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What's a Nice Guy Like You Doing in a Place Like This?
The Pivotal Role of Ethnography in the Evolution of Media Ecological Theory

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S OME years ago, a good friend of mine who was frequently involved with one political issue or another, used to wear a button on his jacket that read: "The trouble with Leninists is they all want to be Lenin." The image of the bearded Lenin, standing on a platform and extolling the masses to rise up against their oppression, is a most appealing one. On the one hand, it calls to the angels in us that demand justice and freedom for all and, on the other, it is the voice of those demons that crave adulation and power.

I begin here because it seems to me that intellectual revolutions, no less than social and political ones, are commonly crystallized in the form of a figure that quickly assumes a platform much bigger than life. Marshall McLuhan is another such figure. We sometimes forget that he was a man made of flesh and blood, riddled with foibles and folly, distained and ridiculed by many who now carry his banner. More importantly, for the purposes of my discussion today, what is often overlooked is the degree to which these monumental figures stand on a stage that was built by thousands of hands whose labor is underplayed and forgotten. Neil Postman, another figure who has become larger than life, was fond of reminding his students that we are all dwarfs standing on the shoulders of giants. Unfortunately for many Leninists, as well as for many McLuhanists, there is a tendency to imagine ourselves as giants standing on the shoulders of dwarfs. And this, of course, is not a good thing. While the jury is still out on the future of media ecology, we've all seen what has happened to the glorious Bolshevik Revolution that began with such promise and ended with such despair. And so today, at the outset of my talk, I would like to extend this observation and propose my own lapel button "The trouble with McLuhanists is they all want to be McLuhan."

In my paper, I would like to emphasize that media ecology—perhaps more than any other discipline—is a team sport. While we do have an impressive stable of superstars—Mumford, McLuhan, Postman and Ong come immediately to mind—the nature of our inquiry and our method of procedure are inherently collaborative and interdisciplinary. I do not believe there is any garden we have not pilfered, any refrigerator we have not raided, any section of the library where we don't feel at home. In the specialized and puritanical world of academia, we are not only promiscuous but proud of it. We esteem our roles as generalists and, as such, our penchant for crossing borders requires us to work with, translate and integrate a vast array of ideas into a coordinated whole.

Following on this observation, I wish to underscore the importance of ethnography in contributing to the foundations and evolution of media ecology. Not only was much of McLuhan's stage built upon the fieldwork of Edmund Carpenter, Dorothy Lee, and other anthropologists, but many of the brilliant insights outlined by Walter Ong are derived from the ethnographic research of Milman Parry, Alfred Lord, Jack Goody, Levi Strauss and others.

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Moreover, the common sense and folk wisdom that we find so pronounced and appealing in the work of Neil Postman is largely the reflection of a neighborhood intellectual who always lived close to his community, even writing in community settings, and who could talk as easily with a busboy at a diner as he could with the likes of Lewis Mumford and Erik Havelock. In other words, the great media ecologists have always understood that the nature of our scholarship requires us to discourse with others who are different, frequently not as well educated, perhaps not even literate, but who possess a wealth of knowledge and a quality of experience we value and respect. Once again, we must acknowledge that we are but dwarfs on the shoulders of giants.

From this perspective, the value of conducting ethnographic research in Latin America, and in my case in Brazil and in Chile, is enormous. Here one finds a communication environment where a robust oral culture still competes with electronic media for dominance and prestige. In the words of the Argentine scholar Garcia Canclini, "Latin America is the place where traditions haven't left and modernization is still arriving" (p. 13). It's not unusual, for example, to find small towns in the interior of Brazil where the area around the central plaza exhibits all the familiar trappings of the modern world—automobiles, televisions, bright lights, loud music, and Coca Cola—while a walk of but a few blocks in any direction will bring you to a dirt road, horses, chickens and cows, stray dogs, hand tools, and humble shacks lit by candlelight.

In my book, *Mediating the Muse,* I build my investigation of music, technology and cultural change around an ethnographic study conducted in small town in the interior of Brazil known as Abadiânia. The purpose of the ethnography was to provide a thick description of the historic transition from orality to electronic media as it was recalled and experienced by members of the community. Electrification in Abadiânia at the time of my study was a relatively recent phenomenon, arriving in the early 1960s and, as of 1980, only 30% of the rural homes were serviced by electrical current. This particular town, therefore, provided an excellent opportunity to study the transition from an oral media environment to an electronic one.

The findings of my study revealed a much deeper relationship between music, technology and cultural practice than is normally considered or seriously evaluated. While modern mediated forms opened the town to a wider diversity of musical ideas, it also eliminated many of the practices that had glued the community together and gave it a share sense of meaning. To note one prominent example, we need only look at the diminished stature of the oral musician. Within the oral music environment, there was ample room and respect for the amateur musician. Since the mechanical reproduction of music didn't exist and the specialized professional musician wasn't normally affordable or available, the local amateur musician became the muse who inspired all events, actions, and locations where music was called for.

With the arrival of electronic technology, the amateur musician finds himself in a difficult position. He cannot possibly keep up with the ever changing and ever expanding repertoire of music promoted on radio, TV, cassette and CD—much of it, of course, in English—nor can his performance on a well worn country guitar compete successfully with the polished productions of a modern day recording studio.

All of this comes as no great surprise because we experienced something very similar in the United States several decades ago. But it is instructive to see it all over again in a different context, with a different content, from a media ecological perspective and to experience it personally. The extinguishing oral music culture flips into an art form now that it is studied by ethnomusicologists who treat it like a museum artifact to be preserved in a pristine form now that it no longer performs a functional role within the modern world of electronic technology. At the same time, the newly emergent electronic music environment retrieves something unexpected of

the past. I found it interesting, for example, that many of the old timers complained how secularized and unbridled the feast of St. John was becoming when, the feast itself was an attempt by the Church several centuries ago to Christianize and restrain the exuberant midsummer celebrations of pagan Europe. In other words, the intensity, sexuality, and ecstasy of pre-Christian pagan music re-emerge triumphant after centuries of Christian repression.

But at same time we celebrate the pent up release of Dionysian energy, we must introduce the question that Neil Postman urged his students and readers to ask, "What is undone by this technological transformation?" "What are its disadvantages as well as its advantages?" "What individuals, what groups, what classes, what institutions will benefit and who will lose out?"

It seems to me clear enough that the community is losing a form that helped to bond it together in a coherent way. The collective musical repertoire of the community begins to evaporate through neglect and with it the solidarity that group singing enhances. Moreover, music becomes less something that one produces as part of his or her heritage and more something that one consumes. The new electrically sustained musical culture also encourages fashion, a sharp division of generations, and commercialism to the max as television becomes a huge part of the equation.

Before closing, I should point out what I believe to be some of the shortcomings of my study. First of all, it can be accused of painting a nostalgic portrait of disappearing orality. Certainly my conclusions seem to favor the oral music environment over the emergent electronic one even when I point out some of the distinct advantages of the latter. But is it strictly nostalgic to lament the passing of actual participation in the creation of culture and the performance of song? Lewis Mumford (1952), who dedicated much of his life to the study of such questions, offered this insightful remark over a half century ago in the days long before the massive introduction of stereos, I-pods, and MTV: "the very growth of mechanical facilities has given people a false ideal of technical perfectionism so that unless they can compete with the products of the machine or with those whose professional training qualifies them for such a public appearance, they are all too ready to take a back seat" (pp. 6-7). It would seem, therefore, that the perplexing result is that even those of us who swear a devotion to music often become strangely silent before polished music boxes of perfect sound that only require we push buttons, flip switches and quietly listen.

A second objection to my study, I take more seriously. Why should people, especially those in another culture, open their doors and their lives to me, an outsider? It was precisely this objection that a man raised during my very first ethnographic study some 30 years ago. While collecting interviews in a shantytown in the Northeast of Brazil, a man I had approached asked me sharply but very honestly, "why should I participate in your study? A few months from now, you'll be gone and I'll still be here in this slum." And it was true: why should he or anyone else participate in my study? Over the years, the man's words have haunted me and I have never been able to respond to his objection in a satisfactory way. True, I approach my subjects and their community with respect. True, I do regard their experience as something valuable, as something that should be affirmed, recorded, documented and passed on. True, I try to make my presence useful to the local community by providing services that may be needed. But is this sufficient? Is the trade an equal one? And, if not, what can I do to make it more so?

A third shortcoming I find with my study is perhaps the most serious of all. In places like Brazil and throughout Latin America, where the richness of orality has not yet surrendered to literacy or electronic media, the ethnographer of media ecology enters a world and lives a culture that the theorist only reads about. As someone drawn to ethnography and the concrete world of

lived experience, however, I often find it difficult to abstract and theorize based upon the descriptions that I record. As a media ecologist, I am well aware of distinctions between orality, literacy and electronic media environments but I always remain with the doubt that there's much more buried in them there hills than I was able to bring to the surface. I would encourage other media ecologists, therefore, especially those who are of a more theoretical bent to continue to look at ethnographies, as did McLuhan and Ong, and to draw out some of implications that myopic ethnographers like myself may have simply overlooked.

But in the end, what more can I say? I'm only a dwarf standing on the shoulders of a giant. And in my case, the giant is a pyramid that not only includes Postman, McLuhan and Ong but a very small town in the middle of a very big country called Brazil. Muito obrigado.

Computer-Mediated Femininity:
An Ethnographic Approach to a Brazilian Blog

Adriana Braga[1]

This paper proposes a theoretical exercise concerning the applicability of ethnography to study the interactions on the Web, and the potential consequences of such application. As an empirical topic for discussion, the communicational dynamics among a group of women and their definitions for the status of femininity and motherhood within the interactional environment of the weblog *Mothern* was analyzed.

Introduction

COMMUNICATION on the Internet and the phenomena that emerge from those processes require specific methodological approaches to analyze them. This article develops a theoretical exercise regarding the applicability of the ethnographic technique to study the interactions on the Web. After a short review on the limits and possibilities of ethnography as applied to Internet interactions, we propose some analytical categories for studying the interactions in virtual environments, and the potential consequences of such applications.

Currently, researchers who investigate social interactions on the Internet usually do not pay much attention to the discussion of the methodological procedures they employ in their analysis. However, to think about the cultural dynamics of the Internet requires a preliminary discussion of its empirical peculiarities.

Ethnography and the Internet

ETHNOGRAPHIC technique, because of its emphasis on the experience of the researcher as a data source, has become a promising theoretical approach to Computer Media Communication (CMC). Such a choice demands theoretical deepening and, possibly, an interdisciplinary dialogue with researchers that use this method in a more traditional way.

Ethnography was conceived and historically applied to the study of groups in face-to-face interaction with the ethnographer, making his/her experience a data source. The particular kind of interaction transpiring on the Internet is sort of a novelty that brings methodological challenges to the application of this traditional research method, and which requires some adjustment of the traditional premises of ethnography.

The neologism "nethnography" (net + ethnography) was originally coined by a group of American researchers (Bishop, Star, Neumann, Ignácio, Sandusky and Schatz, 1995) to describe a methodological challenge: to preserve the rich details of ethnographic fieldwork observations while using the electronic media to "follow the actors." In methodological terms, ethnography is grounded on the notion of participant observation, taking for granted that it is impossible, in face-to-face interactions, to observe without participating. The interactional environments of CMC, however, are characterized by the physical absence of the participants, and the possibility

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to be there "invisibly," (i.e., "lurking"). Is it possible, therefore, to comprehend the culture of a group without actually participation in it, just by lurking? Rutter and Smith (2002) describe the context as ideal for analysis:

> …online ethnography is surely a researcher's dream. It does not involve leaving the comforts of your office desk; there are no complex access privileges to negotiate; field data can be easily recorded and saved for later analysis; large amounts of information can be collected quickly and inexpensively. (p.3)

Rutter and Smith discuss the notion of "research setting" on online ethnographies, warning about the problematic definition of *where* we are studying as electronic ethnographers, since relationships on the Internet are defined by acts of communication and interaction, considering that there is no "place" on the Internet beyond metaphor. Another pertinent topic regarding this approach is the ethical questions such research engenders. In a physical setting, the very presence of the ethnographer is an aspect to be negotiated in the fieldwork, while the "net presence" (Agre, 1994) seems to be something quite indistinct (Barnes, 2004). Regarding traditional ethnography, authors like Winkin (1998) maintain that the ethnographer should be absolutely clear about his/her identity in field situations, and reasonably open about his/her research agenda. In sum, the fact is that the relation between presence/absence has specific and novel implications for Internet research.

The Ethnomethodological Approach

STANDING in opposition to authors who argue that the introduction of computer technology as produces a radical transformation of society, Greiffenhagen and Watson (2005) consider online activities as but transformations, complements or supplements of non-online activities, and are rarely substitutions or something completely without precedents. On the subject of social actions, these authors consider these actions as being locally-situated and practical, that is, they involve a range of practical considerations for being used, in what Schutz (1962) calls "the everyday life attitude." Such activities are characterized more for their practical than theoretical nature. Thus the authors recommend proceeding through an adequate empirical analysis, on an instance-by-instance basis.

From the ethnomethodological perspective, it is important to study "locally-situated" instances of CMC use, a phenomenon that cannot be interpreted through a global and abstract theoretical description:

> the term 'CMC' suggests that we are dealing with a single phenomenon. In contrast, we suggest that CMC is not a single, unitary, or self-contained phenomenon. Instead, we are dealing with diverse instances where CMC features in some particular activity or complex of activities. These instances may well show some similarities, overlaps, etc.—but will not be exactly identical. This is why ethnomethodology considers it important to examine single, locally-situated instances of, in this case, CMC use. For us, then, CMC is not a unitary phenomenon which can be rendered through an abstract, overall theoretical depiction. (Greiffenhagen & Watson, 2005, p. 91)

Logfiles, an outcome of CMC technology, are very often taken as "the" data, solving many problems of collecting information. However, Greiffenhagen and Watson point out some risks of such a methodological choice. Logfiles present a "bird's eye" perspective of the interaction; that is, a point of view typical from the perspective of the analyst, not from that of the participants of the CMC. Moreover, such an approach fails to grasp the way participants establish and maintain their interactions over time. Since computers are involved in diverse activities of everyday life and communication conducted through this medium may have other purposes than communication itself. Thus, depending exclusively on logfiles leads to a decontextualization that risks not allowing the phenomenon to be perceived properly. The decision of some analysts of taking logfiles as independent, and granting exclusive priority to their contents, therefore, removes the peculiarities of CMC.

A Methodological Proposal

THE limits and possibilities noted above make evident the need of developing a composition of techniques for each particular piece of research, a specific methodological device, that Howard Becker (1993) calls "multimethod." The specific research object analyzed in this paper demanded an appropriate methodological device consistent with its character as a phenomenon. As a result, I did not work with the weblog as a whole, but rather chose some structures, understood as dynamic spots of the communication being held there, along with complementary data: a) the content of the guestbook linked to the weblog, a starting point that lead to the other data sources; b) transcriptions of interviews with informants selected by the contact established in the guestbook; c) fieldwork notes taken during participation in face-to-face meetings promoted by the participants; d) video recordings of natural situations of computer use during communicative practices on the weblog. Beyond the more evident elements of the weblog—posts, links, layout and guestbook—it is possible to perceive a set of principles, values and interpretations of events, dynamic negotiations of meaning and definitions of the situation engaged by participants.

Thus, fractions of definitions of reality appear as topics for debate in the guestbook, followed by other related positions, structuring what has been called a "thread," defined by Rutter and Smith (2002) as a sequence of comments motivated by a given topic in online interactions. A thread, in this sense, is the result of a double contingency: the discursive order (in its political dimension as a negotiation of meanings) and the interactional order (in its dynamics as a presentation of self of the participants).

An Analytic Application

I WOULD like to note a specific feature of the wide universe of feminine culture that illustrates the application of ethnography to online interactions: feminine computer mediated communication. To do so, I chose as a point of observation the interactional environment around a web log called "Mothern." The title connects the words 'mother' and 'modern,' relating the semantic fields of motherhood to those of modernity. Another index of 'modernity,' for Brazilian middle class standards, can be found on the use of English words to name the weblog. The focused group seems to be emblematic in Brazilian context, since these women represent the first generation in contact with computer technology in everyday work life.

Motherhood as a topic for conversation nowadays can easily be taken as something outdated, connected to a traditional perspective of femininity, related to the triad husband-household-children. As an example we could think of Miranda, of the TV show *Sex and the City*, who apologized to her friends for the baby pictures on her walls and for allowing matters of motherhood to enter into their interactions and relationship. Once motherhood as a topic for conversation seems to find no place in modern times, it is interesting to think that the Internet can provide a meeting point for discussions of this subject and articulated with the positively-valued meanings of technological updating and participation in the public sphere.

There are many different forms of appropriation of the interactional environment allowed by web logs. In this case, rescuing a traditional feminine practice that, from a male perspective, could easily be understood as futile and unnecessary. In workplaces, from where most of the participants access the Internet, feminine sociability—epiphenomenon of online work—finds expression.

I would now like to describe some interactional modalities that take place within this environment. Online communication, after all, has distinct interaction rituals, different from those practices in face-to-face interaction. The arrival of a newcomer in the guestbook is in general motivated by: a) the exposure of one of the bloggers in conventional media; b) the recommendation of friends that already interact in the guestbook or—at the beginning of the web log; c) friends and relatives congratulating them for the novelty. In these comments left by newcomers, there are some identifiable interactional patterns, both at the entrance and at the reaction to this entrance. Between usual participants, there is a tendency to avoid conflicts, framing the general situation as what Georg Simmel called "sociability" (1983). For Goffman (1998), most of social interaction is possible by the voluntary engagement of participants in what he calls "working consensus" (p. 19), a sort of superficial agreement in which each participant gives up part of his/her personal position to hold a shared definition of the situation common to all. However, sometimes disruption can emerge due to the entrance of a hostile newcomer or to the proposal of a polemical subject. These polemical topics are usually related to the "feminine universe," such as abortion, drinking during pregnancy, homosexuality, the education of children, and so on. In sum, in mixing both playfulness non-commitment and proposing topics for serious discussion, definitions of the situation are proposed, defended and attacked within this environment, defined by the participants as a place for freedom of expression.

a) the entrance

The weblog has been online for the past two years, and compiling a guestbook during this period, in which participants enter as newcomers with an opening comment that may receive a response from other participants. Most of these first time comments are characterized by words of enthusiastic approving of the weblog, and these words grants them kind replies and welcomes from other participants. Motherhood as a topic is rather frequent, but the simple utterance of a pleasant greeting is the major resource for acceptance between other participants. The reaction to the greeting is usually a kind reply by the hostesses, as on the following example, that demonstrates the warm welcoming:

> 726 – Marilene: Awesome!!! Everything that I think, doubt, imagine, complain
> and cry about is here.

> 728 – Ju: Hi, Marilene! You're welcome here! The Mothern idea is exactly this: let's gather our gang and dominate the world!

Sometimes, the entrance takes place without a pleasant greeting. The newcomer asks directly for advice, information or poses a suggestion, a form that I call 'no-greeting,' which is, at the same time, usually welcoming:

> 337 – Cristina: Hi! I would like so much to know Laura's mail! I live in BH and as I could see she lives there as well... I have a 5 month old baby who is giving me a ton of work and I am becoming desperate! I would like to exchange some ideas, please! I await an answer. Thanks.

> 338 – Laura: Cristina, my e.mail is xxx@xxx. Feel free to write me, but if you want to talk about your problem here in the guestbook, it might be better, cause we have a super team of readers-consultants-tip givers-whizzes ;) Best.

However, in some cases the entrance is rather turbulent, with harsh critiques to the topics dealt with in the guestbook. In these cases—not many—the reaction of the regular participants is quick and volatile. They defend any critique to their comments by claiming that the guestbook is a place for absolute freedom of expression, thereby framing the critiques as outrageous assaults on their freedom:

> 1122 – Renata: What is this? a gossip room or what? You should exchange phone numbers and spare us from this Peoplemagazinelesbiangossipchic atmosphere, ok?

> 1130 – Cau: No one has to spare anybody anything... the internet is full of guestbooks, everybody picks what suits them best, nobody is obliged to come here to read our nonsense.

It is worth noting that when a disagreement like this one occurs, the reply justifies itself by defining the public space of the guestbook as if it were private. This defensive pattern can be seen in many other conflicts in the guestbook, defined by its usual participants as private property, in which they make the rules, and let the discontents go away.

b) conflicts

Eventually, the usual kindness rules of this interactional environment are disturbed by conflicts between participants. These conflicts are often due to opposite positions regarding polemical topics. In such cases, there are long series of comments in which positions are radically taken, hesitating members are challenged, accusations are exchanged, participants decide to go away or are banished, in a dynamic ruled by conflict. Although this kind of situation does not define the regular interaction within the guestbook, several conflicts have been observed during its two years of activity.

One example occurred when a young participant asked for advice, complaining she was pregnant, but still lived with her parents, just like her boyfriend, who was unemployed. She

asked the guestbook whether or not she should have an abortion. In two days, almost two hundred comments were posted. The specific topic lost its relevance and was changed to a moral argument, with divided opinions between "pro-life" *versus* "pro-choice." The episode ended with the voluntary departure of two participants who condensed radically the anti-abortion position.

c) informal theorization of femininity

Considering the dynamic process of updating feminine culture, as seen above, it is interesting to note the "encyclopedic" dimension of the topics discussed within the guestbook. They talk about several issues concerning motherhood: alcohol-drinking in front of the children, smoking, drug use, homosexual experiences, alternative medicine, dieting, nutrition for children, breastfeeding, toys, gender roles, media products for children, and many other topics. In doing so, these young mothers appear to re-think motherhood, creating a sort of informal theorization that aims to negotiate contemporary definitions of femininity, available in the context of this mediated public sphere. Examination of these informal theoretical statements reveals a general tendency to re-think old habits, practices and morals in society. Usually, however, these proposals are offered as programs for individual action, and not as proposals of political transformation.

Conclusion

E THNOGRAPHY appears to be a promising approach for the empirical study of the activities surrounding Computer Mediated Communication (CMC) once some precautions are taken in this application. These emergent social practices present peculiar features that demand a considerable reformulation of the rules of the traditional ethnographic method. For instance, it may be necessary to modify the premises of participant observation as regards online activities, since a "non-participant observation" on the Internet it is perfectly possible. Another risk is to assume that online activity happens exclusively online, or that all the relevant information is readily available in log files, easily accessed and stored.

If, on the one hand, the log files made available by Internet technology appear to offer "everything" that transpires within CMC activities, and seems to minimize or even eliminates the problems of data collection. On the other hand, however, the use of log files as the sole source as the only source of data can lead the analyst to miss the intersubjective meanings shared by the group under investigation. The analysis of CMC act ivies demands a combination of research techniques for every different case that is studied.

In the case analyzed here, the interactional aspects of the entrance of newcomers shows some features of the tacit knowledge that organizes this situation, an informal—and unwritten—protocol, that regulates and organizes interaction in the guestbook, an important aspect of the way people appropriate the Internet. The conflicts raised there suggest areas of tension between knowledge and points of view to the discussion by the participants who eventually show contradictions and radical differences. As a sort of background discursive modality, the study of the discourse presented in the guestbook points to a contemporary informal theorization of femininity, negotiated amongst the participants under the rules of digital sociability.

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Soccer, Media and Culture:

An Ethnography of the 2006 World Cup in Brazilian Cities

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This paper analyzes the social situation and the public reception of the 2006 FIFA World Cup Soccer matches as they transpired in several Brazilian cities. During this event, there is widespread availability of TV screens in public places such as bars or shopping malls, along with massive concentrations of people in large public places watching together on giant screens as the Brazilian team plays. Ethnographic video data from different places in Brazil was collected in these contexts to allow some reflections concerning order and interaction in the social context of this media environment.

Introduction

IN this paper, I wish to discuss some salient aspects of the relation between soccer, media and social interaction in Brazil from an ethnographic perspective. Examining the video taped behavior of Brazilian fans watching broadcast games in public places, I intend to describe and analyze male social interaction during the 2006 World Cup of Soccer. After presenting a brief overview of the role of soccer in contemporary Brazilian culture and its relevance as a major theme for male sociability, I will proceed to describe and analyze some ethnographic video data concerning the collective reception of soccer matches in public places. The project, called *Rites of a Nation,* employed four different teams of ethnographers, each covering a different region of Brazil. There were video recordings made in eight different cities in five states. In such settings, some remarks can be made about the on-going interaction of the fans there (supposedly, the "audience") and the media, the different alignments of the participants reacting to the definitions of the situation proposed by the TV sports commentator, and the sound and images presented. This paper also wishes to challenge the stereotyped views of soccer as a domain ruled by violence and come to a closer and more sophisticated—due to its ethnographic approach—theoretical grasp of this specific situation.

On Soccer in Contemporary Brazilian Culture

ALTHOUGH the myth of Brazil as "the football country" is the result of a social and historical process that has little more than 50 years, this sport has become one of the major icons of what may be called, along with samba and trance religions, a "Brazilian identity." There are interpretations of Brazilian soccer that connect it to peculiar attributes of

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'Brazilian-ness', such as the so-called '*malandragem*' (trickery). The golden age of '*malandragem*' is generally situated at the beginning of industrialization in Brazil, between 1930 and 1940. This time is a sort of 'mythic past' for Brazilian contemporary culture, and the '*malandro*' is a kind of 'popular hero' in Brazil, much like the 'cowboy' for North Americans or the 'samurai' for the Japanese. Ruben Oliven (1986) considers the '*malandragem*' as a "strategy for survival and a conception of the world" (p. 34) through its refusal to bend to the discipline–and the exploitation–of regular employment. Although the contemporary historical and social contexts have left the '*malandro*' in the past (along with his razor fights, white suits and silk scarves around the neck), his emblematic figure is still present in Brazilian culture. One of the fields in which '*malandragem*' is still seen as a value in Brazil is the soccer field, a stage where many elements of Brazilian culture are ritualised.

The homogeneity promoted by a single and unified definition of 'Brazilian-ness' hides conflicts underlying social, ethnic and regional differences. According to Ortiz (1994), the "official" choice of symbols of "Brazilian culture' during the Vargas period (1930-1945) elevated elements of black culture—such as samba and African trance religions—to the status of "Brazilian culture." Of soccer, it is worth noting the now classic work of Mario Rodrigues Filho, *Black Men in Brazilian Soccer* (1964/first published in 1947) which proposes an 'heroic' interpretation of the participation of the black soccer players as competing against their 'enemies', the white racist elite of Brazilian soccer. The thesis is that once the doors for black participation in soccer matches were opened, the soccer played in Brazil had become a new entity, "Brazilian soccer," reflecting a Brazilian style, that, several years later would be called 'art-soccer'–a derivation of Gilberto Freyre's (1973) "racial democracy." The work of Mario Filho and Gilberto Freyre eventually became a dominant discourse about soccer in Brazil, although recently it has been questioned (see, in this sense, the debate between A. J. Soares, 1999a, Gordon and Helal, 1999 and the response by Soares, 1999b).

Roberto Da Matta (1982) argues that the same activity can be appropriated differently by different societies so that the football in Brazil and in England, for example, reflects different kinds of social interaction. In Brazil, soccer is always called '*jogo*', a term that defines both gambling and sports, while in England the two words define completely different activities. In general, Brazilian people's interest for soccer is related to their support for local teams—often called 'clubs'. These soccer teams demand a life-long loyalty. Many times, sports commentators refer to the supporters of a club as a 'nation', defined by its colors ('black and red nation', for example, for Flamengo in Rio). The term that describes the support for a team is also different: '*torcer*' (literally 'to twist'), refers to the anxious contortions of fans during the matches. Being a part of a '*torcida*' (a "twisted") involves deeply emotional attachments, very often mediated in childhood by familial relations (Damo, 2002).

This emotional charge is transformed into a national dimension when the Brazilian team enters the pitch. This special soccer team represents a sort of 'national unity' that surpasses the fan's affection for regular teams with an overriding common wish: the success of Brazil against all other countries. I emphasise the metonymic sense that usually relates the 'national team' and the 'nation' itself—Brazil or its opponents. Thus, frequently sports press use the Brazilian team to 'represent'—on the metonymic sense—the Brazilian people. In this sense, a World Cup in Brazil is much more than a soccer tournament: it is a chance to compare Brazil with the rest of the world. This is probably why in Brazil the World Cup is taken as the summit of the sports universe—much more than Olympic Games. The one who wins the World Cup is undoubtedly the 'best of the world'.

Media and World Cup in Brazil

THE World Cup is a social fact of gigantic dimensions in contemporary Brazilian culture which is intimately linked to its character as a mediated event. Since the beginning of regular international transmissions of soccer matches on the radio in the early 1950s, the coverage of matches of the Brazilian team in the World Cup have produced huge audiences. The massive interest of Brazilians for soccer, boosted by its participation in the World Cup finals has even resulted in the creation of curious—and artful—devices designed to 'capture the audience' and thus add value to each second of advertising time. During the World Cup of 1962 in Chile, for example, the videotapes of the matches could be transmitted in Brazil only two days afterwards. Attempting to circumvent this delay, a radio station in São Paulo installed in a huge panel in a large park in the city centre. Painted as a soccer pitch covered with lamps, a public address system transmitted the position of the ball on the pitch, so that an operator in Brazil kept turning the lamps on and off according to the position of the ball in Chile. According to Edileuza Soares (1994), this ingenious device attracted crowds to 'watch the matches live' and conquered the audience for their station in that World Cup, anticipating by decades the phenomenon analyzed in this paper.

Nowadays, every edition of the World Cup becomes a massive public event all over Brazil. When the Brazilian team plays, ordinary life gets placed on hold, in a most literal actualisation of the term "finite province of meaning" (Schutz, 1962). The direction of motor vehicle traffic is changed to avoid jams that always happen; banks change their hours of operation; many stores close early or open late; newspapers publish lists of essential and emergency services that will remain open. In short, a match of the Brazilian team in a World Cup creates a liminal moment, a deep alteration in the order of everyday life, in an increasingly institutionalised way. If in past World Cups there was not a consensus toward this alteration in work routines, this sort of "semi-holiday" is becoming a tradition with each new edition of the tournament.

I believe that the World Cup represents for Brazilians an authentic opportunity to celebrate national values. The traditional day for the display of patriotic fervor in Brazil is the 7th of September, 7th but that celebration, with its emphasis on military parades and the circus of military hardware, recalls too vividly the dark days of military dictatorship (1964-1984) than the more popular zeal of the World Cup. During a World Cup, people celebrate the idealization of a triumphant nationality, in an international competition in which Brazil is always the favorite, "the best of the world", even when it loses. As with some other ritualised periods (Christmas, for example), people decorate their houses to publicly communicate the feelings of the owners who inhabit the house. The facades of buildings and houses are covered with the national colors of yellow and green, city halls, shopping malls and commercial associations provide "public" decorations, street vendors color the corners with hats, banners, t-shirts, horns and a variety of goods in the ritual colors for celebrating nationality: yellow and green. Supermarket shelves are covered with all sort of regular products dressed up in a "new package" or "special edition," always yellow and green. Shop windows as well are covered with Brazilian flags, footballs, and multiple other displays, always with yellow-green inscriptions. As happens at Christmas, in a marriage or for any other ritual, a Brazilian World Cup game requires substantial preparation, specific items of consumption and, most important, a group celebration. To watch the match alone is definitely not usual.

In keeping with this collective imperative, TV screens of all sizes are made available to the public in shopping malls, bars, street shops and, most impressively, in major public places, such

as parks and markets. In such social settings, usually sponsored by the city hall, thousands of people gather to watch the match in giant screens. In this highly ritualised organization of public space, the ethnographic fieldwork was carried.

Methodology

THE ethnographic study outlined here consists of two integrated components:

1) a video recording of the 2006 World Cup of Soccer as it was experienced by fans in eight different Brazilian cities;

2) an ethnographic description and analysis of the video data and the different venues where fans joined together to watch the World Cup on television.

It must be noted that the World Cup, an event that mesmerizes the totality of Brazilian society and much or the rest of the world, occurs only once every four years. Moreover, there is no certainty that the national team of any particular country will qualify for inclusion and that, even it advances through the qualification rounds, there is no guarantee that the team will not be eliminated within the first round. Argentina, for example, always a powerful team to be contended with, was eliminated from the World Cup in 2002 during the very first round after only three matches. Most nations, in fact, seldom if ever qualify for participation in the Cup and, those that do, always mark this rite of passage with great celebration.

In a country as large as Brazil, the distances between one region and another make it difficult to grasp the phenomenon as experienced in different places. In order to deal with this difficulty, it was decided to contact video makers living in different cities and regions of Brazil, and ask them to go to a public environment and document the World Cup matches with their cameras. Each video maker was given an orientation to the study and a set of instructions of how to proceed. Four teams of ethnographers and video makers answered the call and produced more than 20 hours of raw footage. A mailing list was created to put the video makers in contact and images were taken in five states: Rio Grande do Sul, São Paulo, Rio de Janeiro, Minas Gerais and Goiás. Each team was instructed to record audio as well as video and to use natural lighting as much as possible. Most of the images were taken during the first three matches of the Brazilian team, respectively, against Croatia, Australia and Japan. Additional images were taken after the defeat against France in the quarter finals. Each individual video maker was asked to keep an ethnographic diary describing his or her experience. The audio/visual that was collected, plus the diaries, were then sent to the coordinator, who analyzed the images and texts. Along with editing the video, the coordinator organized the material into a set of analytical categories and assembled the images and texts in a coherent way.

Some preliminary results

THROUGH the collected data in the video, it was possible to draw out some inferences about the so-called "Football Country." Analyzing the situation as a giant media environment—the images on the screen completely dominating the context—it is interesting to make some observations about the relationship of the participants with the media, and after, some reflections on the social uses of nationality within the setting.

a) Participation in the setting:

The situation under scrutiny could be described in the terms of Goffman (1961) as a "focused interaction":

> Focused interaction occurs when people effectively agree to sustain for a time a
> single focus of cognitive and visual attention, as in a conversation, a board game,
> or a joint task sustained by a close face-to-face circle of contributors. (p. 7)

In the researched settings, the focus of interaction is on the screens. They determine the spatial dispersion of the people throughout the setting, producing, if there is a single screen, a sort of "triangle" or "cone" of attention, focused on the screen. However, in larger places, such as public markets or parks, it is usual to offer more than one screen, turned in various directions. The resulting effect is to enlarge the angle of the "cone" and, as it is made of people, of blurring its limits. The situation is such that, at any given time, a participant may watch the match on several different screens. Although the eyes of participants may stare in different directions, the images that form the central focus are always the same.

Usually, apart from the World Cup period, soccer supporters in Brazil are men, with an unchanging passion for one particular club (see Gastaldo, 2005). Thus, regular soccer fans face local rivalry in the setting as a constant pattern. Whoever a team plays against, there will always be the "others", the fans of a traditional rival. In World Cups, however, there are key differences. Beside the fact that there is only one side supported in the situation (in this case, the Brazilian team of course), the number of supporters involved highly outnumbers regular sports fans. There are a lot of people that usually don't care about soccer but, at the same time, don't miss a match of the Brazilian team. So, the quality of the understanding of the match among the public is highly variable.

If something can be taken as a "total social fact" (Mauss, 2001) in Brazilian society, it is the celebration of a goal scored by the Brazilian team in a World Cup. Everyone stands up, with raised arms, shouting, jumping, and hugging each other: the sound of the crowd can be heard from a long distance. Apart from this special moment within the match, the degree of focus of such a number of people—hundreds or thousands in each situation—is highly dependant on the quality of the match. It is always expected by the fans that the Brazilian team will play wonderfully, score several times and finish as the World Champion every time. However, as in every game, one can never predict what is going to happen. So, the unlimited attachment to the Brazilian team depends a good deal upon the performance of the Brazilian team itself. If people perceive that the players are not playing up to their expectations, such attachment can diminish and even reverse itself. In the match against Japan, for example, Brazil played a bad first half. In a counter-attack, Japan scored first. In several places we videotaped in Brazil, people actually applauded the Japanese goal, as an ironic homage to the opponents, understood as the weakest team in Brazil's group.

The pattern of behavior analyzed in the different situations was relatively consistent. However, we noted a sort of what Goffman (1998) called "determinism of the situation," that is, the same formal situation in different places results in some different attitudes of participants. In bars, the facility of consumption of alcoholic beverages (just asking the waiter) makes this situation rather noisy and emotionally more intense than in others, such as the auditoriums of

universities where no alcohol is permitted or even in public parks, where beer is made available by sporadic street vendors salesmen but there are no chairs, tables, waiters or pressure at all to consume alcohol.

The situation exists only for the duration of the match, as in the most strict adherence to the idea of a "finite province of meaning". Places start to get crowded a few minutes before the match, reaching full occupancy about 15 minutes after the start, and emptying almost immediately after the end: in no more than five minutes, the crowd is gone.

b) soccer and symbols of nationality

As it was said, the situation of public reception of World Cup matches is a highly ritualised one. Thus it demands appropriate dressing. The Brazilian team's t-shirt is an obvious element, although most of the participants do not wear the "official" t-shirt, as it is quite expensive by Brazilian standards. On the streets close to any concentration of supporters, street vendors are easily found that offer "alternative" Brazilian t-shirts hanging on strings, much cheaper, along with Brazilian flags, hats, horns, whistles, all in yellow and green. These colors seem to be the ultimate symbol of nationality: almost everybody in the researched settings showed up with a yellow-green element, be it a hat, a scarf or a simple band around the head or arm.

The attitude towards the national anthem, played before the matches, was in fact a surprise. It could be expected that the crowds would sing it out loud as a musical expression of national values. The pattern presented, however, was of almost absolute indifference. It is intriguing to note that both the flag and the anthem, prime symbols of the national state, were simply ignored, whilst the yellow t-shirt and the Brazilian soccer—national symbols unrelated to the State— seemed to captivate much more attention from the supporters. It would seem, therefore, that the once strong link between sports, national identity and the government, synthesised in the expression "political use of sports," is becoming weak.[2] Affiliation to national values, in this sense, could seem now more a matter of private/individual leisure than one of political/collective engagement.[3] The myth of "political use of sports", a sort of taken-for-granted interpretation of soccer in Brazil during the military dictatorship seems each day a weaker explanation for the social appropriation of sports.

One final word about the most enthusiastic supporters of the Brazilian team: advertisement gimmicks.[4] They are all over, in posters, outdoors and TV commercials and show the "regular" gimmicks dressed up as Brazilian team's players, making tricks with the ball, and always scoring and winning. If one is to believe in national mythologies, the "football country" is much more real in the world of advertisements than in the world of politics and government.

Conclusion

THIS paper has tried to discuss some of the aspects related to a special media event, highly ritualised within Brazilian society: the Brazilian team's matches during a World Cup, taken from an ethnographic perspective. This collective video-ethnography reveals both

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[2] According to this explanation, soccer would be an "ideological device" under the command of the State. A Brazilian victory in a World Cup would serve as an antidote against revolutionary feelings, "the opium of the people."
[3] This opinion was anticipated by Helal and Soares, 2004.
[4] For an analysis of national themes in advertisements see Gastaldo, 2002.

promising paths and methodological challenges. The rich data collected on such a rare occasion—and as of yet only partially analyzed—points to further reflections on the reception of the media under special conditions, as well as on the social dimension of soccer and national identity in Brazil. I believe that by deepening the interpretation of these phenomena, we could reach a fuller understanding of a national culture through an everyday life perspective. Through this other approach, we may begin to see more clearly a national culture in the making.

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The Fallacies and Fortunes of 'Interactivity' in Communication Theory

David Holmes[1]

'Interactivity' persists as both a buzzword and a fraught concept within communication theory. For 1950s information theorists (e.g. Shannon and Weaver, 1949) interactivity denoted two-way communication between humans, animals or machines, but today it has become exclusively hardwired to the telecommunications and computing sectors. The use and misuse of the term in 'new media age' discourses is problematized in this paper by showing that traditional media can enable interactivity—whilst exploring accounts that new media do not, in themselves, guarantee interactivity. The limitations of the concept of interactivity becomes apparent the more it is empiricized or made exclusively reducible to one or other technical medium. This in turn underpins the historicism of second media age thinkers, for whom interactivity becomes synonymous with the 'interactive society'. (Castells, Van Dijk)

> Interactivity has almost turned into a dull buzzword. The term is so inflated now that one begins to suspect that there is much less to it than some people want to make it appear. No company would fail to claim that it is keen on feedback. No leader would fail to praise the arrival of a new communication era. Apparently interactivity has hardly any threatening meaning for the elites. (Schultz, 2000: 205)

'INTERACTIVITY' has established itself as both a buzzword and a fraught concept within communication theory. For 1950s information theorists (e.g. Shannon and Weaver, 1949) interactivity denoted two-way communication between either humans, animals or machines, but today it has become exclusively hardwired to the telecommunications and computing sectors. In information theory, the content of communication is separated from the means of communication, and the aim of communication is to control the reproduction of a 'message' in any medium or means of communication. Today, the term interactivity is reserved for only communication events which are electronically extended in space and time.

The term 'interactivity' has been rapidly conscripted into the discourses of a 'new media age'. Interactivity is central to a cluster of terms that preoccupy the study of cyberculture. Around it are assembled so many of the binary terms of new media theorizing—active/passive, one-way/two way, linear/nonlinear, synchronous/asychonous, mediated/face-to-face, etc.

The strongest proponents of the importance of interactivity are the 'second media age' theorists (Gilder, 1994; Poster, 1995; Rheingold, 1994) who bestow it with emancipatory meanings in contrast to the one-way architecture of first media age, 'broadcast' media. Traditional media of newspapers, radio, television and cinema are viewed as repressive,

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controlling, subordinating and an attack on individuality itself. New media, in contrast, are seen to place the control of meaning-making back into the hands of the individual to the extent that they enable interactivity. Indeed, in the work of Mark Poster, interactivity is elevated to the status of a 'mechanism' of modern media:

> Subject constitution in the second media age occurs through the mechanism of interactivity. ... interactivity has become, by dint of the advertising campaigns of telecommunication corporations, desirable as an end in itself, so that its usage can float and be applied in countless contexts having little to do with telecommunications. Yet the phenomena of communicating at a distance through one's computer, of sending and receiving digitally encoded messages, of being 'interactive', has been the most popular application of the Internet. Far more than making purchases or obtaining information electronically, communicating by computer claims the intense interest of countless thousands. (Poster, 1995, 33)

Manuel Castells, in his influential *The Internet Galaxy,* takes the concept further, with the nomenclature 'interactive society', which for him is based on the 'digitized, networked integration of multiple communication modes' (2001, 374). He claims that communication outside of such networked spheres (like face-to face communication) increasingly becomes marginalized: 'From society's perspective, *electronically-based communication (typographic, audiovisual, or computer-mediated) is communication*. (Castells, 2001, 374)

What is clear in these accounts of 'interactivity' is that it is only computer-mediated or tele-mediated *interaction* that is significant. Embodied forms of 'interaction' do not figure at all in the contemporary conception of 'interactivity'. For this reason Roger Silverstone, like Tanjev Schultz, situates the concept as an ideology of contemporary disembodied consumerism:

> The new ideology of interactivity…(is)…one which stresses our capacity to extend our reach and range to control, through our own choices, what to consume, both when and how, is seen to promise its reversal. It is hailed to undo a century of one-to-many broadcasting and the progressive infantilization of an increasingly passive audience. It is an expression of a new millenialism. These are the utopian thoughts of the new age in which power is believed to have been given, at last, to the people: to the people, that is, who have access to, and can control, the mouse and the keyboard. (Silverstone, 1999: 95)

One antidote to the inflated uses of interactivity in recent communication theory can be found in John Thompson's typology of 'interaction' which reclaims face-to-face communication as a substantive component of communicative interaction as much as extended forms of interaction.

Thompson distinguishes between three types of interaction: face-to-face, mediated interaction and mediated quasi-interaction which are analytically distinguishable by their spatio-temporal potential (see Table 1). The face-to-face occurs in a context of mutual presence; it is interpersonal and dialogical. Mediated interaction (writing, telephoning) is also dialogical but its spatio-temporal context is extended rather than mutual. Lastly, mediated quasi-interaction (books, radio, newspapers) is also extended in space and time, but is monological or 'one-way'. However, Thompson points out that senders and receivers within this kind of interaction nevertheless form bonds which transcend the fact of interaction.

Interactional Characteristics	*Face-to-face Interaction*	*Mediated Interaction*	*Mediated quasi-interaction*
Space-time constitution	Context of embodied co-presence; shared spatio-temporal reference system	Separation of contexts; extended availability in time and space	Separation of contexts; extended availability in time and space
Range of symbolic cues	Multiplicity of symbolic cues	narrowing of range of symbolic cues	narrowing of range of symbolic cues
Action orientation	Oriented towards specific Others	Oriented towards specific others	Oriented towards an indefinite range of potential recipients
Dialogical/ Monological	Dialogical	Dialogical	Monological
Example	**Face-to-face conversation**	**Letters telephone**	**Books, newspapers (broadcast) radio & TV**

Table 1 Thompson's Types of Interaction

adapted from Thompson (1995, 85 [Table 3.1])

What courses through all of these form-types is the progressive filtering-out of communication cues, where the face-to-face provides a high degree of contextual information (like body language and gestures) whilst the mediated forms substitute such information with narrower contexts (letterhead, signature, time-announcement on the radio, station promotion etc).

The value of Thompson's typology is his insistence that all three of these kinds of interaction may co-exist within a particular communication event. Drawing on Erving Goffman and Joshua Meyrowitz, he shows how a television talk show may involve layers of face-to-face communication (in the studio and between viewers watching the program in the home) as well as the mediated quasi-interaction of program 'fans' that is linked by feedback systems where viewers' comments might be aired on the show.

But Thompson is also interested in the fact that even traditional broadcast media carry forms of interaction and reciprocity that are overlooked by new media theorists. There are letters to the editor, talkback and talkshows, but there is also the fact that readers, listeners and viewers 'quasi-interact' in the act of simultaneous event-reception.

Thompson's insights about 'interaction' provide some restraint to the fortunes of 'interactivity' in recent literature on the Internet. Just as Thompson points out that broadcast media are capable of interaction, we are also compelled to accept that the internet isn't just about interactivity, and that its various sub-media are also capable of broadcast communication, such as bulk email and bulletin board postings. In turn, it needs to be asked why technologically extended 'interactivity' is so closely associated with the Internet, and not with, say, the entire

history of telephony. (That is, we need to question not simply the reductionism of contemporary media theory (eg. digitilization = interactivity) but its presentism, i.e. (that the internet gives birth to interactivity) In fact, the Internet is not an easy host to such a blanket characterization, as it provides a platform for an array of communication functions: information retrieval, advertising, browsing, commerce and many forms of anonymous communication. The only sub-media of the Internet which uniquely provides a communication form that cannot be found in other media is Usenet or WWW-hosted discussion groups, which is capable of scales of participation that are not possible in embodied fora. But even with these, interactivity cannot be so easily heralded as some kind of special property.

A key theorist who can assist in understanding interaction within computer-mediated communication (CMC) is Rafaeli, who distinguishes between connectivity, reactivity and interactivity (Rafaeli, 1988). Connectivity refers to the technical way network architecture makes interactivity possible, but also important is the way communication histories within CMC determine the nature of the interactivity that happens within it. In making this distinction, Rafaeli is able to show that, two-way communication does not, in itself, guarantee interactivity. If an exchange does not develop into a relationship where one utterance becomes a context for another, the discourse may become closed and self-referential. Conversely, reactive communication is not just typical of broadcast communication, but is possible within networks.

Rafaeli and Sudweeks have argued that on-line interactivity needs to be thought of as existing across an entire network, not simply between two given interlocutors (see Rafaeli and Sudweeks, 1997). Two-way communication must be part of a chain of inter-related messages for genuine interactivity to occur. Every message 'must take into account not just messages that preceded them, but also the manner in which previous messages were reactive' (1997). Rafaeli's work on interactivity is further developed by Sarah McMillan who argues for a 'registrational view of interactivity' which measures a 'medium's potential to register information from and thereby also adapt and/or respond to, a given user's explicit choice of communication method.' (McMillan 2002: 274) As Rob Cover has observed of this view, messages must be seen to come from both content-creator—perhaps in a time-lapsed system—or the communications method itself. And from the user as responses, inputs, commands, or various other forms of utilization that alter the mode, style, type, form, or indeed, the content itself'. (Cover 2004: 108)

If this registrational view of interactivity is adopted, it suggests that much of the way in which the Internet sub-media are used is seldom interactive, especially if the question of anonymity in CMC discussion groups is addressed.

The views of Thompson—that traditional media can enable interactivity—and Rafaeli—that new media do not, in themselves, guarantee interactivity—arrest much of the popular usage of this concept. The limitations of the concept of interactivity become apparent the more it is empiricized or made exclusively reducible to one or other technical medium. This in turn underpins the historicism of second media age thinkers, for whom interactivity becomes synonymous with the 'interactive society'. (Castells, Van Dijk)

A means of avoiding the fallacies which have befallen 'interactivity, is to distinguish between interaction and *integration*. In this distinction, interaction is still important, but needs also to be viewed in terms of the fact that all concrete interactions occur in the context of dominant frames of communicative integration (see Table 2). Following C. H Cooley, Calhoun explores forms of *indirect social relationships* that are enabled by complex communication systems and through which individuals are nevertheless able to form integrating bonds of intimacy and many-sided recognition.

Type of Relationship	**Primary** *(from Cooley)*	**Secondary** *(from Cooley)*	**Tertiary**	**Quaternary**
Characteristics	Affective ties	Impersonal groups	No embodied co-presence; 'mediated' but parties aware of relationship	One party unaware of of relationship
Direct/indirect	Direct	Direct	Indirect	Indirect
Example	**Family/friendship groups**	**Committees**	**The corporation; correspondence; information technology**	**Surveillance Via information technology**

Table 2 Calhoun's Four Types of Social Relationship
Based on Calhoun (1992)

Where such recognition occurs in large volumes, interaction is no longer a condition of social connection, as individuals become integrated indirectly by the agency of technologically extended media forms. Thus, the integration thesis rejects the idea that the study of communication is reducible to documenting empirically observable kinds of *interaction*, be these interpersonal or extended (see Calhoun 1986; 1992).

In three important articles[2] on computer-mediated social relations Calhoun innovatively develops the idea of indirect social relationships. Following C H Cooley's work in *Social Organization* Calhoun works up a typology-driven model of communicative levels of social integration. Where Calhoun differs from Thompson and Meyrowitz is in placing social *integration* rather than interaction as the traversing agency across these levels. To explain this we need to revisit Cooley for a moment. In *Social Organization* Cooley proposes the need to distinguish between primary and secondary social relationships. 'A primary relationship must be both directly interpersonal and involve the whole person' (kinship relations, enduring friendships). A secondary relationship, by contrast, 'need meet only the criteria of directness' but not in a way which permits any kind of intimacy or many-sided recognition. (encountering shopkeeper, embodied intermediaries) Calhoun 1986: 332

Secondary relationships are also cause for the experience of wide spread anomie, precisely because of their practical difference from primary relationships. Calhoun argues that this difference is ontological, not simply a matter of perception. Secondary relationships are generally held in low esteem, by city dwellers and as advanced by Cooley himself at the beginning of the 20th century.[3] Primary relationships, found in family and face-to-face networks provide spontaneous settings of integration even when they involve conflict.

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[2] Calhoun 1986, 1992, 1998.

[3] Elsewhere, Calhoun argues that Cooley instantiates a version of Tonnie's Gemeinschaft (read as primary relationships) and Gessellschaft (read as secondary relationships) dichotomy in which the latter are devalued as inauthentic. (Calhoun 1993 212) However, at the same time Cooley does not adequately distinguish modernity from pre-modern forms of society. For Calhoun, modernity is not constituted by the presence of secondary

The frustration of secondary relationships, in workplaces, in the marketplace, in the public sphere, is that they take up so much of our time, are emotionally involving but unfulfilling. Whilst it is true that primary relationships may also be unsatisfying, at least they are capable of generating enduring loyalty and satisfactions which secondary ones can't. Secondary relationships foster a destructive notion of freedom, in which 'strangers often seem to exist *only* to annoy us. ' (or as Sartre once suggested: 'Hell …. is other people'…and that 'relationships are simply the choices of the moment rather than commitments.' (335) Such relationships are purely functional, such that when even their functionality fails it reverberates as an even more intense condemnation of the hopelessness of the emotional or other value of such levels of association.

Under such conditions we seek to avoid emotional involvement in our dealings with strangers and 'deal with problems by trying to escape' as narrated in P. Slater's account of the 'pursuit of loneliness.' Such a condition has also become the subject of a film like "*Falling Down*"…

The ontological impasse between primary and secondary relationships, which are in some sense 'proven' by the everyday tension between them, argues Calhoun, is eased by the widespread development of what he calls tertiary 'indirect' relationships.

'Noting the impacts of modern communications technology, we may go further and identify as indirect those relationships that require the mediation of a complex communications system.'[4]

For Calhoun, tertiary relationships are ones that individuals are 'aware of' and active in, for which he lists bureaucracy as an archetypal form. 'We have "tertiary" relationships with those to whom we write and complain about the errors in our bank statements, with our political representatives (most of the time), and, often, with the senior managers of the companies for which we work. It is these large-scale relationships which are enhanced by apparatuses of connectivity, telephony, CMC as they allow for a compression of scale in their speed and efficiency and give rise to illusions of participatory democracy.

But to this level he adds Quaternary relationships are ones which we are not aware of such as surveillance infrastructures, and we are exposed to socio-technical systems in which we find ourselves unwilling participants. (332-33)[5]

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relationships and the absence of primary ones, but in both modern and pre-modern societies there is a co-presence of both.

Rather, modernity is distinguished by the increasing frequency, scale, and importance of indirect social relationships. Large scale markets, closely administered organizations and information technologies have produced vastly more opportunities for such relationships than existed in any premodern society. This trend does not mean that direct relationships have been reduced in number or that they are less meaningful or attractive to individuals. Rather, it means that direct relationships tend to be compartmentalized. They persist as part of the immediate life-world of individuals, both as the nexus of certain kinds of instrumental activities (e.g. the many personal relationships that smooth the way for or make possible business transactions and, especially, as the realm of private lie (family, friends, and neighbors). However direct interpersonal relationships organize less and less public life, that is, fewer and fewer of the crucially determinant institutions controlling material resources and exercising social power. Indirect relationships do not eliminate direct ones, but they change both their meaning an sociological significance. (1993: 211-212)

[4] Significantly, Calhoun says, such tertiary relationships need not involve ordinary written communication, it need not involve electronic technology, though such technology enhances the reach and the efficacy of such systems.' (Calhoun 1986: 332)

[5] Calhoun's tertiary and quaternary levels are dealt with in most CMC literature in terms of use/abuse, 'impact analysis' or within the sociology of technology in terms of a positive and negative effects debate. (See for example Spears and Lee)

Both tertiary and quaternary relationships allow for what Calhoun calls large-scale social integration, the definitive locus of which is the modern 'mega-urban' city. This, whilst, some may see technologically-mediated relationships as just an disembodied extension of estranged secondary relations[6] (particularly when tertiary relationships are only a rudimentary or modest feature of social relations generally), for the most part, he argues that such a level of relationships can be experienced as emancipatory. Remembering that Calhoun was advancing this thesis well before the utopian discourses, which heralded the Internet, as relieving everyone from the impersonal aspects of trying to maintain large-scale integration in an embodied form by way of networks of agents.

Instead the 'proliferation of tertiary relationships cuts down on secondary, but not primary, relationships.'(336) Calhoun argues that in substituting for the unwieldiness of large-scale social integration occurring at an embodied level, tertiary relationship can actually free individuals up to spend more time in primary modes. 'We might focus time and energy on community building, friendships and family life, though this is only a possibility, not an automatic result.' (336) (Steve Graham)

For Calhoun, this possibility is a feature of all technologically extended and mediated relationships, not simply communicative ones. He gives the example of the Automatic Teller Machine. 'Direct interpersonal contact is reduced, as the customer no longer deals with a teller But the customer also spends less time standing in lines and has greater flexibility as to when to use banking services.' The customer does not have to endure the 'rebuff of non-recognition…. There is often a disappointment on the customer's side at not being recognized (and apparently not trusted) by a person with whom he or she may interact on a regular basis…. It is not obvious that we are losing much of value in giving up this sort of "personal" interaction." (336)

Conversely, argues Calhoun, the flexibility we have with interfacing with the much more numerous machines, frees up time which can be used more productively elsewhere, as well as 'redeployed into primary relationships'.

However, Calhoun's caveat is that while CMC might greatly assist in large-scale integration,

> 'there is as much (or more) reason to think that computerization and new communications technologies will lead to, or accompany further deterioration of interpersonal relationships. A drift toward relationships of convenience might be accelerated; passive enjoyments from the mass media might predominate over active social participation. A few people might even have wind up preferring relationships based on single common interests and mediated through computer networks — or worse (from the point of view of social integration), preferring the company of computers themselves, which are dependable, don't talk back, and don't make silly mistakes very often.' (337)

In other words, Calhoun perceives a tension between the capacity of tertiary relationships to enhance and re-generate primary ones and their tendency to replace them altogether. This tension is, arguably, a central problem of communication theory which ultimately hinges on evaluating the nature of sociability within computer-mediated communication.

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[6] 'Certainly, they think, a world dominated by relationships conducted over the phone, by correspondence, or with the assistance of computer would be much worse.' (Calhoun 1996: 335)

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The Emergence of Language as an Autocatalytic Set of the Elements or Mechanisms that Make Speech Possible: An Enquiry

Robert Logan[1]

It is argued that language is an emergent phenomenon that emerged from the autocatalysis of the various mechanisms that make speech and other forms of language possible, including writing, mathematics, science, computing and the Internet.

1.0   Introduction and Objective

WE will attempt to show that the origin of language or speech like the origin of life, is the result of autocatalysis and is an emergent process. Spoken language as a living organism evolved into a number of different forms. Logan (1995 & 2004b) showed that speech, writing, mathematics, science, computing and the Internet form an evolutionary chain of languages. Building on this result and following a suggestion of Mogens Olesen (private communication) we will show that not only spoken language but all of the different forms of language are emergent processes that arise through autocatalysis.

Emergence as pointed out by Hofkirchner (2002) cuts across disciplines and allows concepts like autocatalysis from one field to be used in another. Autocatalysis is the mechanism that Kauffman (1995, p. 49) used to explain the emergence of life: "A living organism is a system of chemicals that has the capacity to catalyze its own reproduction." An autocatalytic set of chemicals is a group of organic molecules where the catalyst for the production (or really re-production) of each member of the set is contained within the set itself and as a result the system can, in the presence of a source of energy and the basic atoms needed to build organic compounds, become a "self-maintaining and self-reproducing metabolism", i.e. a living organism. A key idea in Kauffman's approach is that the members of the autocatalytic set self-organize and, hence, bootstrap themselves into existence as a set with an identity and properties different from the individual members that make up the set and hence is an emergent system. The system is emergent because its properties cannot be predicted from, derived from or reduced to those of the components of which it is composed.

An autocatalytic process is one that catalyzes itself into a positive feedback loop so that once the process starts, even as a fluctuation, it begins to accelerate and build so that a new phenomenon emerges. As a self-organizing agent, the living organism is an emergent phenomenon, because its properties cannot be reduced to those of the components of which it is composed.

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We will make use of a more generalized form of autocatalysis and suggest that any set of mechanisms or ideas that catalyze each other's existence is an autocatalytic set—an autocatalytic set of mechanisms or ideas. In the case of language we therefore posit that language is the result of an autocatalytic process among the various components of which it is composed and like a living organism has the "capacity to catalyze its own reproduction." Language is collectively an autocatalytic whole.

We further posit that as such language is an emergent phenomenon, as its properties cannot be predicted from, derived from or reduced to those of the components of which it is composed. If we were to describe all of the mechanisms of language we would still not be able to explain its origin because language is more than the sum of its mechanisms.

We also join with Morten Christiansen (1994) and Terrence Deacon (1997) in assuming that human language can be treated as an organism that evolves like a living organism. Language is not actually an autonomous agent like a living organism because it does not metabolize a source of energy but it does reproduce itself in the fashion of a meme as introduced by Dawkins (1989). Christiansen and Ellefson (2002) have correctly identified language as "a kind of beneficial parasite—a nonobligate symbiant—that confers some selective advantage onto its human hosts without whom it cannot survive."

Kauffman et al. (in press) have shown that a living organism has the capability of propagating its own organization and this constitutes its biotic or instructional information. Language also propagates its organization (ibid.), which reinforces Christiansen's (1994) notion that language can be treated like an organism.

2.0 The Components of Language and The Faculty of Language in the Narrow (FLN) and Broad (FLB) Sense

WE begin our discussion with spoken language, leaving our treatment of the notated languages of writing, mathematics, science, computing and the Internet to later on. As pointed out by Tecumseh Fitch (2005, p. 194) to understand spoken language and in particular its origin and evolution one must consider all of the components that make up speech or make speech possible.

> As recently stressed (in) Hauser et al. (2002a), it is unproductive to discuss 'language as an unanalyzed whole'. Thus a critical first step in analyzing language evolution is to distinguish among its various component abilities. Most generally, any mechanism involved in language is part of the faculty of language in a broad sense (FLB). Mechanisms that are both specific to language and uniquely human can be termed the faculty of language in a narrow sense (FLN), which is a subset of the FLB. The contents of the FLN must be determined empirically rather than a priori (ibid.).

The components of language without which it could not exist include the following elements: vocal articulation, vocal imitation, phonemic generativity (the ability to combine phonemes), lexical (or word) creation, morphology, conceptual representation, comprehension, a theory of mind, joint attention, altruistic behavior, syntax especially recursion, grammaticalization, and generativity of propositions. It should also be noted that speech also serves two functions, that of social communication, and conceptualization or a medium for abstract thought. We shall return to this dual aspect of language later in this paper.

Of the components listed in the above paragraph almost all of them belong to FLN, only vocal articulation and vocal imitation are part of FLB only. Many animals are capable of vocal articulation but have a limited range of signals that they can produce which is not more than 20 or 30 distinct sounds and they cannot use these signals generatively, i.e. make a combination of two signals to produce a new third signal. Some animals such as parrots, myna birds, harbor seals, bats, whales and dolphins are capable of vocal imitation (Fitch 2005, p. 197). It is important to note, however, that our closest relatives in the animal world, the great apes, do not possess this capability. Human vocal imitation was not therefore inherited genetically but developed sometime during the evolution of genus Homo.

3.0 The Emergence of FLN from the Pre-Human Components of FLB

RATHER than defining FLN as a subset of FLB as does Hauser et al. we shall define two new sets L_1 and L_2. L_2 is the same as FLN but the set L_1 consists of those components of FLB that are not also members of FLN. (L_1 = FLB minus FLN and L_2=FLN). The set L_2 consists of all those components that makes human language possible and is uniquely human. The set L_1 also contains components that makes human language possible but consists exclusively of those components of FLB that are pre-human and as such includes all the pre-adaptations for members of the set FLN or L_2. With this definition of L_1 and L_2, we suggest that the set L_2 emerges from the set L_1 in the classical sense of emergence since the properties of L_2 cannot be predicted from, derived from or reduced to those of L_1. This emergence parallels the emergence of life from organic chemistry for example.

Using Philip Clayton's (2004) description of the emergence of a level L_2 from a less complex level L_1, it becomes clear that human language is an emergent phenomenon and L_2 or FLN emerges from L_1 or FLB – FLN. Clayton describes the relationship between two levels L_1 and L_2 where L_2 emerges from L_1 as follows:

For any two levels, L_1 and L_2 where L_2 emerges from L_1,

(a) L_1 is prior in natural history.
(b) L_2 depends on L_1, such that if the states in L_1 did not exist, the qualities in L_2 would not exist.
(c) L_2 is the result of a sufficient complexity in L_1. In many cases one can even identify a particular level of criticality which, when reached, will cause the system to begin manifesting new emergent properties.
(d) One can sometimes predict the emergence of some new or emergent qualities on the basis of what one knows about L_1. But using L_1 alone, one will not be able to predict (i) the precise nature of these qualities, (ii) the rules that govern their interactions (or their phenomenological patterns), or (iii) the sorts of emergent levels to which they may give rise in due course.
(e) L_2 is not reducible to L_1 in any of the standard senses of 'reduction' in the philosophy of science literature: causal, explanatory, metaphysical, or ontological reduction. (ibid., p. 61)

Taking L_2 to be FLN and L_1 to be FLB - FLN then each of the 5 conditions that Clayton articulates are satisfied.

(a) L_1 certainly took place before L_2.
(b) L_2 would not be possible without L_1 as L_1 contains the pre-adaptations of L_2.
(c) L_2 is certainly more complex that L_1.
(d) One cannot predict on the basis of animal signaling the emergence of the various manifestations of human language such as the generative grammar of spoken language and the evolution of spoken language into writing, mathematics, science, computing and the Internet (Logan 2004b).
(e) Human language cannot be reduced to animal signaling in any of the senses of reduction identified by Clayton in (e) above.

4.0 Autocatalysis and the Emergence of Language

IN order to complete the argument that the emergence of spoken language is due to the autocatalysis of its components we have to demonstrate that the components or subsystems that make up language that we identified in 2.0 catalyze each other. If human language is an emergent phenomenon as I believe we have just demonstrated using Clayton's definitions it explains why theories of the origin of language that do not take into account all of the components or subsystems that make up language have proven to be less than satisfactory.

I believe that as has been suggested by Fitch (2005) that "analyzing language evolution" it is necessary "to distinguish among its various component abilities". I also agree that "it is unproductive to discuss language as an unanalyzed whole," but I believe that looking at language as an analyzed whole, a non-linear dynamic system has great merit. The course that I believe will be most productive is to look at each of the components or subsystems of language and the system of language that emerges from the autocatalytic interactions of these components. I will attempt to show how some of the components of language catalyze the emergence of other components. I do not claim to be able to execute a complete analysis of the dynamic system of language and its components but hope I that by providing a few examples I may be able to point the reader in a direction that might prove fruitful with time.

The term catalysis arises most naturally in chemistry and was used to great effect by Kauffman in his model to explain the emergence of life as the autocatalysis of organic chemicals. We would like to suggest that the analog to autocatalysis that might be most appropriate when considering the evolution of Homo sapiens, the most advance species in the biosphere, is co-evolution. By autocatalysis we mean that as one function or mechanism required for language develops it creates an environment that facilitates the development of other mechanisms equally essential for language. This is the sense, we believe, in which we can use the term autocatalysis to describe how the various mechanisms necessary for the emergence of language might have bootstrapped each other into existence, i.e. this is how the various mechanisms might have co-evolved.

5.0 The Co-evolution and Autocatalysis of the Communication and Cognitive Functions of Language

BEFORE examining the co-evolution and autocatalysis of the mechanisms and components of language we will first demonstrate how the two functions of language, communication and cognition, co-evolved and at the same time provide the reader with

our model for the origin of language. Our earliest human-like ancestors, whom we will refer to as hominids, emerged in the savannas of Africa, where they were easy targets for various predators. To defend themselves from this threat as well as to increase their food supply they acquired the new skills of tool making, the control of fire, group foraging, and coordinated hunting. These activities resulted in a more complex form of social organization, which also increased the complexity of their lives. At first, this complexity could be handled through more sophisticated percept-based responses, but at some point the complexity became too great. Percept-based thought alone did not provide sufficient abstraction to deal with the increased complexity of hominid existence. The hominid mind could no longer cope with the richness of its life based solely on its perceptual sensorium. In the information overload and chaos that ensued, I believe, a new abstract level of order emerged in the form of verbal language and conceptual thinking.

I believe that when the complexity of hominid life became so great that perception and learned reactions to perceptions alone could not provide enough requisite variety ala Ashby Law of Requisite Variety to model or regulate the challenges of day-to-day life a new level of order emerged based on concepts. Percepts are the direct impressions of the external world that we apprehend with our senses. Concepts, on the other hand, are abstract ideas that result from the generalization of particular examples. Concepts allow one to deal with things that are remote in both the space and time dimension. If our first words were concepts then language allowed us to represent things that are remote in both space and time and, hence, provided language with what Hockett (1960) defines as displacement.

Concepts also increase the variety with which the brain can model the external world. Percepts are specialized, concrete and tied to a single concrete event but concepts are abstract and generative. They can be applied to many different situations or events. They can be combined with other concepts and percepts to increase variety in ways that percepts cannot.

What, we may ask, was the mechanism that allowed this transition to take place? Assuming that language is both a form of communication and an information processing system I came to the conclusion that the emergence of speech represented the actual transition from percept-based thought to concept-based thought. The spoken word, as we shall see, is the actual medium or mechanism by which concepts are expressed or represented. We must be very careful at this juncture to make sure that we do not formulate the relationship of spoken language and conceptual thought as a linear causal one. Language did not give rise to concepts nor did concepts give rise to language, rather human speech and conceptualization emerged at exactly the same point in time creating the conditions for their mutual emergence, which is a form of autocatalysis. Language and conceptual thought form an autocatalytic set because language catalyzes conceptual thought and conceptual thought catalyzes language.

Language and conceptual thought are autocatalytic and the dynamically linked parts of a dynamic cognitive system, namely, the human mind. A set of words work together to create a structure of meaning and thought. Each word shades the meaning of the next thought and the next words. Words and thoughts are both catalysts for and products of words and thoughts. Language and conceptual thought are emergent phenomena, which bootstrap themselves into existence.

The use of a word transforms the brain from one state to another and replaces a set of percepts with a concept. A word is a strange attractor for all the percepts associated with the concept represented by that word. A word, therefore, packs a great deal of experience into a single utterance or sign. Millions of percepts of a linguistic community are boiled down by the language to a single word acting as a concept and a strange attractor for all those percepts.

In suggesting that the first words were the strange attractors of percepts I did not mean to imply that all words arose in this fashion. I certainly believe that the first words to appear were the strange attractors of percepts, but once a simple lexicon of words and a primitive grammar came into being a new mental dynamic was established. The human mind was now capable of abstract thought and abstract concepts, which needed to be represented by new words. These new words would not have emerged as attractors of percepts but rather as representations of abstract concepts in the form of grammatical relationships among words. The first words of this nature would have been, in all likelihood, associated with grammar and categorization. Examples of the former would be function words such as: *he, she, this, that, and, or, but, if*, etc. and examples of the words for categorization would be words such as: *animals, people, birds, fish, insects, plants, and fruits*.

6.0 The Co-evolution and Autocatalysis of Mechanisms

IN this section we will provide some examples of ways in which one mechanism catalyzes another and vice-versa.

Vocal articulation, a mechanism that we share with many non-human animals is obviously ground zero for speech, but there is a controversy among linguists as to whether language began as a vocalized system as is true of all of today's languages or as a system of hand signals like the signed language of the deaf like ASL which is derived from spoken language. There are compelling arguments on both sides of this dispute. We will pursue Solomon-like neutrality and remain agnostic as to whether human language was first signed or vocalized. I personally favor the position of Merlin Donald (1991) in the Making of the Modern Mind in which he claims that language arose from mimetic communication consisting of hand signals, mime (or body language), gesture and non-verbal prosodic vocalization. It is therefore not a question of either hand signals or vocalization but probably a combination of both. The fact that it is almost impossible to speak without simultaneously using mimetic signals argues for the emergence of speech from both hand signaling and vocalization. The elements of mimetic communication identified by Donald (1991) belong to L_1 as we have defined it above, i.e. they are part of FLB but not FLN. While it is difficult to establish whether mimetic communication catalyzed speech, Donald (1991) has argued persuasively that mimetic communication served as the "cognitive laboratory" in which the skills for the production and comprehension of speech developed.

Vocal imitation is absolutely necessary for the acquisition of language by infants and hence the reproduction of the organism of language, i.e. the transmission of language from parents and caregivers to their children and wards. Vocal imitation obviously co-evolved with phonemic articulation, as imitation could not take place until phonemic articulation emerged. But on the other hand is it possible that vocal imitation contributed to phonemic articulation.

Phonemic generativity, **lexical creation** and **conceptualization** must have co-evolved because without phonemic generativity it would not be possible to create or produce the variety of sounds needed for the extensive vocabulary that characterizes human language. The mechanism of morphology would have also contributed to the generation of lexical items. But it was the pressure for a larger vocabulary that conceptualization generated that gave rise to phonemic and morphemic generativity and it was lexical creation that co-evolved with conceptualization, as our first concepts were our first words Logan (2000, 2006 & 2007). Phonemic generativity catalyzed lexical creation and conceptualization catalyzed lexical

creation, which in turn catalyzed phonemic generativity. All three bootstrapped each other into existence and hence formed an autocatalytic set.

Conceptual representation and **comprehension** are linked to the symbolic and conceptual nature of language as described by Deacon (1997) and Logan (2007) respectively and must, therefore, have co-evolved.

The desire to communicate verbally has been attributed to three closely related attributes of human cognition, namely, a **theory of mind**, the sharing of **joint attention**, and the advent of **altruistic behavior**. In order to want to engage in the **joint attention** that Tomasello (1998, pp. 208-09) suggests was essential for the emergence of language it is necessary to have a **theory of mind** (Dunbar 1998, p. 102), namely the realization that other humans have a mind, desires and needs similar to one's own mind, desires and needs. At the same time there must have developed a spirit of **altruism (**Ulbaek 1998, p. 41) once a theory of mind emerged so that human conspecifics would want to enter into the cooperative behavior that is entailed in the sharing of information. Theory of mind and joint attention catalyzes the social function of communication and cooperative behavior and vice-versa. The mechanisms of social communication and cognition through language also form an autocatalytic subset.

A number of authors believe that a primitive **syntax** emerged at the same time as the first lexicon. Donald (1991, p. 250), Levelt (1989) and Hudson (1984) support the **lexical hypothesis** that lexical items are the central focus of language and that they carry with their pronunciation, meaning, and grammatical and morphological possibilities all at once. For Christiansen and his co-workers syntax existed at the very beginning of language because it arose from the adaptation of the capabilities of the learning and processing of sequential information that existed before the advent of language.

Grammaticalization is a mechanism in which semantics gives rise to **syntax.** Semantics catalyzes syntax and syntax catalyzes semantics. They bootstrap each other. S**yntax or grammar** and the **generativity of propositions** share a similar dynamics.

Although we have been able to argue that certain mechanisms responsible for speech autocatalyze each other, we have still not yet tied together all of the mechanisms into one complete autocatalytic set, which constitutes human language. Hopefully, however, we have convinced the reader of this possibility and that this modest beginning will inspire others to make connections we were unable to develop.

Autocatalysis and the Emergence of the Notated Languages of Writing, Mathematics, Science, Computing and the Internet

LANGUAGE is not the passive container or medium of human thought whose only function is to transmit and communicate our ideas and sentiments from one person to another. Language is a "living vortices of power" (McLuhan 1972, v), which shapes and transforms our thinking. Language is both a system of communications and an informatic tool. Language is a dynamic living organism, which is constantly growing and evolving. Not only does spoken language grow in terms of its increased semantics and new syntactical forms it also evolves into new forms of presentation and expression.

As we stressed above language has two functions: social communication role and conceptualization or informatics role. Language = communication + informatics. As the informatics role of language expanded and became more complex with the increased complexity of human life information overloads developed that could not be resolved by spoken language.

Speech and the human capacity for memorization encountered limits as to how much data could be recorded in this manner. In this environment written language and mathematical notation emerged at precisely the same moment in time in Sumer approximately 3100 BCE. The teaching of the skills of reading, writing and arithmetic led to formal schools and teachers who in turn became scholars which led to another information overload that eventually gave rise to science or organized knowledge. Science based technology led to another information overload that led to computing and the information overload of computing resulted in the emergence of the Internet. In this manner their arose the evolutionary chain of languages consisting of speech, writing, mathematics, science, computing and the Internet. Each new language arose as emergent phenomena addressing the information overload that the languages from which it emerged gave rise to and could not resolve (Logan 2004b & 2007). Each new language incorporates all of the features of the languages that preceded it with the exception of writing and mathematics, which emerged simultaneously and each incorporates the other plus spoken language. As a result of this dynamic each new language emerges as the autocatalysis of the previous languages plus some new cognitive capacity that is stimulated by the information overload generated by the previous language. We will examine each of the languages spawned by spoken language and show how they represent the autocatalysis of the components of which they are composed which always includes the prior languages from which they emerged. We start with writing and mathematics and continue in the chronological order in which these new languages emerged.

Initially the vocabulary and grammatical structure of written language was the same as that of spoken language. But as the users of written forms made use of the new visual language they could see patterns that were not apparent to them in spoken language. They also began to realize that certain regularities were needed to avoid ambiguities that oral dialogues could easily resolve through the mimetic signals of gestures, hand signals, body language and tonality or by the listener simply asking the speaker to clarify something that was not understood. The components of written language that formed an autocatalytic set were the words and syntax of spoken language plus the visual signs used to represent the sounds of the spoken language. The first forms of written language were pictograms. Therefore the components of written language that autocatalyzed into a visual system of communication and storage of information were spoken language and visual representation. The first forms of notation were enumerations in the form of one-to-one tallies where the thing being enumerated was not specified.

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Media Ecology & the New Nomads

Eric McLuhan

Once out of nature I shall never take
My bodily form from any natural thing,
But such a form as Grecian goldsmiths make
Of hammered gold and gold enamelling
To keep a drowsy emperor awake;
Or set upon a golden bough to sing
To lords and ladies of Byzantium
Of what is past, or passing, or to come.

—W. B. Yeats, "Sailing to Byzantium"

W ITH the accelerating stream of new media over the last few decades, we have created a new *kind* of culture, a culture of hunters—of information. Back in the day when information was simply content, information gathering was the route to mastery; now information is environmental, and gathering is pointless. All of it is instantly available everywhere. Navigation and hunting are principal skills of nomads. Like their Paleolithic ancestors, our neo-nomads go, in electric form, where the game is to be found. The simultaneous electric information environment takes the entire Neolithic age as its content and makes of us all nomadic hunters and huntresses. These are properly media-ecological concerns.

The first job Media Ecology has then is to study the new nomad as representing a form of culture. To this end, all modes of causality have to be brought to bear, particularly formal cause,[1] specifically useful for the elucidating environmental forms. And the procedure proper to formal cause, as it deals with simultaneous relations, is that of inventory.

Begin by taking stock of all of the kinds and modes of nomad. For example, we have the physical kind, as in the Paleolithic hunters and hunter-gatherers. And we have the current form, the metaphysical kind, the users of telephone, radio, television (including the channel-surfer), internet, etc. The old nomad used a spear or arrow; the new one uses a mouse, and to greater effect. The mouse is mightier than the spear.

Inventory all of the nomad-enabling devices and services that are presently in place and new ones that appear each day. These prepare the ground for nomadism. A few suggestions to get started: Blackberrys, pagers, cell phones, WiFi, e-mail…The list of bare line items may run a couple of pages.

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[1] See "On Formal Cause" in the current issue of *Explorations in Media Ecology*.

Inventory all of the precursors to the new nomadism, the foreshadowings, to include such things as dropoutism in the 60s and 70s, and the jogger. This list, too, can be lengthy.

Our nomad's accessories include items like bottled water (the old form was the canteen, which has not made a reappearance) and the backpack. Bottled water might be seen as strictly an aesthetic item as there is clean water everywhere available across the continent. The point of the backpack is that it leaves the hands free: the old mode was the briefcase, a rigid box. With inventories, the patterns of pressure and influence become somewhat clearer and easier to discern. These suggestions are the merest sketch, intended as starting points only.

Let us now turn to some of the characteristics of the new nomadism. The neo-Nomad, the cyber-Nomad, has also been called the mass audience, and the electric crowd. I use these terms interchangeably in the following remarks.

During the early twentieth century, Elias Canetti suddenly realized that he could discern two distinct types of crowd, open and closed. It is significant that he noticed these things in the first powerful age of humanity's discarnate experience, the radio age. He announced that the two modes of crowd are the same everywhere, regardless of culture or language or era.

The open crowd is everywhere spontaneous, he maintained. It is programmed with a need to grow, and it has a terror of stagnating or growing smaller.

As soon as it exists at all, it wants to consist of more people: the urge to grow is the first and supreme attribute of the [open] crowd. It wants to seize everyone within reach; anything shaped like a human being can join it. The natural crowd is the open crowd; there are no limits whatever to its growth; it does not recognize houses, doors or locks and those who shut themselves in are suspect. "Open" is to be understood here in the fullest sense of the word; it means open everywhere and in any direction. The open crowd exists so long as it grows; it disintegrates as soon as it stops growing.[2]

The open crowd is inherently unstable. The closed crowd, on the other hand, is characterized by stability:

> The closed crowd renounces growth and puts the stress on permanence. The first thing to be noticed about it is that it has a boundary. It established itself by accepting its limitation … the important thing is always the dense crowd in the closed room; those standing outside do not really belong. The boundary prevents disorderly increase, but it also makes it more difficult for the crowd to disperse and so postpones its dissolution. (*Ibid*.)

These are **physical** crowds, in physical space. As Joyce remarked, "These twain are the twins that tick Homo Vulgaris."

Today, **metaphysical** nomadism is a feature of normal everyday life for about a third of the world's population. The effects of all that emphasis penetrate the other two-thirds. You cannot understand this new situation by using any of the familiar reference points such as classification, or population-sampling or nose-counting or comparing locations, etc. The mass is no focus group.

The analogical ratios hold strong: The two types of incarnate crowd are to 3D or 4D space as the electric crowd is to cyberspace. (I provide a tentative tetrad on Cyberspace in Appendix One).

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[2] *Crowds and Power*, Trans., Carol Stewart (Victor Gollancz, 1962; Viking, 1963). New York: Penguin Books, 1973, Rpt., Peregrine Books, 1987, *et seq*. Page 17.

The new discarnate crowd of ours exhibits ten major characteristics.

1. The electric crowd / mass audience EC is invisible, composed as it is of *de facto* nobodies with no bodies.

2. The electric crowd lives as if already dead (a traditional Japanese technique for those attempting to achieve perfection in their art or endeavors)—consequently, it finds nihilism natural (cf. terrorists).

The ground for **the** electric crowd/mass audience is the totality of electric media present and operating, via broadcast, network or satellite, etc. The ground for **an** electric crowd is A medium. So there is the radio crowd, the TV crowd … All of these are as it were dialects of the mass audience.

3. Electric crowds are paranatural. They have exchanged being-in-the-body for being in the absolute. This concern is, else, a closed-crowd trait; it accompanies the transformation to the metaphysical or discarnate world.

4. The electric crowd / mass audience / new nomad cannot have a goal or a direction or objective. Those matters belong to becoming and the nomad is involved rather with being. Being is not an objective or a goal. With no outer body the mass audience shifts its focus inward. Various manifestations declare this transformation, from the dropoutism (rejection of goals and objectives as irrelevant) of the sixties and seventies to the drug culture that suddenly appeared about that time (emphasizing inner life rather than outer). This move also appears under the guise of narcissism. But it is the narcissism or the selfishness of one without a self, rather different from the selfishness that attends private individualism. Electric speed has abridged time as well as space in the old senses of physical time and space. The four-dimensional world is entirely too restrictive for these discarnate entities. Fixed goals and becoming belong to *incarnate* existence. The electrified nomad is rapt in the ecstasies of sheer being, bereft of all traditional ties to the natural world and to natural law.

People have no idea why they suddenly began to look for quality of this or quality of that (TQM had managers abuzz for a while in the eighties); it just seemed the right thing to do. In other words, we are floundering, disoriented. Each electric medium does not so much extend the bodily senses as it extends into the environment or around the world—or the solar system—a parody of the central nervous system. So each new technology represents one or another modulation of our human being: herewith we find the foundation of all mass-audience aesthetics.

So the electric crowd shifts its interests from quantity (matter) to quality after it sheds the body. Shifts from facts (objective, observer) to feelings (subjective, participant) affected every area of life and culture at the end of the twentieth century. The boom in Harlequin Romances began in the seventies. So did the crash of literacy. A generation ago, Tom Wolfe announced the appearance on the scene of *The New Journalism*, by which he meant reportage that substituted feelings for mere recitation of fact. Check your news broadcasts tonight and tomorrow at home. The big questions today are not so much "What happened?" as "How do you feel about it?" "How does it feel to have survived the horrible _____ (select one: volcano, house fire, car crash, tsunami, etc.)?" "Give us an idea of how it felt when…" Etc. Only the police still concern themselves with facts.

5. We have to begin working on the problem of consciousness in this new circumstance. We know what to think about consciousness when *in* the body; *out of* the body is another matter. Discarnate, the natural mode of awareness is unconsciousness or sub-consciousness, or the intuitive (visceral) senses rather than the rational ones. What the mass knows is itself, and it

knows itself tacitly. Keep in mind that the "con"—"together"—in *con*sciousness requires more than one. Consciousness while alone is a contradiction in terms: there's just sciousness, that is, knowing (of a sort). By definition, consciousness requires at least two, for dialogue.

Advertisers a generation ago shifted their attention from product to image, from hard-selling to participative forms such as lifestyle ads. These provide life fantasies and group identities for all.

The mass audience is not characterized by rationality, though individual members may be rational.

6. The open crowd is characterized by a need to grow, an urge that is foreign to all mass audiences. The electric crowd has no body or physical being; therefore it has no size; paradoxically, though, it does have infinite mass. The physicists tell us, anything moving at the speed of light approaches zero size and infinite mass. Numbers and quantification apply only to physical entities. The mass is equally massive whether composed of a billion or twenty million or twenty, or two.

While density is a defining aesthetic for the physical closed crowd, it holds no meaning for the mass of nomads. Space has a totally different character for electric crowds, all of which are invisible and indivisible.

The biggest need of the mass audience is not to grow but to sustain, to continue to BE. In this regard, it resembles closed crowds (which renounce growth for permanence and stability). But these electric masses not stable. Participational imagery generates the emotion and the aesthetics of being, the only reality left after leaving the body and the physical world behind. On line or on the air, minus your physical bodies, you put on the corporate body: you wear all mankind as your skin. Under these conditions, a private sensibility would be a huge liability.

7. The quality of image adjusts the degree of participation. A "good" image allows a lot of participation in depth by a big, diverse mass. For this, it must be virtually devoid of content. The more vacuous the better. Our politicians know this well, for example. Their condition provides a paradigm of group identity on the Internet. On the surface, the ego seems to expand to immense proportions, but like a balloon it is all surface. As it enlarges it becomes more fragile, more precarious—and thinner and emptier. It has to be empty to allow all that participation.

The aesthetic of these circumstances derives from manipulations of being. Each new electric medium brings with it a new mode of group being, a new WE. Hybrid energies give the biggest kicks of all, and it is in the nature of electric media to hybridize endlessly. Each new medium collects older ones as "features" even as it becomes included in the others as a feature—a process that will continue until all have become features of each other. Their future is features. Gadgetry. Narcissism for the self-less.

A recent ad in Toronto for a cell phone proclaims it has "more features than Santa has elves"! (This, five months after Christmas.)

8. The crowd of electrified nomads has no natural boundaries: it o'erleaps all natural and physical limitations. It is exempt from natural law.

9. The term "Mass Audience" was coined for broadcast crowds. Sheer speed makes the mass. At electric speed, there is no to or fro: the user just arises there, having left the body behind. "There" might be the other side of the world or the other side of town: it's all the same. You function in more than one place at once. Cyberspace foreshadowed. "On the air" you can "be" in thousands or millions of places simultaneously. Physical laws no longer apply once you leave the physical body: there is nothing on which to base them. You become information, an environmental image.

Not long ago, as these things go, the networked world supplanted the broadcast world. That is, the networked world now has taken over, among other services, the world of broadcast media as content. One effect of this change is that the broadcasters will begin shortly to present us with a range of new forms, as broadcasting converts into art forms. Broadcast once was fairly local, until they set up the big national networks for radio and TV, e.g., NBC, CBS, Mutual, etc. Every aspect of *our* networked world is global: there is no more local. "On" the net means automatically global. The user merges into the global information environment, reconstituted into data and image. And the global theatre brooks no spectators; only actors allowed. In a similar vein, Bucky Fuller often pointed out that Spaceship Earth has no passenger accommodations; there is only space for crew.

Derrick de Kerckhove observes that anyone who goes on-line becomes thereby a *de facto* node of the world-wide network. This is not an unfamiliar form: our worldwide net, then, has its centre everywhere and its margin nowhere.[3] (Recall the medieval notion of God as having being everywhere, and as being nowhere circumscribed.) The world-wide network presents a state of complete equality, an equality of nobodies. There is no owner; nobody is in charge; there is no head office. Every user can say, with all fidelity, "I am every man." "I am legion."

Do you remember those tales our parents used to tell, about talking to a stranger on the telephone and forming a mental picture of him, then meeting some time later and being surprised at the speaker's appearance? We had formed the wrong impression. Silly we! (Notice, we don't hear these tales any more.) If the image and the reality differed there was no question which was in error. Today, the situation has reversed: image is all. In the electric world, the image is always correct and the physical appearance is the illusionary item. These principles apply equally to persons on the air—radio, and TV, etc.—and on other media, Internet included.

Internet is total and global and nomadic. We used to think of outer space as exotic, a Final Frontier. That's just kid stuff. How much more exotic it is to live and work and play outside of space itself and time. And how mundane. Cyberspace is far bigger on the inside than it is on the outside.

And how disorienting. And, for that matter, disoccidenting.

The simple omnipresence of everyone on the worldwide net has some curious consequences. Of a sudden, every culture on earth finds itself present in every country and nation: every culture becomes multinational.[4] And for the same reasons the reciprocal also applies: every nation instantly becomes multicultural, despite any and every effort to the contrary.

To one side, let me observe that not everyone responds favorably to the invasion. The Islamic terrorists clearly regard it as an extreme form of pollution of their cultures and their spirits. Obviously, terrorism is a media-ecological problem.

Why has Media Ecology not stepped up to the plate over the matter of terrorism? Or over the matter of democracy in the Middle East? Media Ecology holds the keys to destroying the power of the Taliban or of any other oral or tribal group, and we all know it. You know how to program an environment to produce certain perceptual and cultural effects: that forms a large part of the discipline. You know that the way to crack any tribal spell is via the phonetic alphabet, that making the oral, tribal group alphabetic will defeat them. The alphabet will instill separation of knower and known, and detachment. The alphabet will instill private awareness and individualism in the users, as it has always done. Simply give them everything they want, their books, their papers, even their own propaganda (none of ours), all free, as long as it is in

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[3] The utopia to end all. Nowhere is Now here.
[4] In the simultaneous world, there is no more "international."

alphabetic form. Democracy in the Middle East? We know perfectly well that democracy presumes a ground of individualism. Private awareness is quite literally the *sine qua non*. And the only sure route to individualism is through the phonetic alphabet. And all of this too is well known to media ecologists. Time to accomplish? Maybe as little as a generation, and that would be much less expensive than wars that continue for two or three generations, or go on forever as feuds.

10. The tenth characteristic concerns the impact on identities.

The Church teaches that each of us is endowed with an individual soul since conception, and the concomitant, an individual conscience. The private individual with a private self is also charged with private responsibility for his or her own actions, and quests for private salvation. The alphabet literally paved the way for these matters. These are New-Testament times; the Old Testament, for example, had declared the Jews a chosen people—group salvation.

Saint Thomas gives us the formula for individuation: he frequently observes that the principle of individuation is matter, necessitating a material body.[5] To separate the mind or soul from the body is to mime death. (It is generally accepted that any separation of the two, of mind and body, results in death.)

Electric media disturb the natural union of mind and body at the deepest level. They take the user out of nature in a pantomime of death. The new sensibility brings a new fascination with death and the hereafter, and encourages the growth of nihilism and amorality. Doesn't this illuminate somewhat our culture's present infatuation with euthanasia and abortion? A generation ago, we awoke to a new awareness of the body: it had suddenly transformed into a programmable machine with replaceable parts, an art form to be shaped and molded and enjoyed at will. The new reality, which we all take for granted, is this: on the air, on the telephone, you are in many places simultaneously, minus any bodily inhibitions. You are there, they are here, fully functional (though disembodied) intelligences. These "out-of-body" experiences are casual, utterly unremarkable features of everybody's experience, and they pull the rug out from under individualism. Cyberspace is the home of the group, not the individual; its natural mode is the hive, abuzz with information.

Look at the ease with which the kids put on and shed personas, in games as easily as on *YouTube* and *MySpace* and *Facebook* and the rest. They can revel in role playing because their senses of identity are very fluid and supple. Role playing is 1st nature to them. This is a very right-brain pattern of preference.

A couple of weeks ago I asked my classes a question I haven't used for easily a decade. I asked them, "Do you think in words or in images?" A generation ago, left/right brain analysis was popularized to a fault; popularity killed much of its credibility, but even so there was substantial truth in what neurology had revealed about thinking processes and perception. The question is tantamount to asking, "Are you left-brained or right-brained?" In the mid-seventies, about 70% of an audience would respond "in words," and 30% "in images." By the later eighties, it had drifted to about even. My class gave this question 100% "in images": I was confronting a completely right-brain group. Amazed, I checked with the rest of my classes that day and got the same result: 90% - 100% "in images." Check with your classes when you get home: have they drifted significantly in the last 20-30-40 years? The significance is this: individualism, which results from the intellectual separation of knower from known, is a specific function of the phonetic alphabet. The alphabet—and words and language and utterance—works through the left

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[5] For example, he notes that "an accident which belongs to the individual...results from the matter, which is the principle of individuation." *Summa Theol., Prima Pars*, Q. 54, Ad 2.

hemisphere. Individualism, too, is a function of the left hemisphere and comes from the phonetic alphabet. No other form of writing, syllabary or pictogram, has the fragmenting power of the alphabet. Evidently it has secured no deep hold on these students, and, one would suppose, the same observation would extend to their colleagues throughout the Western school system. This is the right-brain generation and we are the aliens.

"You," I told my class, "are Aristotle's problem." In the *De Anima*, Aristotle says that we all think in images. He takes it for granted, but it is not to his liking.[6] He regards thinking in images not as a valuable faculty but rather as a **disability**, and that is why he never counts it among the main faculties of the soul. Thinking in images completely inhibits abstract reasoning, which he was wont to encourage. Since abstract thinking was essential to philosophy (Dialectic), Aristotle had to find a device to circumvent that pernicious habit, images. He found it: the syllogism. I've tried it, and I challenge you to do so. It is utterly impossible to syllogize in images: the syllogism forces the mind to think using words, to reason using the left hemisphere of the brain. The syllogism breaks the mimetic thrall in which the poets held their Greek hearers, and against which Plato inveighed in *Republic* and elsewhere. It posed a mortal threat to the new enterprise. Perhaps with great effort you can torture a few images into a semblance of a syllogism, but the result is lamentable use of images and nothing like the crisp efficiency of reasoning in words. Try it yourself. Aristotle's syllogism constituted a real revolution not only in philosophy but also in making abstract thinking possible.

Dialectic—logic and philosophy—requires that you develop the capacity to think in words, rather than in images. Images are entirely too illogical, too concrete; they do not permit very much in the way of abstraction. As if by magic, Aristotle's syllogism defeats images, freeing the imagination to dance with ideas and words. My students turn out to be pre-Aristotelian in their sensory lives. Actually, their—and our—sensibilities nowadays hearken back considerably further than that.

Recently I have been doing some work on the art of ancient Egypt. I decoded several aspects of their canonical drawings from the First Dynasty onward that have remained hidden from Western view until this century. They were "hidden" only in the sense that we were unaware of their presence because we had forgotten how to look at these old images. The culprit here, I feel certain, was the phonetic alphabet. (Naturally, then, this is a media-ecological matter at root.) We looked at these old icons with Western eyes, that is, with proper detachment and objectivity: we examined, we observed: precisely the wrong approach. I began in the '80s trying to show audiences how the Egyptian artists and artisans had coded movement into these ancient forms. They had, in effect, invented animated cartoons, moving images, which, predictably, look rather odd when they are static.

In the 1980s, I might succeed with two or three in an audience of twenty—10% or 15%. Last year, I was succeeding with about 70% to 75%, a success rate of two thirds or three-quarters.[7] Our perceptual stance has shifted considerably during the last generation, so much so that these

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[6] "Now for the thinking soul images take the place of direct perceptions; and when it asserts or denies that they are good or bad, it avoids or pursues them. Hence the soul never thinks without a mental image." (*Aristotle: On the Soul, Parva Naturalia, On Breath.* Trans., W. S. Hett (Heinemann / Harvard, 1957), III.vii; 481a.14-17, p. 177.) The Greek original: *Te de dianoetike psyche ta phantasmata oion aisthemata hyparchei. Otan de agathon he kakon phese he apothese, pheuge he diokei. Dio oudepote noei aneu phantasmatos he psyche…* (Loeb, p. 176.)

[7] I have written up this discovery in a paper and the students assure me that it is posted on the conference web-site where you can download it and try the matter for yourself. Please bear in mind that results do not come instantly or easily: it will take a little practice. But if you do find it do-able, if not too easy, consider: 100 years ago, 1000 years ago, it was flat out impossible.

old images are become newly accessible to us. Our own changes, that is, have made us more like the average person of 4,500 years ago and less like our old selves of, say, 45 years ago. So much in so brief a span.

My students tell me that they find their younger brothers or sisters increasingly incomprehensible. The gap now seems to be three to five years. This younger crowd (13- to 15-year-olds) is like totally wired into the cell culture, and the cells provide so many features now that you really don't need lots of other media. They constitute a new culture. The youngsters don't use e-mail and all those old media. The generation gap in major technologies is the same: we are presented with a major new paradigm on the average of every three to five years. Right now part of that is called Web 3.0. Having to adjust to a new culture every few years leaves us no opportunity to study or reflect. We barely have time to react before the next one arrives. Here too we find Media Ecology's concerns and obligations writ large. The culture needs tools that enable us to predict effects before releasing a new form into the environmental soup.

We have made a start. We know how to attack environments and environmental causality. The tetrads do afford a measure of predictability. The basic anthropological work has been done, for the most part. We know that you can't simply add a new medium to an existing situation: in the nature of formal cause, the new medium simply engulfs the existing situation and reshapes it from top to bottom. Media are not additive but transformative. As each new medium penetrates the world wide net, it transforms the world. Any new medium is a new culture looking for a host.

It is no surprise that cyberspace is actually innerspace. Media Ecology has new a frontier to add to the roster: perception. Changes in perception wrought by media have always formed a central part of the study of how media transform culture. Add to that developing techniques for adjusting perceptual ratios, for 'tuning" cultures. Media Ecology doesn't have to work alone on this challenge. Your natural ally is the serious artist.[8] The artist is the only person in the whole culture whose job is full-time training of perception. Any environmental action automatically deadens perception and where there's a lot of action there will also be a lot of deadening. The arts' job is to adjust and to restore perception, so the artist is constantly occupied with creating counterenvironments. The media-ecological approach must always of necessity be counterenvironmental if for no reason other than to provide objectivity.

For the field of media ecology, two of the next moves seem clear. One, forge alliances with all of the arts and get to work together. Two, unlike the old alphabet, its perceptual properties are entirely consonant with the computer screen: learn to read (and write) the Chinese character. It breaks the sound barriers.

Thank you.

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[8] Ably identified by Ezra Pound in his essay "The Serious Artist." See *Literary Essays of Ezra Pound*, Edited with an Introduction by T. S. Eliot. New York: New Directions, 1968, pages 41 to 57, and while you're there read the next essay.

Appendix One

Cyberspace
(a sketch: tentative, incomplete)

Spaceship earth   World > theme park,
                                                    for kicks

   Instant speed   Stasis

                    E   F

                    R   O

        Inner space   3D space + time
                                                    Becoming, travel
  Ancient percepts   the body
                                                    Nature, the natural
The mystical   The rational
   fluidity   fixity

Paper or PowerPoint:

How Should Media Ecologists Present Their Ideas?

Ellen Rose[1]

At the seventh annual Media Ecology Association convention, the two most common modes of presentation were reading aloud from a paper written for the eye rather than the ear and speaking to bulleted lists on PowerPoint slides. This paper analyzes the biases inherent in these presentation strategies and suggests that they embody very different views about the nature and purpose of the convention, and indeed of the field of media ecology itself.

L IKE most of those who attended the seventh annual Media Ecology Association convention, held at Boston College in June of 2006, I had the opportunity to go to numerous plenary presentations and break-out sessions. The topics addressed were wide-ranging and fascinating, but as a media ecologist, someone who believes that the way ideas are communicated bears as much consideration as the ideas themselves, I was equally interested in observing the diverse modes of presentation in evidence at the MEA convention. Some presenters extemporized upon hand-written notes, some read scholarly papers, and some displayed and spoke to PowerPoint slides (and some, myself included, used a combination of these approaches). To characterize this diversity in terms familiar to media ecologists, we may say that, while all of the convention presentations were oral, they varied in terms of the extent to which they partook of the values and biases of orality, literacy, print, and electric media.

I will begin with a brief consideration of what it means for a convention presenter to choose to read aloud from a paper. I am referring, here, to a scholarly paper: a paper prepared primarily not for oral presentation but for inclusion in the convention proceedings or another peer-reviewed academic publication.[2] Reading aloud from such a paper was the standard mode of presentation at conferences for years and in many cases remains so, particularly when scholars in the humanities convene to share information. A number of important media ecology texts were originally read aloud by their authors. For example, Innis's "A Plea for Time" was first presented at the University of New Brunswick in 1950 and subsequently published as a chapter in *The Bias of Communication* (1951); and Havelock's *Origins of Western Literacy* originated as a series of lectures given at the University of Toronto (Strate, 2006, p. 40).

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[2] Of course, Postman advocated and modeled another approach: reading aloud from a paper written for the ear rather than the eye (Sternberg, 2005). While some presenters at the seventh annual MEA convention did indeed use this mode of presentation, most of the papers that I heard read aloud seemed to have been written for the eye—that is, for publication. Hence my focus here.

However, as a presentation strategy, reading aloud from a paper meant for publication has drawbacks. Certainly, most contemporary how-to guides on presenting at conferences advise that it is not good practice. For example, in his guide for graduate students, Roman Gerodimos (2004) admonishes that "there is nothing less appealing than merely reading out loud a paper at a conference. In fact," he adds, "it is damaging because everyone gets immediately bored and you may appear disrespectful to your audience" (p. 1). Media ecologists will further appreciate the difficulties inherent in attempting to render literate content orally, as though the forms were entirely interchangeable.

Regardless of how well it works as a mode of presentation, the scholarly paper makes some important tacit assertions when used as the basis for an oral presentation. First, as a rhetorical exercise that takes place in a defined discursive space, it lays claim to membership within a particular discipline or field of inquiry. This is achieved primarily through references to other works, in the form of quotations, footnotes, and bibliographic citations, which situate the paper within a specific domain. While these links to the larger body of knowledge more or less disappear when the paper is read aloud, the audience is still aware of them at a subliminal level—after all, they are an important part of what makes a scholarly paper a scholarly paper. The paper as an artifact thus asserts the presenter's familiarity with the works of important predecessors and confers upon him or her the authority to speak on the subject.

Second, the scholarly paper asserts the primacy of literacy, and of the particular habits of mind and ways of communicating to which literacy has given rise. As media ecologists, we are familiar with the story told by Ong, McLuhan, and others about how the advent of writing and print set the individual apart from the tribe and created a new space for analysis and reflection. While spoken language was immersive and immediate, inseparable from lived experience, writing and print created the possibility of attaining an intellectual distance from the life world. Literacy conferred the possibility not only of thinking deeply but of conceiving of alternatives to traditional beliefs and practices. The literate communication of these new ideas took on the sequential qualities of the alphabet and, later, the book. Linear, logical expression became congruent with thought. All of this—the privileging of reflective thought and of the communication of ideas in a linear form—is tacitly asserted by the presenter who chooses to read his or her paper aloud at a conference.

Third, the scholarly paper represents not just a product but a process. It is the culmination of a lengthy period of rumination and writing, fuelled by equal measures of imagination and intellectual rigor. As such, the paper asserts its own non-triviality. We expect it to say something important, to address the kinds of questions that defy easy answers.

Finally, when read aloud in a conference setting, the scholarly paper tacitly suggests something not only about the author's deep engagement with the subject matter, but about the audience's capacity for following the argument. Regardless of Gerodimos' warning about an audience's low tolerance for read-aloud scholarly treatises, the paper asserts that those attending the presentation *are* capable of engaging in the kind of sustained, rigorous intellectual activity necessary to appreciate the complex ideas that it elaborates.

I turn now to a similar consideration of the implications of speaking to PowerPoint slides projected on a screen as a primary presentation strategy. Presentation how-to guides tend to advocate the use of PowerPoint (which I am using generically, like Kleenex instead of tissue, to denote slideware) as good practice. Turning once again to Gerodimos (2004), we find the suggestion that using PowerPoint, at the recommended rate of one slide per minute, "will really show respect for your audience and for the event" (p. 2). And for many professional groups,

slideware has indeed become *de rigeur* at conferences. For example, after attending the 1998 conference of the Association for Educational Communications and Technology (AECT), two members observed that PowerPoint seemed to have become "the new standard for research dissemination" (Hlynka & Mason, 1998, p. 45). When I attended an AECT conference seven years later, I found this conclusion to be amply supported; in fact, at that time another presenter told me that his audience had more or less departed *en masse* when he began to read aloud from a paper. For this group of professionals, PowerPoint is the unquestioned default mode of presentation, a reality which was driven home for me during a breakaway session entitled "Moving Toward a Critical and Humanizing View of Instructional Technologies." When I asked the presenters why, given their topic, they would choose to use slide after slide of bulleted lists, I was met with blank looks: they simply had not considered *not* using PowerPoint.

Nevertheless, PowerPoint has its detractors. One of the harshest indictments is offered by Edward Tufte, whose monograph on *The Cognitive Style of PowerPoint* (2003) sparked a highly polarized discussion about the benefits and drawbacks of using PowerPoint in presentations. Tufte reels off a number of criticisms, concluding that PowerPoint is inherently "contrary to serious thinking. PP actively facilitates the making of lightweight presentations" (p. 26). Of course, PowerPoint's capabilities allow for the creation of displays that do not contain the hierarchical bulleted lists and cutesy clipart that Tufte condemns. However, the remarkable uniformity of most PowerPoint slides is indicative of the extent to which the program does indeed predispose users to display information in largely predetermined formats.

Both supporters and detractors would probably agree that, like the scholarly paper, a PowerPoint display makes some important tacit assertions when used as the basis for a convention presentation. First, a PowerPoint display asserts the primacy of information over ideas. While ideas are generally too complex and ambiguous for representation in the reductive formats of a PowerPoint slide, it is comparatively easy to pare information down to disconnected fragments appropriate for use in bulleted lists. Therefore, a PowerPoint-based presentation tends to deal with the realm of the factual, things that *are* (such as existing programs and projects) while eschewing consideration of things that might be, the realm of speculative thinking. Because PowerPoint is increasingly used not simply to present but to marshal one's thoughts, even those who begin with ideas are likely to find that, in the very process of "PowerPointing" those ideas, they are somehow transmuted into useful information. For example, the ideas explored in this paper might give way to bulleted lists of best practices for presenting at conferences. Information also has an aura of utility that relates it to action rather than thought. We are not meant to spend long hours contemplating and debating the points on a PowerPoint slide; rather, the information is offered as something we can act upon. Thus, as an "information design" expert, Tufte (2003) criticizes PowerPoint chiefly on the basis of its inability to display information adequately, so that viewers can act appropriately—the reason, Tufte argues, for the loss of the space shuttle Columbia (pp. 7-11).

Second, PowerPoint, with its origins in the business world, asserts that efficiency is a core value of both the presenter and the audience members. A PowerPoint display is the distilled essence of a topic, minus the unnecessary complexity of rhetorical embellishments and verbiage indicating logical connections and flow. Of course, these elements can be present in the spoken narrative that accompanies the display; however, because the presenter is "speaking to" not only the audience but to a display that asserts the importance of communicating information efficiently, they often are not. The tendency to avoid complexity is exacerbated when PowerPoint is used not just to present but to develop presentations. Because the program

compels users, especially those many who eschew use of the awkward "Notes page" feature, to conceptualize their topics from the beginning in terms of efficient bulleted points, there is ever less likelihood of verbal flourish or connective tissue creeping into even the spoken component of the presentation.

Finally, PowerPoint asserts the superior communicative power of technology. In PowerPoint presentations, technological effects and imagery—including elaborate backgrounds, clipart, and screen dissolves—tend to take precedence over verbal content, which becomes ground rather than figure. Savvy audience members attend not to the speaker but to the screen, for they understand that it is not the case that the technological imagery supports the spoken words but that the words exist in order to provide "opportunity for another visual expression" (Ellul, 1985, p. 126). Further, because all eyes are on the screen, it is the technological virtuosity of the PowerPoint display, rather than connections or contributions to a body of knowledge, that itself confers upon the presenter the authority to present.

A number of PowerPoint supporters have countered Tufte's critique by insisting that slideware is, after all, just a tool that can be used well or badly. For example, asked in an online interview to assess Tufte's analysis, educational psychologist Richard Mayer responded that "PowerPoint is a medium that can be used effectively—that is, with effective design methods— or ineffectively, that is with ineffective design methods" (Atkinson, 2004).

McLuhan (1964) dismisses this kind of argument as "the numb stance of the technological idiot" (p. 18). Certainly, we cannot deny the importance of human agency and decision-making—on the contrary, as I have already observed, many canonical media ecology texts emphasize the need for a wise, considered use of technology. However, media ecology is premised upon the fundamental understanding that all modes of communication have certain unique predispositions. PowerPoint is not "just a tool": like any medium, it changes how its users think, what they think about, and what they value. Therefore, we can expect that those individuals who choose to read aloud from a scholarly paper and those who choose to present with PowerPoint slides will be predisposed to think rather differently about the purposes of their presentations, of the MEA convention, and of the field of media ecology as a whole.

What is the nature and extent of those differences? As suggested above, reading aloud from a scholarly paper arises from and reinforces a conception of the MEA convention as a forum for the sharing of ideas. Those using this mode of presentation will be predisposed to refer to and value traditional media ecology texts and, like the authors of those texts, to explore from many perspectives the diverse roles that media play in human lives. They will also be inclined, by virtue of the deep thought required to produce a paper, to take positions—to express "a definite view about whether or not a medium contributes to or undermines humane concepts" (Postman, 2000, p. 13), and to regard the convention as an opportunity for dialogue and debate about those views. This will lead them, perhaps, to concur with Postman (2000) that media ecology is a branch of the humanities, a field whose primary purpose is "to further our insights into how we stand as human beings, how we are doing morally in the journey we are taking" (p. 16).

A PowerPoint-based presentation, on the other hand, arises from and reinforces a conception of the convention as a forum for the exchange of new information. Those using this mode of presentation will be predisposed to regard their presentations as a means of disseminating useful factual knowledge about media-related programs and projects. Consequently, PowerPoint biases its users to be less interested in media effects than in media innovations and applications, and less interested in taking a historical and cultural perspective on media development than in prophesying future trends. These perspectives will lead PowerPoint users to regard media

ecology primarily as a field devoted to the exploration of the many uses and manifestations of new media.

So, this said, how *should* media ecologists present their ideas? Like most questions worth asking, my title question defies an easy, definitive answer. Furthermore, as a media ecologist, I have two very different models for formulating my response.

On one hand, I might turn to McLuhan (1964), who insists upon the importance of "withold[ing] all value judgements when studying these media matters" (p. 315), for determinations of good or bad, right or wrong, tend to stand in the way of true understanding. Taking my cue from McLuhan, I might sidestep the necessity of rendering judgement by emphasizing the inherent diversity of the MEA conventions—the variety of topics, perspectives, disciplines, and presentation styles; and I might further expound upon the fact that such diversity is appropriate and the basis of a healthy ecology, whether we are talking about the natural world or the information environment.

Frankly, however, I have long been troubled by McLuhan's stance of presumed neutrality, which he wears like a rather uncomfortable mask—a mask that distracts me from the brilliance of his performance, for I am constantly looking and hoping for moments when the mask slips, allowing the vigilantly suppressed values and attitudes to shine forth. At this point, moreover, I don't think I could lay claim to neutrality, even if I wanted to, since I have made little effort to conceal where I stand on the question of how media ecologists should present their ideas. Indeed, the very phrasing of my title question is a deliberate give-away, since I have asserted that the bias of PowerPoint is to transmute ideas into information.

Therefore, in addressing the question of how media ecologists should present their ideas, I choose instead to model myself after Postman, who, as noted above, regards value judgements as the essence of media ecology, and a moral perspective as what makes the study of media forms relevant and important. Like Postman, "I don't see any point in studying media unless one does so within a moral or ethical context" (2000, p. 11).

Postman suggests that the ethical study of media and their effects should include a consideration of the extent to which a medium contributes to the development of rational thought and gives access to meaningful information—the kind of information that will help us to live better lives. The foregoing analysis should make it quite clear where I stand on these questions vis-à-vis PowerPoint presentations, and why I worry about the increasing encroachment of slideware at MEA conventions. I have seen other associations fall into the PowerPoint rut, have seen rich opportunities for the exchange of ideas become quickly transmuted into mind-numbingly vapid spectacles in which each presenter trots out for display his or her obligatory set of disconnected fragments of information, leaving the audience dazed but no wiser. And it comes to pass just as Ellul (1980), our bleakest visionary, describes: "Naturally, we can say that it is man who decides. But technological growth has manufactured an ideology for him, a morality, and a mystique, which rigorously and exclusively impel his choices toward this growth. Anything is better than not utilizing what is technologically possible" (p. 235).

Anything is better than not utilizing what is technologically possible. Is that not exactly what the presenter at the seventh annual MEA convention was asserting when he was overheard wondering why anyone would choose to read aloud from a paper when there is so much new high-tech media available?

We need to remember why Postman chose the metaphor of ecology when naming this new field: to emphasize the importance of balance. When we talk about ecology, what we are really talking about is the way in which the equilibrium of an environment is affected by the interplay

of elements within it (Postman, 1979, p. 18). At the seventh annual MEA convention, many modes of presentation were used, and a state of equilibrium prevailed, even though the majority of presenters chose to either read aloud from a paper or speak to PowerPoint slides. (Perhaps this dichotomy was the result of an unconscious attempt to maintain such a balance.). If, however, PowerPoint becomes the unquestioned default mode of presentation, then we will slide into a state of imbalance. And we will have succumbed to a PowerPoint bias that will profoundly alter our understanding of who we are and what we do.

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