

A Cybernetic Session for Re-Mapping Communication Environments and How Technology is Reshaping Our Media Landscape

or

“A Boogie Woogie Bugle Ploy for Helping Our Companies See”

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This paper describes a workshop that combined an Applied behavioral science activity called a “Cybernetic Session” with Media ecology concepts to initiate re-mapping of the communication environment and generating dialog about how technology is reshaping our media landscape. During the session, 30–40 participants generated almost 1000 statements on 10 different current “communication media/technologies.” The paper summarizes the results of the workshop and provides data analysis, conclusions, and implications for future use.

UPON first becoming aware of the Fourth Annual Media ecology Association (MEA) Convention title and themes, one might raise questions, such as, “How have communication environments been mapped to date? How could and/or should communication environments be remapped at this time? How is technology reshaping our media landscape?” One might also ask, “What could such ‘re-mapping’ yield and how could it help us understand and better take actions under these new conditions?”

Current events and the previous MEA Convention provide “places to start,” clues and aids for beginning to answer these questions. Recent occurrences at this time such as the deposition of the Saddam Hussein regime in Iraq by the “Coalition Forces,” including the United States and the United Kingdom, with their use of both smart bombs and “embedded reporters” sending TV images via cell phones, suggest that looking at recent wartime eras would be relevant. Various presentations at the Third Annual Convention provided useful concepts and implied that media ecologists should pay more attention to interpersonal dimensions as well as interactive and behavioral science “tools” when examining media/technology trends and their effects (Bailey, 2002; Barnes, 2002; Cheyunski, 2002; Flayhan, 2002; Sternberg, 2002).

With these questions, “places to start,” and clues for answering them as a backdrop, the author of this paper conducted a special workshop at the Fourth Annual MEA Convention designed to utilize an applied behavioral science approach to “re-map” today’s communication media/technology environment. For the workshop, the author derived the subtitle “A Boogie Woogie Bugle Ploy to Help Our Companies See” from the World War II-period hit song by the Andrews Sisters, “Boogie Woogie Bugle Boy.” Discussion of this and other uses of music during the workshop will be discussed later. In this paper, the author gives background, rationale, assumptions, and an explanation of the approach used to generate “re-mapping data.” He also

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provides an analysis and summary of this information as well as discussion of conclusions from this activity that can be helpful in understanding its meaning and potential future use.

Background Contributing to the Cybernetic Session

TAKING together some of the major events that have occurred since 2001—the high tech downturn, the 9/11 World Trade Center/Pentagon/United Flight 93 tragedy, the conflagrations in Afghanistan and Iraq, political tensions with North Korea—we seem to be in an era that parallels the late 1940s to early 1950s: a time of economic depression/recession, war, and related adaptation/application of communication media and other technologies. During that period and the conditions spawned then, several disciplines began to arise that would contribute to and help us deal with the effects of technology. Cybernetics (i.e., the science of feedback and control), and applied behavioral science (i.e., theory and practice of group dynamics, organization development, and societal change) emerged in such works as those of Norbert Wiener (1948) and Kurt Lewin (1951) respectively. Foundations for what was to become media ecology began to appear in works like Marshall McLuhan's first book, *The Mechanical Bride* (1951).

The late 1960s and early 1970s were another time of conflict with the prominence of the controversy surrounding cultural change and the Vietnam War. In the aftermath of *Understanding Media* (McLuhan, 1964), McLuhan published such titles as *War and Peace in the Global Village* (McLuhan & Fiore, 1968) to further help elucidate the effects of electronic technology and happenings at that time. For that particular book, McLuhan (with assistance from his son) interpreted and used the “10 Thunders” from James Joyce's (1939) *Finnegans Wake* as a framework of human technological development. He also began the work that would eventually appear later as *Laws of Media* (McLuhan & McLuhan, 1988).

By the late '60s and early '70s, cybernetics and applied behavioral science had also become more prominent. The word “cybernetics” was widespread, as the concepts it represents were used by American corporations in the form of mainframe computers and extensive automation of their operations. Applied behavioral science emerged from experiential educational offerings to be utilized by corporate managers to improve work group and organizational effectiveness (e.g., Bennis, Benne, & Chin, 1969; Burke & Hornstein, 1972).

As time proceeded, cybernetics extended from its use in computers to personal computers (PCs) and then to the expansion of the Internet after the first Gulf War between the United States and Iraq. With the progress of the 1990s, applied behavioral science came to be used to facilitate not only group and organization development (see French & Bell, 1990) but also organizational changes accompanying the introduction of increasingly sophisticated networked information systems (Davenport, 2000). Each of these disciplines had shown their strengths, but with the “irrational exuberance” of the “tech bubble,” the subsequent downturn and wars that have ensued have also indicated that there are also unintended consequences that deserved attention. With the renewed currency of McLuhan's concepts in helping explain the digital age (e.g., see Levinson, 1999), and the formation of the Media Ecology Association in 1998, it appeared appropriate and timely to deliberately combine and utilize some of the “tools” that had evolved to that point in order to re-examine more recent developments.

Cybernetic Session Rationale and Assumptions

WHEN the Fourth Annual MEA Convention title and themes were announced, the author believed that using media ecology concepts with an applied behavioral science approach would provide an interesting vehicle for *Re-mapping Communication Environments* and generating dialog about “How Technology is Reshaping Our Media Landscape.” The initial idea was that conceptual frameworks and tools such as those described in McLuhan’s *War and Peace in the Global Village* (McLuhan & Fiore, 1968) and *Laws of Media* (McLuhan & McLuhan, 1988), particularly the tetrad, would provide useful vehicles for examining and generating data on a number of current “communication media/technologies.” MEA convention attendees, as people interested and knowledgeable about current events, communication media, and new technologies and their effects, would be resourceful contributors of tetrad data. An applied behavioral science approach called the “Cybernetic Session—a technique for generating and gathering ideas, quickly and effectively from people in moderately-sized to large groups” (Hall & Dixon, 1974) would provide an interesting and efficient vehicle for surfacing tetrad data. Such a session could also provide a stimulating plenary event for involving convention attendees, providing a shared experience, and promoting wider discussion among them on the topics addressed that could carry on during and after the convention. The author thought that small groups of participants could quickly develop some initial theme material that would assist in debriefing the experience with the total group and help in providing some closure to the event. He also felt that the data could subsequently be analyzed and arrayed in tetrad form within this article and provide the basis for some overall conclusions as well as indications for further applications and inquiry.

Workshop Description and Explanation

FORTUNATELY, convention planners accepted the proposal for the Cybernetic Session and slotted it in the schedule as an hour workshop. Because there was another session as well as demonstrations and displays during the same time period, the author’s offering drew 35–40 participants. Those participating ranged from some seasoned MEA veterans to a large contingent of students involved in summer media ecology courses. Facilities for the workshop consisted of a large lecture hall well equipped with audio-visual devices that allowed participants to gather as a total group, hear and view the introduction, and then be divided in small groups at 10 Tetrad Stations.

The actual workshop began with some context setting and explanation of the tools to be used, specifically, the tetrad, Cybernetic Schedule, Tetrad Stations/listing of current communication media/technologies, and music. The author explained how the workshop would be a fast-paced, involvement-oriented session that would combine media ecology (focusing on the study of media environments and the effects of technology) and applied behavioral science (concerning the theory and practice of group dynamics, organizational and societal change) to “Re-map the Communication Environment.” He proposed that by combining media ecology and applied behavioral science in such a way, those involved could contribute to understanding and illuminating the convention themes as well as help foster adaptation to new conditions. Becoming more specific, the author went on to explain that the workshop would use the McLuhan tetrad and a cybernetic session approach to examine how current “technologies” are reshaping our media landscape.

Continuing to provide background, the author described how Marshall McLuhan and several of his associates originated the tetrad as a perceptual tool for surfacing the hidden effects of any communication media, technology, or other human innovation (McLuhan, 1998; McLuhan & McLuhan, 1988; McLuhan & Powers, 1989). He mentioned that according to McLuhan (1988) and his “Laws of Media,” the tetrad represents four questions one can ask about any medium or technology: (1) what does the medium enhance?; (2) what does it make obsolete?; (3) what does it retrieve?; and (4) into what does it reverse, flip, or transform, when pushed to extremes? The author suggested that any medium, technology, or human innovation is subject to this four-part process. A technology tends to *enhance*—enlarge, amplify (or miniaturize), increase, accelerate (retard)—certain capabilities, traits, or qualities; e.g., the zipper enhances clasping. It can *obsolesce*—displace, sideline, push off center stage—other items; e.g., the zipper obsolesces buttons. A medium can also *retrieve*—bring back the old, update, revive—different features; e.g., the zipper retrieves flowing robes. And taken to its limits, the innovation can *reverse*—flip into, transform, or change state (like caterpillar to butterfly)—into another form; e.g., the zipper reverses into Velcro[®].

Next, the author handed out an individualized Cybernetic Schedule to each person and instructed participants to go to the first Tetrad Station listed on their own schedule. The Cybernetic Schedules listed letters (A–J) representing 10 different Tetrad Stations. With the participants at the initial Tetrad Station on their Cybernetic Schedule, the author “talked them through” how they would brainstorm aspects of a communication media/technology tetrad topic. He showed how they would write and post “sticky note” statements on ways the communication media/technology tetrad topic “enhances,” “obsolesces,” “retrieves,” and “reverses” into various traits (see McLuhan, 1998). He described how when given a signal they would proceed to the next letter on their Cybernetic Schedule and repeat the process for the next indicated Tetrad Station topic.

While participants listened at their first Tetrad Station, the author explained that by following their individual Cybernetic Schedules, they would go to each of the 10 Tetrad Stations twice (20 rounds). At each Station, they would brainstorm and record their statements as indicated earlier. The Tetrad Stations consisted of topics representing a listing of current communication media/technologies in keeping with McLuhan’s broad definition of those terms. The Tetrad Stations were designated as follows: (A) English as Business Language; (B) Business Casual; (C) Personal Data Assistant—PDA (e.g., Palm Pilot); (D) e-Store (Web site, FedEx, ATM/Debit/Smart Card); (E) Copier/Fax/Printer/ Scanner; (F) E-Mail, Cell Phone, Broadband, Wireless; (G) CDs, MP3s, File Sharing; (H) DVD, Pay per View, Cineplex ; (I) 747, SUV, Telecommuting ; and (J) Cable, Satellite, HDTV. At the beginning of the workshop and throughout, music was used as a mood setter and timing device. Music from the Andrews Sisters helped the author relate the subtitle, make the tie-in to current and previous war times, and convey the background and rationale for the workshop. During each of the 20 rounds, music played for the minute that people brainstormed at their Tetrad Station, and then they had a half minute to get to their next station and begin again. For the most part, music was taken from different eras, beginning with World War II, and consisted of hit songs reflecting the mainstream ambience from those times (e.g., Korean War, Vietnam War, Gulf Wars I and II). The author also represented music that mentions current technologies, such as a few songs taken from recent television commercials, while not promoting particular styles or tastes (Cogan, 2003). The “round” songs started with “Boogie Woogie Bugle Boy” by the Andrews Sisters and proceeded in alphabetical order of the artist’s names performing them. Other numbers ranged from

“Istanbul (not Constantinople)” by The Four Lads to “Dig In” by Lenny Kravitz. Destiny’s Child’s version of “Boogie Woogie Bugle Boy” served as a reprise at the end of the workshop.

For 30 minutes, participants contributed to tetrads by listing characteristics that each technology *enhances*, *obsolesces*, *retrieves*, and *reverses*. The individual Cybernetic Schedules were deliberately arranged to foster random yet structured interactions among participants for contributing and collaborating in producing information on the different Tetrad Station topics. The 20 rounds permitted those involved to return to stations they had been to before, providing feedback, enriching contributions, and fostering conversation and insights. Energy was high and participants appeared engaged.

After the interactive exercise, people remained at their last Tetrad Station, where they then spent five minutes developing theme material for that particular tetrad. Finally, there was a brief period for total group debriefing, reflection, commentary (e.g., an awareness of the “up-sides and down-sides” of technology change made evident by the tetrad process), and concluding remarks. Remarks referred to how the data generated provided material for constructing “a conceptual map” of the current communication environment, technology and media landscape (related to the *War and Peace* framework—see below). The discussion that ensued and later feedback are included in the analysis and summary that follows.

Session Data Analysis and Summary

DURING the Cybernetic Session, participants generated almost 1000 statements on 10 different current communication media/technologies. In the time after the convention and prior to the submission of this paper, the author analyzed the data captured in several ways. He entered tetrad items and coded them within a Microsoft Excel spreadsheet by each technology and tetrad quadrant, respectively. His subsequent action was to develop the Cybernetic Session statistics (see Figure 1) for the items and sorting them in a number of ways, e.g., alphabetically, by different codes, as entered, and then overall. The author used the results of these actions in recognizing affinities and categorizing items as well as in looking for broader items.

He also constructed the Cybernetic Session play list that is a composite of songs used during 20 rounds (see Figure 2); song lyrics were noted as material that could also be used in connection with summary versions of the tetrads based on compiled information. The author then developed summary tetrads (see Figures 3–12) consisting of category statements and including a few thematically selected song lyrics.

While not addressing the particular tetrads (letting the summary versions speak for themselves) or getting too analytical, it is possible to give some observations about the tetrad data overall. The tetrad data seem to indicate that those participating were familiar with the current media/technologies selected and their effects. They seemed most well acquainted with “e-Mail, Cell Phone, Wireless” and least with “Personal Data Assistant.” More specifically, technologies receiving the highest number of responses in descending order were “e-Mail, Cell Phone, Wireless,” “e-Store (Web site, FedEx, AMEX),” “Copy, Print/Scan, Digital Imaging,” “DVD, Pay per View, Movieplex,” and “Cable, Satellite, HDTV.” Media that had the fewest responses in descending order were “Business Casual,” “CD, MP3, File Share, Down Loads,” “SUVs, 747s, Telecommuting,” “English as Business Language,” and “Personal Data Assistant.” The media with higher responses seemed to be near the middle of the range of the 10 tetrads listed from A–J, i.e., D, E, and F. Tetrads A to C had a lower average score than G and H.

Furthermore, participants were readily able to list items that these media *enhance* and make *obsolete*, but had more difficulty coming up with what they *retrieve* and *reverse* into when pushed to extremes. *Enhance* statements occurred most often, whereas *retrieve* phrases occurred least often. “DVD, Pay per View, Movieplex” had the most *enhancements*. “E-Mail, Cell Phone, Wireless” was the one with the most *obsolesce* items and tied for the most *retrieval* items. “E-Store (Web site, FedEx, AMEX)” also tied for the most *retrieve* statements and had the top number of *reversal* phrases. “Copy, Print/Scan, Digital Imaging” was the only tetrad at or above average in all four areas. “Personal Data Assistant” was the one with the least *enhance* and *retrieve* items. “SUVs, 747s, Telecommuting” had the fewest *obsolesce* statements, while “CD, MP3, File Share, and Down Load” had the fewest *reversal* phrases.

In terms of recurring statements, several items did show up quite often in four to seven different tetrads. These statements included the words “choice,” which occurred 17 times (in *enhance*), and “paper,” which occurred 10 times in statements (mainly in *obsolesce*). Other words appearing in phrases often included “global” (13 times), “personal” (12 times), and “time,” “uniformity,” and “control” (10 times each), mixed among *enhance*, *obsolesce*, *retrieve*, and *reverse* to different degrees. Occurrence of these words might suggest that while current media make “choice” more prominent and “paper” less important, they make dealing with “time,” “uniformity/control,” the “personal,” and the “global” more problematic.

In this analysis, the author also assembled the original and earlier mapping of the communication media/technologies addressed by McLuhan (see Figure 13). He developed an updated version of what appeared as McLuhan’s (1968) depiction of Joyce’s ten thunders from *Finnegans Wake* in *War and Peace in the Global Village* that encapsulate the effects of technology in human development to the mid-twentieth century. Specifically, he used the summary tetrads (see Figures 3–12) and the themes (see Figure 13) developed by workshop participants against the “originals” of a “*War and Peace* framework” as a start in providing a means for “re-mapping our current communication environment” and understanding how such technologies are reshaping our media landscape. For example, one of the workshop tetrads with the most responses, “e-Mail, Cell Phone, Wireless,” which extended from McLuhan’s “Industrial Revolution” and “Electricity, Telegraph and Telephone,” was re-mapped into “Connectedness and Commerce.”

With regard to the “*War and Peace* framework,” one can make a few inferences. First, let us briefly review the meaning of the main aspect of the framework, the ten thunders, as outlined in *War and Peace in the Global Village* (McLuhan & Fiore, 1968) and explained in *The Role of Thunder in Finnegans Wake* (McLuhan, 1997). In the order in which they appear (and as two groups of five), the thunders represent the dis-integration of the human sensorium from man’s first use of “tools” to mechanization and fragmentation during the industrial revolution and its reintegration via electronic communication media/technology—the “Finn-again” cycle: human reaction to technological innovation, identity loss, and breakdown with accompanying violence—physical to psychological—(war) as we struggle to retain, regain, or forge a new sense of self and affiliations that have been lost (peace). Movement proceeds from archetypal unity to the mechanistic repetition of cliché and back (McLuhan & Watson, 1971). Some of the wartime songs utilized (see Figure 2), such as “Boogie Woogie Bugle Boy” by the Andrews Sisters (1946), then Bette Midler (1973) and Destiny’s Child (1990), or “Istanbul (Not Constantinople)” performed by The Four Lads (1953) and They Might Be Giants (1991), also represent this cyclical quality.

Based on the tetrad data, there is more emphasis on the communication media/technologies straddling the fifth thunder in the “*War and Peace* framework” as we get under way in the twenty-first century, i.e., “e-Store (Web site, FedEx, AMEX),” “Copy, Print/Scan, Digital Imaging,” and “e-Mail, Cell Phone, Wireless.” Since the seventh through tenth thunders average higher than the first through third, one way to look at the data is to suggest that perhaps we are “rewinding” from the tenth thunder towards the first, as McLuhan has described (McLuhan, 1964b), with an emphasis on the concentration points described. While we are engaged with the more organic electric technology, we are still struggling with the human reaction to technological innovation—making “choice” more prominent, “paper” less important, and dealing with “time,” “uniformity/control,” the “personal,” and “global” more at issue. We pick up on the *enhancements* and *obsolescence* but are less in tune with *retrieval* and *reversal* as we contend with themes such as “Connectedness & Commerce,” “Personal Production,” and “Business and Organizational Hubs” (see Figure 13).

Conclusions

THIS paper describes a workshop conducted at the Fourth Annual MEA Convention that combined an applied behavioral science activity called a “cybernetic session” with media ecology concepts to generate information related to the Convention theme. The workshop made use of tools including the Tetrad, Cybernetic Schedule, 10 Tetrad Stations with communication media/ technology topics, and music from major eras since World War II. The author analyzed the near 1000 statements generated by workshop participants and used the resulting summaries and analyses. Using this information, he populated and interpreted a framework derived from *War and Peace in the Global Village* (McLuhan & Fiore, 1968) for re-mapping our communication environment and beginning to examine how technologies are reshaping our media landscape.

While we can speculate about current communication media/technologies based on the workshop data, there are also many questions and much questioning possible. The interpretation of the data may be questioned as well as many aspects of the approach itself. Were the assumptions and rationale of the session fulfilled? Were the “current communication media/technologies” addressed the most appropriate? Were the times devoted to setup, explanation of concepts, and processing adequate? Were the song selections and lyric choices optimal? Was the interpretation of the data appropriate? Were there enough people involved and enough data generated to be able to permit any real conclusions? Does this approach enable a way to re-map the communication environment and explore how technology is reshaping our media landscape? Could the session have been even better used as a plenary session framing the convention and creating dialogs to be addressed throughout and in the final panel? Does the session suggest alternative approaches to pedagogy and convention design? Answers to these questions could certainly be interesting and variable. However, one can suggest that even though space does not allow them to be addressed here, the questions themselves remain valuable.

While feedback for the workshop did include some constructive criticism, most comments were very positive. Along with the participant responses, there are also a number of things that one can say about such a workshop approach. One might say that this kind of offering *enhances* variety and involvement, *obsolesces* having just typical presentations, *retrieves* music, fun, and dialog, and when pushed to extremes, *reverses*, flips, and transforms into intellectual stimulation and new insights (see Figure 13). It serves as an anti-environment for most such conference

sessions (e.g., students found the session exciting and interesting, while most scholars sought more familiar ground). It is the type of activity that can occur not only in an academic-oriented situation, but also in business settings. Such an activity parallels convention speakers Leonard Shlain and Camille Paglia in their pleas to pay attention to the arts for clues on understanding other eras and current events (Shlain, 1988; Paglia, 1991). It reinforces the advice of convention speaker James Carey (Carey, 1988) to “read Innis” (i.e., recognize historical cycles—*retrieval*), as well as speaker Lance Strate (Strate, 2000) in his call for the Media Ecology Association to move from the archetype of “firsts” to the cliché of building a sustainable organization (*reversal*) in our time of “Connectedness & Commerce,” “Personal Production,” and “Business and Organizational Hubs.” These are but some of the ways to use such a “A Boogie Woogie Bugle Ploy to Help Our Companies (and other organizations) See” along with Destiny’s Child’s “blowing reveille” with the “hip hop boy from Company B.”

In any case, like the recent film of the same name (Jonze, 2003), the author believes that this workshop demonstrates that it is possible to recognize the need for and practice “adaptation.” We can be like scriptwriter Charlie Kaufman trying to help translate a literary book about an “orchid thief” into an entertaining and commercially successful movie. We can bring together media ecology and applied behavioral science, blend the academic and business, the artistic and commercial. It is possible to employ such “tools” to foster understanding of our ever-changing media landscape as well as actions for survival, benefit, and enlightenment.

[Figures begin on the following page.]





Figure 1 - Cybernetic Session Tetrad Statistics

	Cybernetic Session Tetrads and Numbers of Items by Tetrad Element										Totals	Averages
	A	B	C	D	E	F	G	H	I	J		
	English as Business Language	Business Casual	Personal Data Assistant	e-Store (Web site, FedEx, AMEX)	Copy, Print/Scan, Digital Imaging	e-Mail, Cell Phone, Wireless	CD, MP3 File Share DownLoad	DVD, Pay per View, Movieplex	SUVs, 747s, Telecommuting	Cable, Satellite, HDTV		
Tetrad Elements												
Enhance	31	31	27	35	35	28	30	38	34	30	319	32
Obsolcesce	23	26	30	27	28	41	26	32	21	28	282	28
Reverse	18	18	16	28	21	25	15	17	18	21	197	20
Retrieve	15	17	10	20	18	20	19	15	16	14	164	16
Total	87	92	83	110	102	114	90	102	89	93	962	96

Figure 2 - Cybernetic Session Play List

Round	Song	Artist	Album/Source	Original Release Date
1	Boogie Woogie Bugle Boy	Andrews Sisters	Andrews Sisters: Capitol Collectors Series, 1991	1946
2	Things Have Changed	Bob Dylan	Essential Bob Dylan , Columbia, 2000	2000
3	The Letter	Box Tops	Bese of the Box Tops, Soul Deep , Arista, 1996	1967
4	Love & Mercy	Brian Wilson	Brian Wilson , Sire/Rhino Rerelease, 1998	1988
5	Gonna Make You Sweat	C+C Music Factory	Gonna Make You Sweat , Sony, 1990	1990
6	Days Go By	Dirty Vegas	Dirty Vegas , 2002	2002
7	Telephone Line	Electric Light Orchestra	ELOs' Greatest Hits , Epic, 1979	1976
8	Anything You Can Do	Ethel Merman	Annie Get Your Gun , Original Cast Album Remasterd, Polygram, 2000	1946
9	Istanbul (Not Constantinople)	Four Lads	Four Lads Most Requested Songs , Sony, 1986	1953
10	Cars	Gary Numan	The Pleasure Principle , Beggars Banquet, 1998	1979
11	Brainwashed	George Harrison	Brainwashed , Capitol, 2002	2002
12	Dig In	Lenny Kravitz	Lenny , Virgin, 2001	2001
13	Get Here	Oleta Adams	Circle of One , Uni-Mercury, 1991	1991
14	It's the End of the World as We Know It	REM	Eponymous , Warner Brothers, 1988	1988
15	Ahhh	Run D.M.C.	Crown Royal, Arista, 1999	1999
16	Gonna Getcha Good	Shania Twain	Up (Red/Green), Mercury, 2002	2002
17	Man of Constant Sorrow	Soggy Bottom Boys	O Brother Where Art Thou Soundtrack, Universal, 2000	2000
18	Born to be Wild	Steppenwolf	Steppenwolf, MCA, 1968	1968
19	I Just Called to Say I Love You	Stevie Wonder	Natual Wonder , Mowtown,1995	1984
20	Satellites	Sugar Ray	Sugar Ray, Lava, 2001	2001
Reprise	Boogie Woogie Bugle Boy	Destiny's Child	Born to Sing , East/West,1990	1990





Figure 3 - Station A: Tetrad for English as Common Business Language

 Enhance	Reverse 
<ul style="list-style-type: none"> • Learning English • Facility in Communication • Commonality, Uniformity • Global Economy 	<ul style="list-style-type: none"> • Local Language Celebration • Variety, Diversity, Creativity • Class Structure, Hostility, Babel • American Imperialism, Monopolies Control, Globalism
 Retrieve	Obsol esce 
<ul style="list-style-type: none"> • Universal Communication, e.g. Latin in Middle Ages/Renaissance • Dialects, Foreign Accents • Language Studies & Literature • British Empire, Commonwealth, Colonization 	<ul style="list-style-type: none"> • Other Local/National Languages for Business • Non-English Learning, Reading • Messenger Services, Translators • Cultural Heritage, Diversity, Tolerance

“... Even old New York was once New Amsterdam, why they changed it I can't say, people just liked it better that way . . . why did Constantinople get the works? that's nobody's business but the Turks“ The Four Lads, 1953





“... you may think you may see me no more, but one promise that is given, I'll see you on God's golden shore . . .” The Soggy Bottom Boys, 2000

Figure 4 - Station B: Tetrad for Business Casual

 Enhance	Reverse 
<ul style="list-style-type: none"> • Comfortable, Relaxed Atmosphere • “Designer,” Trendy Casual Clothing • Money Savings • Interpersonal Communication • Gender Equity 	<ul style="list-style-type: none"> • Reduced/Hidden Hierarchy • Cultural Formality, Conformity • Closet Space Used in Other Ways • Identity Quest, Body Piercing, Tattoos • Offensiveness to Different Clients & Cultures
 Retrieve	Obsol esce 
<ul style="list-style-type: none"> • Corporate Culture, Teamwork, Democracy • Leisure, Youth, Individuality • Cursing, Profanity • Past Adornments, Colors & Styles, e.g. Bare Midriff of Belly Dancer 	<ul style="list-style-type: none"> • Professionalism, Etiquette • Judgment by Appearance • Ties, Shoulder Pads, Pantyhose, High Heels • Class Consciousness




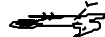
“... gonna take dancin' lessons to the jitterbug rag, ain't no short cuts, gonna dress in drag, only a fool would think they've got anything to prove . . . “ – Bob Dylan, 2000

Figure 5 - Station C: Tetrad for Personal Data Assistant (e.g. Palm Pilot)

 Enhance	Reverse 
<ul style="list-style-type: none"> • Flexibility and Multi-tasking • Organization, Planning & Budgeting • Convenience • Spelling, Access to Resources • Narcissism • Finger Pointing 	<ul style="list-style-type: none"> • Loss of Memory, Vulnerability • Less Socialization, Actual Human Interaction • Individual Technology Obsession • Schedules Drive Choice • Return to Handwriting
 Retrieve	Obsolesce 
<ul style="list-style-type: none"> • Writing Tablets • Address Books, Phone Books, Dictionaries • Pockets 	<ul style="list-style-type: none"> • Post-Its, Paper Clips, Pens • Vacations, Free Time • Shorthand & Dictation • Spontaneity • Distance Between Self and Group • Business Cards




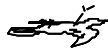
“Days go by and still I think of you . . . “ Dirty Vegas, 2002
 “Once you dig in . . . you’ll come out on the other side . . . “ Lenny Kravitz, 2001

Figure 6 - Station D: Tetrad for e-Store (Web-site, FedEx/UPS, Credit/Debit/Smart Card)

 Enhance	Reverse 
<ul style="list-style-type: none"> • Shopping, Buying, Purchasing • Convenience, Speed, Ease • Opportunity, Choice • Credit, Payment • Globalization 	<ul style="list-style-type: none"> • New Kinds of Buying/Business Experience • Materialism, Hype and Fraud, Loss, Identity Theft • Lack of Privacy, Control • Greed, Debt, Bankruptcy, Cut-backs
 Retrieve	Obsolesce 
<ul style="list-style-type: none"> • Bazaars, Trading Companies • Itinerant Peddler, Door to Door Salesman, Pony Express • Vintage Clothes, Styles, Collecting • Pickpockets, Pirates 	<ul style="list-style-type: none"> • Window Shopping, Mom & Pop Corner Store, Malls • Buying in Person • Cash, Taxes, Regulatory Law • Job Security




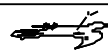
“ Head out on the highway, lookin’ for adventure, gotta make it happen . . . “ Steppenwolf, 1968
 “. . . you’re a fine piece of real estate and I’m gonna get me some land . . .
 gonna getcha real good” Shania Twain, 2002

Figure 7 - Station E: Tetrad for Copier, Printer, Scanner, Digital Imaging

 Enhance	Reverse 
<ul style="list-style-type: none"> • Quality Copies, Cheap • Mass Publication, Information Flow, History, Documentation • Photos, Visual/Clip Art, Use of CD Video • Visual Thinking • Long Distance Relationships 	<ul style="list-style-type: none"> • Blurring of Original and Copy • Unnecessary Copying, “Killing Trees” • Plagiarism, Cheating • Micro Presses, Self-Publication • Manuscripts
 Retrieve	Obsolesce 
<ul style="list-style-type: none"> • Penmanship, Fonts, Handwriting • Cameras, Black & White Photos • Copy Art • Scribal Culture • Page Layout & Aesthetic 	<ul style="list-style-type: none"> • Carbon Paper, Mimeograph, Photo Developing, Polaroid, Film, Telegraph, Mail • Ownership & Intellectual Property • Fountain Pen, Letter Writing • Original Art • Messenger Services




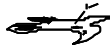
“Anything you can do I can do better, I can do anything better than you . . .” Ethel Merman, 1946
 “. . . it’s the end of the world as we know it, and I feel fine . . .” REM, 1988

Figure 8 - Station F: Tetrad for e-mail, Cell Phone, Wireless, Broadband

 Enhance	Reverse 
<ul style="list-style-type: none"> • Speed, Efficiency • Fun • Contact • Learning • Control 	<ul style="list-style-type: none"> • Blurs Privacy • No Vacation, Ability to Get Away • Long Distance Relationships • Spam, Telemarketing, Pornography, Fantasies, Fraud • Loss of Identity
 Retrieve	Obsolesce 
<ul style="list-style-type: none"> • Village, Small Town Feel • Escapism • Intimacy • Letter Writing 	<ul style="list-style-type: none"> • Face to Face • Formality, Patience • Privacy • Telegraph, Newspaper, Paper, Postage, Air Travel




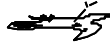
“. . . I’ll tell you everything, if you pick up that telephone . . .” Electric Light Orchestra, 1976
 “. . . I just called to say I love you . . .” Stevie Wonder, 1984

Figure 9 – Station G: Tetrad for CD, Digital Radio, MP3, Down Load Service

 Enhance	Reverse 
<ul style="list-style-type: none"> • Audio Quality, Compiling, Digitizing, Mixing, Sampling • Consumerism, Customization, Specialization, Music Communities • Experimentation, New Sounds, Fresh Media • Quantity, Control, Different Musical Tastes, Control 	<ul style="list-style-type: none"> • Piracy, Copyright Infringement, Viruses • Time Spent Down Loading, Deliberating • Alternate Distributors/Stores, Instant Audiences • Interactive Media
 Retrieve	Obsolesce 
<ul style="list-style-type: none"> • Classic Albums, Plastic/Vinyl, Hard to Find Music • Garage Bands, Home Grown Music, Small Studios • “Speak Easies,” Social Listening, Concerts • Childhood, Shared Interests/Items, Swapping, Dewey Decimal System 	<ul style="list-style-type: none"> • Cassettes, Turntables, Players, Records, Needles, Album Covers • Exotic Discoveries, Record Deals, Big Record Companies, Profit • Individual Creativity, Ownership, Copyright, Market Control, Live Music • Monetary Exchange, Human Interaction, Quiet





“ . . . let the music take control, let the rhythm move you . . . ” C+C Music Factory, 1990
 “Ahh . . . Run done did it again, hittin’ the fan, they droppin’ jams,
 stackin’ the cans” Run-D.M.C. 1999

Figure 10 – Station H: Tetrad for DVD, Pay Per View, Cineplex

 Enhance	Reverse 
<ul style="list-style-type: none"> • Home Entertainment, Play, Leisure • Choice, Variety, Convenience, e.g. Viewing, Copying • Consumption, Shopping, e.g. Food, Stories • Spending, Revenue, Profit • Control, Manipulation, Time Mgmt 	<ul style="list-style-type: none"> • Non-traditional Views of Film, e.g. Plot, Reality • Short Shelf Life, Piracy • Overindulgence • Interactivity Options, Cross-Media Tie-ins, Product Placement, Promotion • Less Depth, Quality Time
 Retrieve	Obsolesce 
<ul style="list-style-type: none"> • Classic Movies (Old & New) , Directors Cuts, Background Info • Folklore, Old Actors, Star System • Small Theaters, Street Puppet Shows, Drive-Ins, Popcorn • Hollywood Opulence • Personal and Shared Viewing (Crowds) 	<ul style="list-style-type: none"> • Live TV, Large Theaters, Single Screens • VCRs, Cassettes, Celluloid Prints • Individual Performers, Talent • Tickets, Cheap Night Out • Physical Activity, Conversation, Family Time




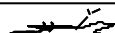
“ . . . sitting in a crummy movie with my hands on my chin, oh the violence that occurs, seems like we never win . . . love and mercy is what you need tonight . . . ” Brian Wilson, 1988

Figure 11 – Station I: Tetrad for SUVs, 747s, Telecommuting

 Enhance	Reverse 
<ul style="list-style-type: none"> • Ease, Affordability, Comfort of Travel • Use of Oil • Close Cultural Communication • Globalization • Virtual Offices, Empowerment 	<ul style="list-style-type: none"> • Not Enough Eye to Eye • Dependence on Oil, Fuel Efficiency • Blinding Headlights, Road Rage • War, Pollution, Disease, Terrorism, Homeland Security • Video Conferencing
 Retrieve	Obsolesce 
<ul style="list-style-type: none"> • Global Village, City Life • Walking, Bicycles, Trains • Machismo, Predatory Instincts • Leisure Time • Meeting, Sensing, Participating 	<ul style="list-style-type: none"> • Station Wagons, Small Cars • Environmentalism, Public Transportation • Road Courtesy • Face to Face

“ Give me a ticket for an airplane, ain’t got time for a fast train . . . ” The Box Tops, 1967
 “. . . I don’t care how you get here, just get here if you can” Oleta Adams, 1991

Figure 12 - Station J: Tetrad for Cable, Satellite, HDTV

 Enhance	Reverse 
<ul style="list-style-type: none"> • Sensory Experience, Experimentation • Bundling Services, Uniformity, Control • Choice, Diversity, More Channels • Advanced TV, Radio, • International Communication, Market Reach 	<ul style="list-style-type: none"> • Higher Format, Faster Delivery • Increased Expenses, Concentration of Information Services • Consumerism, Specialism, Brainwashing, Channel Surfing, Boredom, Lack of Focus, • Convergence with Computer, Phone • Decentralism, Localism, Digital Divide, Quest for a Voice
 Retrieve	Obsolesce 
<ul style="list-style-type: none"> • Classic Movies, TV Shows, Reruns • Museums, Libraries • Frontiers, Explorers, Commandos Retreats, Hermits • Realism, Human Form • “Make Believe,” Fantasy, Visions, Artistry 	<ul style="list-style-type: none"> • Reading, Writing, Poetry • Mass Audience, Uniformity, Local Programming, Network TV • Available Bandwidth, Scarcity of Time, Staying Power of Shows, Access without \$\$\$ • Antennas, Low Resolution Picture • Physical Activity, Human Interaction

“Brainwashed by the military, . . . under duress, . . . by the media, . . . the press, . . . by computer, . . . mobile phones, . . . the satellite . . . to the bone . . . God, lead us through this mess . . . ” George Harrison, 2002

“. . . I feel you tonight . . . through the satellite . . . and I think about it . . . ” Sugar Ray, 2001

Figure 13 - A Re-mapping of Our Communication Environment/Media Landscape

Thunder/ Station	FW/Theme	FW Technology Focus	Current Technologies	Current Theme
1/A (Fig. 3)	Paleolithic to Neolithic	Speech	English as Business Language"	Culturalistic to Globalistic?
2/B (Fig. 4)	Clothing as Weaponry	Clothing, Writing	Business Casual	Customs as Costumes?
3/C (Fig. 5)	Specialism	Wheel, Road	Personal Data Assistant-PDA (e.g Palm Pilot)	Individual Informatics?
4/D (Fig. 6)	Markets, Truck Gardens, Commercialism	Rail Road, Goods Circulation Money Transactions	E-Store (Website, FedEx/UPS, Credit Card)	Business & Organization Hubs?
5/E (Fig. 7)	Printing	Printing Press, Photograph	Copier, Printer, Scanner, Digital Imaging	Personal Production?
6/F (Fig. 8)	Industrial Revolution	Electricity, Telegraph, Telephone	Internet, Cell Phone, Wireless, Broadband	Connectedness & Commerce?
7/G (Fig. 9)	Tribal Man Again	Radio, Phonograph	CD, Digital Radio, MP3, File Share, Download Service	Surround Sound & Neo Oral Tradition?
8/H (Fig. 10)	Movies	Silent, Motion Pictures, "Talkies"	DVD, Pay per View, Movieplex	Virtual Entertainment?
9/I (Fig. 11)	Car and Plane	Automobile & Airplane	SUV's, 777's, Telecommuting	Trans & Teleportation?
10/J (Fig. 12)	The Charge of the Light Brigade	Television	Cable, Sate llite, HDTV	Media Convergence?

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