. Within this intensified variability, CMCs themselves act as agents of intensification, providing not only so many more cultural "spaces" for meaning-making transactions, but marking those spaces with increased

consciousness of the 'virtual" or experimental basis of the activity. To this extent CMC technologies can be said to 'legitimise" interpretive work: text production and reception – as the new dominant cultural activity.

Online journals on CMC

There are several prominent journals on CMC online, including the *Journal of Computer-Mediated Communication*[32] from the Annenberg School for Communication at the University of Southern California, and from the School of Business Administration at the Hebrew University of Jerusalem and *The Electronic Journal of Communication* based at the University at Albany, New York (Terrell Neuage, online editor). The *Journal of Computer-Mediated Communication* however has only one article on text-based chatrooms, focusing mostly on topics not relative to text-based chat, such as Computer-Mediated Markets (5,3), Electronic Commerce and the Web (5,2), Searching for Cyberspace (5,1), Persistent Conversation (4,4), CMC and Higher Education, 2 (4,3), Online Journalism (4,1), Virtual Environments, Part 2 (3, 3), Designing Presence in Virtual Environments (3, 2), Studying the Net (3, 1), Electronic Commerce (1, 3), Play and Performance in CMC (1, 2), and Collaborative Universities (1, 1). An article by Judith Donath, Karrie Karahalios and Fernanda Viégas at the MIT Media Lab, Massachusetts Institute of Technology is of interest to my work in chat. They constructed a way to carry on chat online by having

> 'each person who is connected to the chat's server appear as a circle. When the user posts a message, their circle grows and accommodates the text inside it. Postings are displayed for a few seconds (the exact time varies depending on the length of each posting) after which they gradually fade into the background. This approach mimics real life conversations where at any given time the focus is on the words said by the person who spoke last. Over time, those words dissipates the conversation evolves. The sequence of growing and shrinking circles creates a pulsating rhythm on the screen that reflects the turn taking of regular conversations. By building visual interfaces to on-line conversations and their archives, our goal is to increase the ability of this medium - computer-mediated discussion - to carry subtler and more nuanced messages, both by giving people a richer environment in which to interact and by providing them with greater insight into the underlying social patterns of their virtual community.'[33]

"The point of view is that of the red circle (shown saying "Hello I'm Kate"). As she moves from one location to another, different conversations are brought into focus." From http://www.ascusc.org/jcmc/vol4/issue4/donath.html (05 July 2000)

I have not however found any chat site with this model of presentation, and the two models which are thriving in Internet communities, text-based chat and 3-D chat sites, continue with the limitations on "subtler and more nuanced messages" – suggesting, as I consider throughout this study, that there are in fact expressive and interpretive systems in play which can be picked up with careful analysis, and shown to satisfy existing users.

One of the world's first peer reviewed electronic journals, *The Electronic Journal of Communication*[34] is a part of the large online site, 'Communication Institute of Online Scholarship' with articles and links to many studies being carried on in the area of electronic communication. Several of the journals that have been useful in

this thesis include: '[Computer Mediated Communication](#)', Volume 3 (2) April 1993 (Edited by Tom Benson); '[Computer-mediated Discourse Analysis](#)', Volume 6 (3) 1996 (Edited by Susan Herring); '[The Future of the Internet](#)', Volume 8 (2) 1998 (Edited by Peter White); '[Community Networking: Mapping the Electronic Commons](#)', Volume 11 (2) 2001 (Edited by Joseph Schmitz); and two issues of A Digital Divide? Facts and Explanations of volume 12 to be online early 2003: A Digital Divide? Facts and Explanations (Edited by Jan van Dijk) and LIBERATION IN CYBERSPACE ... OR COMPUTER-MEDIATED COLONIZATION? (Charles Ess and Fay Sudweeks). Computer-Mediated Communication Magazine[35] ran issues from May 1994 to January 1999, reporting about people, events, technology, public policy, culture, practices, study, and applications related to human communication and interaction in online environments. The only issue that is particularly useful for this study is *Organizer Participation in an Computer Mediated Conference* Volume 5, Number 6 / June 1, 1998, in which the author hypothesizes that there is a relationship between the number of messages posted to an online conference by the organizers of such a conference and the number of posts made by the participants. Organizers must continue to actively participate in their conference in order to insure that participants will also actively participate. I have found this true in moderated chatrooms (see Case Study 6) where the moderator, like the organizer in an online conference, needs to keep the 'talk' going by contributing, and answering each turn taking.

Computational linguistics

Computational linguistics involves the use of computing and its powerful capacity for measurement and detection of recurrent patterns, in the analysis of complex networks of language construction. In Foundations of Statistical Natural Language Processing Manning and Schütze (1999) give an overview of one form of computer analysis of language: natural language processing (NLP). Their work presents all the theory and algorithms needed for building NLP tools. While such models may seem ideal for handling the vast numbers of talk-transactions within daily chat use,

research into text-based conversational analysis is not yet encompassed in NLP. At one level, I share Manning and Schutze's concern with analysis of real language: language in use. Analyzing patterns of words and grammar in chatrooms, Instant Messenger, and within discussion group environments will present challenges not faced in other forms of textual analysis. Linguistic researcher Michael Stubbs begins his book, 'Text and Corpus Analysis' (1996), with a question: "How can an analysis of the patterns of words and grammar in a text contribute to an understanding of the meaning of the text?" (p.3) Stubbs continues with an explanation of text, which will be the working definition of text I will use in my own research:

> By text, I mean an instance of language in use, either spoken or written: a piece of language behaviour which has occurred naturally, without the intervention of the linguist. This excludes examples of language which have been invented by a linguist merely to illustrate a point in a linguistic theory. Examples of real instances of language in use might include: a conversation, a lecture, a sermon, an advert, a recipe..." (Stubbs, p.4)

Chatroom talk, despite its apparent artificiality in that it is constructed through CMC and represented in script, is such a form of "natural" language in use. And, since it is transported by the complex algorithms of CMC, why not re-apply them to help explain its techniques? The problem with NLP is in its focus on "processing", or the reconstruction of individual pathways of meaning-making. Without tracking individuals it is impossible to know how an individual is dealing with language – and chatrooms move too fast and are too enmeshed in cultures of anonymity and even active identity concealment and experimentation, to conduct ethnographic follow-up on meaning processing. Such work is useful for people doing research into text-based chatrooms in areas such as education, where students can be accessed in person to find out how they process what is on the screen. But for online chat analysis, at least at this period of its history, study must depart from what is available on the screen.

Online writings on CMC

There are many articles on CMC and in recent years the literature online is rapidly growing[36]. Search engines on the Internet result in the discovery of any number of articles one wants to review. I am reviewing three articles from hundreds read for this thesis that I have found useful in my research of text-based chatrooms.

That said it is also important to realize that not every form on on-line talk provides equal access to productive techniques of analysis. For instance, Edward A. Mabry in *Framing Flames: The structure of argumentative messages on the* net [21] 'hypothesized that framing strategies are related to the emotional tenor of a disputant's message, and that a speaker's emotional involvement with an issue should be curvilinearly related to the appropriation of framing as an argumentative discourse strategy.' Mabry carried on an analysis of 3000 messages, obtained from a diverse sampling of computer-mediated discussion groups and forums. He wanted to find a correlation between on-line argument and off-line person-to-person argument. The obvious conclusion was that without physical cues arguments online cannot be fully determined as effective. This work may seem immediately relevant to tracking meaning-making in chatroom talk – yet Mabry's work was on online discussion groups, where long postings are common, and where topics are very clearly focused. I found I could not translate his findings into a text-based chatroom as the feature of fleeting-text (see Case Study 5) and the constantly appearing and disappearing authorships (chatters coming and going and lurking – see Case Study 6) make it impossible to track readers' arguments.

Not all CMC environments are equal

Kirk McElhearn's *Writing Conversation: An Analysis of Speech Events in E-mail Mailing Lists*[37] expands on Gruber's (1996) four possible types of message posted to a mailing list; initiating messages which successfully stimulate a new discussion; initiating messages which fail to stimulate further discussion: continuing messages which cause further discussion and continuing messages which are "dead ends."

Categories to define chat-types

In text-based chatrooms not only are the two categories of initiating messages and continuing messages present at all time but because of the nature of threads (see Case Study 4) the multilogue of chatters and the presence of lurkers (see Case Study 6) and the never ending chat (chatrooms can be going for years with no stoppage) it is difficult to determine the path of messages, especially whether they have "dead ends". McElhearn's arguments do not hold up when one considers that the Internet never sleeps and neither do mailing lists; making it difficult to say that there is a beginning or an end to any online communication. Simple conceptual structures will not transfer from CMC application to application, and are eroded by the very conditions of CMC technologies themselves: their boundarilessness and incessant interactivity. *Computer-Mediated Communication and Emotion: Developing Personal Relationships Via CMC*[38] an online essay by Brittney G. Chenault, begins with the often-cited Michael Strangelove quote; 'The Internet is a community of chronic communicators'. There is no discussion or argument or data collection in this writing, however Chenault's essay is a useful summary of what many others have written about online relationships (Turkle, Rheingold, etc.). Chenault undertakes no text analysis, and generalizes from generalization, rather than attempting to uncover how "personal relationships" are constructed – or imagined – through online talk-exchange.

In the Volume 12 Number 2, 2002, issue of 'The Electronic Journal of Communication' several papers presented at the second biennial conference on Cultural Attitudes towards Technology and Communication co-chaired by Fay Sudweeks and Charles Ess, and held in Perth, Australia, 13-16 July 2000. The journal issue entitled, 'Liberation in Cyberspace … or Computer-mediated Colonization?' raises the question whether CMC can be affective on a world-scale as there are sever cultural differences that make communication via computers on the Internet and the Web difficult to maintain and understand.[39] Though there is much written on CMC the affect between cultures has had attention paid to it. I address how different languages are attempting to be translated so as to be readable in any language the user is in the discussion of this study (see. 5.2.3 Will

chatrooms (as part of an online discourse) become a universally understood language?).

Next to e-mail communication[40], chatrooms are of primary CMC importance. According to 'Consumer Technographics Brief Online', Chat has three times the users it had in 1999[41]. With the use of the Internet, distance and time differences seem to play a more important role than with the use of e-mail. An e-mail message can be read at a latter time, however, for chatrooms people need to be physically present, although primarily at different locations. Computer-mediated communication does not always appear to be sufficient in information exchange, and developing and maintaining relations as is discussed throughout this study.

My research shows that in CMC literature the least discussed is the 'real-time communication and this study undertakes to bring this form of CMC to the forefront.

Trevor Barr breaks down the different kinds of interaction on the Internet into six categories:

- one-to-one messaging (such as email);

- one-to-many messaging (such as 'listserv');

- distributed message databases (such as USENET news groups);

- real-time communication (such as 'Internet Relay Chat');

- real-time remote computer utilisation (such as 'telnet'); and

- remote information retrieval (such as 'ftp', 'gopher' and the World Wide Web') (Barr, 2000)

2.2.3 Pragmatics

Pragmatics is the study of linguistic communication, and so of actual language use in specific situations. In theory, we can say anything we wish, however, in practice,

we follow a large number of social rules (many of them unconscious) that constrain the way we speak (Crystal, 1987, p. 120-122). Pragmatics studies the factors that govern our choice of language in social interaction and the effects of our choice on others (Levinson, 1983; Nofsinger, 1991). It offers the possibility of extension of its regulatory features into the new interactive or interpersonal speech formations of chatrooms – and the chance of discovering whether what occurs there is constituting new regulatory features.

Amongst the many areas of linguistic enquiry however, several main areas overlap. Pragmatics and semantics both take into account such notions as the intentions of a speaker, the effects of an utterance on listeners, the implications that follow from expressing something in a certain way, and the knowledge, beliefs, and presuppositions about the world upon which speakers and listeners rely when they interact. Pragmatics also overlaps with stylistics and sociolinguistics, and psycholinguistics, as well as with discourse analysis. In attempting analysis of an extended field of language use, is one school of inquiry adequate – or does each have something to offer? To the degree at least that these are considered complementary rather than competing theories of language in use, this study will take the position offered in van Dijk's monumental four-volume study of the foundations of the linguistic methods constituting discourse analysis: that each technique borrows from the others; that some, like discourse analysis itself, borrow from all in an otherwise-directed methodology (in the case of DA, an ideological commitment to social reform) and that it is often in the areas of overlap that the most fruitful discoveries and insights occur.

2.3 Field Literature and Current Research

My field literature is from material found on the World Wide Web as well as in print. The material on the Internet has the accuracy of timelessness for surveys (See Internet Statistics. http://www.internetstats.com; Jupiter Media Metrix http://www.jmm.com; Nielsen net ratings http://www.nielsen-netratings.com/; Web Statistics http://www.globalxpert.net/globalxpert/applications/news/statistics.htm;

Global Reach, http://global-reach.biz/; WorldLingo, http://www.worldlingo.com as well as the Internet statistical sites at: http://www.messagingonline.com/ and http://www.forrester.com/home/0,6092,1-0,FF.html) as well as the immediacy of chatrooms that can be harvested for data.   Not all articles and essays cited in this study will be locatable online for future reference. This is a problem with the way the Internet has sites disappearing constantly, removed by the author, or the entire site being removed by the server or host institution, or the Internet server going out of business. There have been discussions about archiving everything on the Internet as it appears (Lasica, 1998; See the Internet Archive site that is building a digital library of Internet at http://www.archive.org/) but no complete archive of everything on the Internet currently exists. Media news sources online are attempting to archive their material. And there are several directions this has taken:

1. Article links that are permanent. These sites claim that not only to archive everything, but to also retain the original links, for example BBC News claims to do this.

2. Articles that expire after a set time period (usually 1-4 weeks) but are available upon request. Time corporation does this and the articles are available on a pay-per-request.

3. Articles that expire at different times without advanced warning. The archive system is limited to recent publications only. The news site, MSNBC (http://www.msn.com/) uses this method.

4. Articles are archived elsewhere. For example CNN news keeps their links up but articles from other agencies expire. The Associated Press archives all of their articles through the library Lexis/Nexis system.

Because of the vast number of pages[42] being put on the World Wide Web (WWW) and the number of pages being changed and updated, the articles I have cited may either be different from the version cited or no longer on the WWW. . To overcome this problem I will include the complete text cited as it existed when I saw it, on the

University of South Australia server, if I have either received permission from the author, or have not received a denial to access reply from an email sent to the author requesting permission to save his or her work. I have also saved these essays on the accompanying CD with this thesis. For example,

10. <u>Cybersex Amongst Multiple-Selves and Cyborgs in the Narrow-Bandwidth Space of America Online Chat Rooms</u> **(19705 words 42 pages)** MA Dissertation by **Robin B. Hamman.** <u>Department of Sociology</u> <u>University of Essex, Colchester</u>, UK (30 September, 1996) '*Cybersex in online chat rooms is defined here as having two forms: 1) computer mediated interactive masturbation in real time and, 2) computer mediated telling of interactive sexual stories (in real time) with the intent of arousal. Both of these forms of cybersex are found on America Online.* '<u>http://www.socio.demon.co.uk/Cyborgasms.html</u> **LAST ACCESSED ON-LINE Tuesday, 14 November 2000 (<u>6</u>)**

shows the number of the citation, the title, number of words in the article, how many typed A-4 pages there are, the item and whether it is a thesis, dissertation, article or essay, the author, publisher and date published if given, the author's abstract (or if one is not provided I briefly describe the item, its URL at the time of viewing, the date I last viewed it and the number in brackets). (<u>6</u>) is where it is saved on the University server and on the CD with this thesis as it was seen. Not all items have all of this information. Some items have only a title and the article with no name of the author or date of its publication or who the publisher is, i.e. a university. An example of this is the essay, <u>Conversation Analysis of Internet Chat Rooms</u>, which has no information or who the author is, although as I say below I search for the author before I use the material.

The difficulty with any online research is that anyone can write anything online and there is no way of verification. I have sought to overcome this problem by firstly carefully verifying authorship and authenticity of the source by following the URL to its server. For example, the essay, 'Conversation Analysis of Internet Chat Rooms' had no author, date or place of origins associated with the actual material on the

WWW, therefore I followed the URL,

http://www.polisci.wisc.edu/~rdparrish/Chat%20Rooms%20for%20Web%20Site.htm, of the article to its server, http://www.polisci.wisc.edu/ and found the article was written by an instructor in Political Science, Richard Parrish, at the University of Wisconsin in the United States of America.

Secondly, I have limited my on line literature review to articles that can be traced to universities, as just shown, or associated with an institution that can be verified.

Thirdly, for every article I have critiqued that was on the Internet andfor which an e-mail address for the author was provided, I wrote to the author stating that I was saving their complete article onto the University of South Australia server and that I was citing their work in my thesis. Several authors requested me not to save their article to the University of South Australia server so I have left their article out of my thesis as a reference source. There are major articles that the authors have asked not be used, such as Howard Rheingold, one of the original people involved with online communities (he began the first online community, The Well in 1985). Rhinegold has on his excellent article on the Internet, Rethinking Virtual Communities, the warning: (DO NOT CIRCULATE THIS URL OR LINK TO IT). The reason I believe is that he re-wrote and published much of what was in this article in his book on Internet culture, The Virtual Community.

There is also the issue of the updating of one's work. Because print has a finality to it books can be cited the way they are. With Internet essays, an author can re-write or update their article and therefore it would be different from the version I have quoted in my thesis. I myself do this as I am writing my thesis 'live' online, saving each day's writing which overwrites the previous day's writing. This is the same as taking back one's words, but if someone prints or saves one day's work or quotes yesterday's analysis he or she may be looking at a different argument or conclusion from that available the day before.

There has been a cartography of the powers that circulate through virtual lives (Turkle and etc), the forces that pattern the politics, technology and culture of virtual

societies have been charted (Poster and etc). These powers (See Max Weber and Michel Foucault on the interpretation of power) set the basic conditions of virtual lives. At the same time the linguistics behind what is happening in chat-text has not been fully explored and it is the purpose of this study, using conversational analysis theories to chart the turn-takings of online Internet chat communication.

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[1] See http://www3.usal.es/~nonverbal/researchers.htm which lists 135 current researchers doing academic work on online communication. Most of these researchers are presenting online work in the areas of psychology and sociology which are providing an on going source of literature on Internet activity. There are many university Internet research projects such as the University of London's 'Gender and the Internet' project, University of Washington's Center for Internet Studies; The Internet Studies Center at the University of Minnesota and etc. For example there are psychologists exploring options with using Internet chatrooms as well as many universities using chatrooms for distance learning (including the University of South Australia, sponsor of this thesis) and for classroom

experiments (see Sociology and the Internet at Rutgers, The State University of New Jersey).

[2] The virtual linguistic worlds of Moods; multi-player virtual worlds on the Internet have many sites catering to them. MUDS and MOOS are imaginative worlds that exist digitally only. A text-based virtual world typically consists of a number of rooms and a number of players, all of which made up the world's database. Each room would have a description that is displayed to a player when they moved into a room. In a room, players would enter commands to tell the server how they wanted to act in the virtual world. 'For example, if a player was in a room with a diamond, they could type take diamond in order to pick up the diamond. Unfortunately, only the commands recognized by the server would work; if a player was to type shine diamond, the server would become confused unless it was programmed to allow players to shine the diamond.' Christopher J. VandenBussche in Introduction to Text-Based Virtual Worlds http://vchicago.org/about/tbvw.html. One of many sites which displays and explains a range of maps of the geographic structure of text-based virtual reality Multi-User Dimensions (MUDs) and graphical 3D virtual worlds is at, http://www.cybergeography.org/atlas/muds_vw.html.

[3] Anna Cicognani's "A Linguistic Characterisation of Design in Text-Based Virtual Worlds" focuses more on the design in a text-based virtual environment and its sense of interactions between users and the virtual environment, "and that these interactions for design can be approached using a linguistic perspective". I have saved this to my university server online for a reference point as it may no longer be on the Internet. Therefore, though the reference material is not available in hardcopy it is available as long as the University of South Australia preserves my web site and it is also on the CD which accompanies this thesis. On the World Wide Web I have saved it as: http://se.unisa.edu.au/vc/30-design.html and on the CD it is in the appendix: Online essays: vc/30-design.

[4] Sherry Turkle, Professor of the Sociology of Science at the Program in Science, Technology, and Society at the Massachusetts Institute of Technology, has published widely on topics of Online Interactions. Life on the Screen: Identity in the Age of the Internet, is one of her major works. In 2000 she was named one of Time Magazine's Innovators of the Internet. Her Internet site links to many of her published articles. http://web.mit.edu/sturkle/www/. Turkle's current research is on Cyberpets and Children (http://web.mit.edu/sturkle/www/vpet.html). Her most current published work is "Cyborg Babies and Cy-Dough-Plasm: Ideas about Self and Life in the Culture of Simulation In Cyborg Babies: From Techno-Sex to Techno-Tots,". Robbie Davis-Floyd and Joseph Dumit (eds.). New York: Routledge, 1998.

[5] David Caraballo has one of the most comprehensive explaimations of IRC chat on the Internet at http://www.irchelp.org/irchelp/new2irc.html.

[6] Cyberrdewd was one of the earlier researchers into online behaviour. His site

http://members.aol.com/Cybersoc/is2cyberdude.html begins with the academic and professional qualities most researchers bring to their Internet research during the early years of the World Wide Web and says: 'My qualifications in this area are based on five months experience as an "internet junkie", this being the amount of time I have had my new computer and hence been on the Internet   ;-)   I focus specifically on IRC community on AustNet becuse this is the network I regularly access. The essay concludes with a few imaginative speculations regarding the future of digital communities.'

[7] Robin Hamman covers topics such as online communities, internet access, and cybersex with his Cybersoc e-zine, which is a valuable online resource for social scientists interested in the study of the internet, cyberspace, computer mediated communication, and online. http://www.socio.demon.co.uk/home.html, issue 6, is on 'methodology of online research.

[8] Paul ten Have, Associate Professor, Department of Sociology & Anthropology, Faculty of Social and Behavioural Sciences, University of Amsterdam, writes and researches on the concepts of ethnomethodology, conversation analysis, medical interaction, technology and research practices. He currently heads an online discussion group on ETHNOMETHODOLOGY and CONVERSATION ANALYSIS 'languse'. http://www.pscw.uva.nl/emca/paul.htm

[9] Dr. Karen L. Murphy and Mauri P. Collins are two of the many researchers and academics who have written in the e-zine, 'First Monday', a peer-reviewed journal on the Internet, solely devoted to the Internet. Since its start in May 1996, First Monday has published 336 papers in 68 issues; these papers were written by 399 different authors. To view hundreds of published articles on everything and everything to do with the Internet go to their website at: http://www.firstmonday.dk/index.html. I will review this ezine further on in this literature review.

[10] See Daniel Chandler's list of 'Active Interpretation Reader-Oriented Theory and Studies' at http://www.aber.ac.uk/media/Sections/interp02.html viewed July 20, 2001.

[11] Currently Holland is active on the Internet and is the "listowner" of PSYART, a usergroup on the Internet (not available as of Friday, 22 February 2002) and he is the editor-in-chief of 'PSYART: A Hyperlink Journal for the Psychology of the Arts,' started in 1997 and still available online (22/02/2002: http://web.clas.ufl.edu/ipsa/journal). Holland's homepage is http://www.clas.ufl.edu/users/nnh/ and on that site he publishes his views on 'reader response' in essays. In one article, which seems recent (there was no date on the page)

[12] He comments that men easily get into 'mine-is-bigger- than-yours games. My hard disk, my chip, my screen is bigger or faster or newer or more powerful'. Sherry Turkle also discusses this in

her book. The Second Self: Computers and the Human Spirit. And I refer to Turkle in several places in this thesis; Chapter 1, Introduction; Chapter 2, Literature Review, especially on the topic of MUDs.

[13] Norman N. Holland "The Internet Regression"

http://www.rider.edu/users/suler/psycyber/holland.html viewed, 22 February 2000.

[14] See Glossary for a standard definition. Simply put, phenomenology is the study of the development of human consciousness and self-awareness. It is a 20th-century philosophical movement dedicated to describing the structures of experience without turning to theory, deduction, or assumptions. The leaders in the field of phenomenology are, The founder of phenomenology, the German philosopher Edmund Husserl, introduced the term in his book Ideas: A General Introduction to Pure Phenomenology (1913; trans. 1931), and the German philosopher Martin Heidegger, Husserl's colleague claimed that phenomenology should make manifest what is hidden in ordinary, everyday experience. In Being and Time (1927; trans. 1962) he describes the structure of everydayness, or being-in-the-world, which he found to be an interconnected system of equipment, social roles, and purposes. I discuss the role of chatrooms to define the self, which combines computers as 'interconnected systems with the everyday experience of chatting to define our roles and purpose in our world, in the Discussion Chapter (chapter 5) of this thesis. In this way I borrow from Heidegger to demonstrate the value of chatrooms to enhance the self.

[15] Such as what is appropriate language in a particular chatroom, i.e. is it a sex or a religious chatroom?, and also whether there is shared interpretation of such chatroom linguistics as emoticons and abbreviations. For example, does the oft used abbreviation, LOL, mean 'lots of laughs', 'lots of love', 'laughing out loud' or does it have some other meaning?

[16] Iser's theory of "aesthetic response" is developed in his major books, one critical (The Implied Reader, 1972) and one theoretical (The Act of Reading, 1976).

[17] Fish is a professor of English and law, and immediate past chair of the English department at Duke University, now executive director of the Duke University Press developed a reader-oriented perspective which he called an 'affective stylistic'.

[18] Conversational Analysis

http://www.wfu.edu/~liusx/conversation_analysis.html   link valid as of: 20/02/2002

[19] Speech Act Theory

http://wings.buffalo.edu/philosophy/faculty/smith/articles/speechact.html

link valid as of: 20/02/2002

[20] Discourse Analysis (DA);

http://www.lsadc.org/web2/discourse.html

 link valid as of: 20/02/2002

[21] Reading Theory;

http://nlu.nl.edu/ace/Resources/Documents/Theory.html

 link valid as of: 20/02/2002

[22] Computer Mediated Communication (CMC) which includes; Electronic Communicated Analysis

http://jefferson.village.virginia.edu/~jmu2m/mla-94.html

link valid as of: 20/02/2002); Computational Linguistics

http://www.ims.uni-stuttgart.de/info/FTPServer.html

 link valid as of: 20/02/2002); Text and Corpus Analysis

http://www.rdg.ac.uk/AcaDepts/cl/slals/corpus.htm

 link valid as of: 20/02/2002;

http://www.december.com/cmc/mag/

 link valid as of: 20/02/2002

[23] Semiotics

http://ccat.sas.upenn.edu/jod/sanmarino.html link valid as of: 20/02/2002

[24] Prague School of linguistics

http://www.britannica.com/bcom/eb/article/0/0,5716,119040+14+110292,00.html

 link valid as of: 20/02/2002

[25] Dependency grammar

http://ufal.mff.cuni.cz/dg/dgmain.html

 link valid as of: 20/02/2002

[26] Tagmemics

http://personal.bgsu.edu/~edwards/tags.html

 link valid as of: 20/02/2002

[27] Stratification grammar

http://www.library.wwu.edu/cbl/ray/concept_dictionaries/fairhaven_student_work/stratification.htm

 link valid as of: 20/02/2002

[28] Systemic linguistics

http://jac.gsu.edu/jac/15.3/Articles/2.htm

 20/02/2002

[29] Optimality Theory

http://www.ling.ed.ac.uk/~mits/abstracts.html

 20/02/2002

[30] See www.worldlingo.com/resources/language_statistics.html

[31] Computational linguistics is the scientific study of language from a computational perspective. Computational linguists are interested in providing computational models of various kinds of linguistic phenomena.

[32] Journal of Computer-Mediated Communication is at http://www.ascusc.org/jcmc/ University of Southern California and http://jcmc.huji.ac.il/ the Hebrew University of Jerusalem I last accessed this journal online Wednesday, June 12, 2002

[33] See http://www.ascusc.org/jcmc/vol4/issue4/donath.html

[34] The Electronic Journal of Communication is a mega site of articles on every aspect of online research and has been online since 1993 and is active as of Wednesday, 12 June 2002 at http://www.cios.org/www/ejcmain.htm

[35] Computer-Mediated Communication Magazine (ISSN 1076-027X) is online at

http://www.december.com/cmc/mag/ as of Wednesday, June 12, 2002.

[36] See for example, 'Synchronous Computer Mediated Communication Resource Site Papers': http://www.fed.qut.edu.au/tesol/cmc/papers.html

[37] This is available on the 'Linguist List' http://linguistlist.org/

[38] Available on the *Computer-Mediated Communication Magazine* website http://www.december.com/cmc/mag/masthead.html

[39] See especially the paper, 'How Cultural Differences Affect the Use of Information and Communication Technology in Dutch-American Mergers' by Frits D. J. Grotenhuis in Volume 12 issue 2 of the CIOS journal at cios.org.

[40] Email as an important part of online CMC is not the privilege of the original dominant creator of the technology. Messaging Online reports that for the first time ever, that there are more email accounts outside the US than within it. The total number of electronic mailboxes in the world at the end 2000 was a 891.1 million, up 67 percent from 1999. Over 451 million of the total for 2000 were outside the US. See http://www.messagingonline.com/

[41] Chat Gains Ground As A Service Channel, March 2002 http://www.forrester.com/go?docid=14660

[42] According to Macromedia.com, a software company, 'By 2003, there will be 19 billion web pages' from an email advertisement received on 6 June 2002.