In an effort to contribute to the dialogue on the effects of the intensification of technology upon the structure and dynamics of human communication, this paper examines the views of technology in the works of Kenneth Burke and Walter Ong. The paper argues that their theories can be compatible, that Ong's view of writing as a technology which raises consciousness can supply what is missing in Burke's approach to rhetoric, and that Burke's satiric frame of rejection can be reconciled with Ong's "accepting yet not passive" approach to technology. First the paper discusses Burke's works, limited to three stages of his thinking about technology: the technological psychosis, the definition of man, and the "Helhaven" project--the imaginary, hypertechnological "culture bubble" on the moon. Then the paper considers Ong's concept of technology, which concentrates on the idea that technologies change the relationship between humans and information. Emphasis is placed on Ong's belief that writing is the most important technology, because only knowledge of writing allows for criticisms of other technologies. The paper concludes that Burke's satiric approach to technology is persuasive on purely empirical grounds. Burke insists that what is necessary to alleviate some of the ills of humankind is a fuller knowledge of what it means to be a symbol-using animal, while Ong's work suggests that such knowledge is only possible with the reflective capacity brought on by the interiorization of writing. In addition, both scholars will be remembered for having resisted an over-simplified explanation of the influence of technology. (Twenty references are appended.)
Division, Unity, and Consciousness Raising:
Burke and Ong on Technology

by

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You'll have an eight cylinder car in heaven—
Air Conditioning—
Indirect Lighting
a tile b' room and a white porcelain kitchen.

Despite the phenomenal growth of population, there'll be no traffic problem,
if you would drive out to the Garden of Eden
for a weekend

O the celestial sundaes—all flavors made with the purest chemicals

No strike — no speed up — no lay off —
everybody a coupon clipper in heaven,
living in peace, on the eternal drudgery
of the damned

All will be fragrant and quiet in heaven,
like the best real estate in Westchester.
All noise and stench segregated
to the under side of the railroad.

In heaven,
When you want something,
you just fill out an order
and your want is met like magic,
from the lower plants
Assembly rooms
Factories
Presses
Forges
Mines
Mills
Smelteries
and blast furnace
of hell

Kenneth Burke, "For a Modernist Sermon" (1955)

... Technology exercises its most significant effects and its most real presence not in the external world but within the mind, w'thin consciousness. The external product designed by consciousness somehow reenters consciousness, to affect the way we think, to make possible new kinds of noetic processes, including those of philosophy itself, which are unrealistic until technology is deeply interiorized in the human psyche.

Walter J. Ong, "Technology Outside Us And Inside Us" (1978)
In *Communication, Philosophy, and the Technological Age*, Michael Hyde argues that the debate over technology has been marred by an either/or polarization. Either technology humanizes or dehumanizes, with no in between. The result is solid commitment to positions at the expense of arriving at a fuller understanding of what technology is and is becoming. Influenced by Karl Jaspers, Hyde suggests rejecting polarization in favor of a more open-minded, dialectical approach. Technology must be scrutinized with a philosophical rigor that moves beyond the limitations of either/or, where questioning elucidates understanding, where understanding promotes open communication, and where such communication, whenever necessary encourages additional questioning.

Hyde suggests that a suitable question for rhetoricians and communication theorists to pursue is "what effects does the intensification of technology have upon the structure and dynamics of human communication?" The purpose of this paper is to contribute to the dialogue concerning this question by assessing the views of technology held by Kenneth Burke and Walter Ong. As scholars whose work has been found useful in anthropology, English, linguistics, sociology, philosophy, literary criticism, theology, literary criticism, and rhetoric, it is entirely appropriate that Burke and Ong be discussed in the same paper. Both offer modern theorists a "starting point" for further discussion on the meaning of technology.
Kenneth Burke's views regarding technology have rarely been addressed by rhetoricians, yet Rueckert identifies technology as one of Burke's key concerns since The Rhetoric of Religion was released in 1961 (Drama of Human Relations, 274). As with most of his critical writing, regarding technology Burke seeks to "demystify" rather than "debunk." He does this essentially through employment of a satiric frame of rejection, evidenced by the poem at the beginning of this paper. Yet while the satire further enhances Burke's ontological view of man as the being "rotten with perfection" to the point of eliminating himself from his natural home, one senses something "missing" in the view as regards the question raised by Hyde. This paper will argue that Walter Ong's view of writing as a technology which raises consciousness supplies what is missing in Burke's approach.

Though this essay may appear to be setting Burke's technological views up as a foil for Ong's, it is not the purpose of this paper to disparage Burke. Rather, the paper tries to reconcile Burke's satiric frame of rejection with Ong's "accepting yet not passive" (as Burke might say) approach to technology. A wedding of the two views can provide a useful framework from which rhetoricians can approach the relationship of technology to communication practices.

Kenneth Burke: Division and Unity

Burke addresses so many issues, in so many different places, with so many different terminologies, that it is difficult to decide where to begin discussion of his views on
any issue—let alone technology. For purposes of brevity, discussion will be limited to three stages in Burke's thinking about technology: (1) Permanence and Change and the "technological psychosis;" (2) Language as Symbolic Action and the "definition of man;" and (3) Burke's later concern with the "HELHAVEN" project. The use of the term "stages" here should not imply any radical shifts in Burke's thinking. Like his writings on most other issues, with technology Burke has been remarkably consistent over the years. If anything, he has "perfected" the satiric elements in his technological view—taking his terminology "to the end of the line" as he might say.

The Technological Psychosis

Burke has always been somewhat sceptical regarding "scientific progress." Those uncritical proponents of science miss the division inherent in advanced scientism: "... every addition to the positive powers of applied science will be an addition to the realm of human conflict" ("PROGRESS: Promise and Problems," 324). In other words, the tendency to get caught up in the excitement of new comforts and/or pleasures brought on by advanced technology blinds humans to the fact that with such "progress" will come a corresponding set of "thou shalt nots." As Burke put it, "many people become so dazzled with the promise of the "positives," they unconsciously conspire with one another to overlook the "negatives" ("PROGRESS," 323).

Permanence and Change introduced the notion of the "technological psychosis" to describe the twentieth-century obsession with scientism. By analogy with Dewey's "occupational
psychosis"—the idea that a culture will manifest in its social rituals those behaviors found in the occupational environment (i.e., a culture of hunters will reflect a "hunt" pattern in marital rites), Burke argues that the "technological psychosis," burdened with quantification as an end in itself, is even more far-reaching:

It is the one psychosis which is, perhaps, in its basic patterns, contributing a new principle to the world. It is at the center of our glories and our distress (Permanence and Change 44).

The technological psychosis is essentially a condition in which a culture takes the secular as the chief point of reference for all questions of value; concern with quantification becomes obsessive. Burke says the psychosis "blossomed" with the English utilitarian philosophers—the principle of utility of course concerned with "the greatest good for the greatest number" in all matters political, economic, and social. Nietzsche emerges as a key figure in the evolution of the psychosis. His attack on all prior ethical precepts resulted in the creation of Zarathustra, the superman who brings to the earth "a kind of skepticism, of irreligious shrewdness, which is the very essence of the metropolis" (P & C 46).

What does the technological psychosis mean for modern humanity? As interpreted by Rueckert, it is "negativistic, dissociative, dehumanized, destructive, combative, deterministic, and selfish; anti-ethical, anti-magical, anti-poetic, and anti-religious" (Drama of Human Relations 35). Technological psychosis literature attacks ancient myths for their "primitive"
nature and limited utility for modern life, yet replace them
with the new myths of hypertechnologism, rationality, scientism,
and other terms which de-socialize and compartmentalize human
life. Burke does not suggest a return to the ancient myths as a
guide for life, but he does suggest that humanity suffers when
it is robbed of its mythmaking capacity. Burke is fond of
anthropological literature, such as Malinowski's, which
suggests that humans in the "primitive" state will communicate
often "for the sheer joy of it." The technological psychosis
then robs symbol-using animals of their capacity for, and
fundamental need of, symbolization.

Some obvious examples of the technological psychosis are
the idea of earning enough "credits" to graduate from college;
rigid empiricism and statistical analysis in the social
sciences--where "running the confirmatory" becomes an end in
itself; tenure decisions based not on the quality of research,
but how much; mass bureaucracy at all levels of society; the
buildup of massive weapons systems; and so on. Essentially, any
dimension of human life that is given its value in quantitative
terms will fall under the psychosis. Burke argues that the
psychosis becomes more complex and dangerous because humanity
persists in solving quantitative problems with more
quantification; technological problems with more technology.

One final example will close out this section. It concerns
the American method of electing the "Chief Executive Symbol,"
the President. The electronically dominated campaign season is
mired by symptoms of the technological psychosis: candidate
successes and failures are analyzed "rationally" by panels of
"experts;" campaign "strategists" "segment" the nation into "winnable" areas for their candidate, thus building "momentum;" candidates explicitly suggest that their poor showing is not due to a paucity of ideas but that they "ran out of money;" the use of "investigative" techniques to discover aspects of a person's "character;" making up for an issue-less campaign by holding a "record number" of debates; and a drive not to understand ethnic and special interest groups as much as appealing to as many of them as possible to attain the ultimate political quantification--the most votes. The entire process is then held to be the most "rational" under the existing circumstances. Burke enjoys taking a "comic perspective" toward such scenarios. Yet underlying much Burkeian comedy is the underlying tragedy of the situation. In this case, the idea that the person elected under this process has the power to use technologies to dismantle and/or destroy the planet.

Definition of Man

In Language as Symbolic Action, Burke argues that "a definition of man is at least implicit in any writer's comments on cultural matters" (2). Burke's definition of man is, in essence, the basis of his ontological view of man. This will mean that technology, a cultural matter, will be subject to the will of man, and not vice-versa. Burke thus avoids in his theorizing the kind of Orwellian vision which posits a world besieged by technology it cannot control. Analysis of two clauses of the definition will clarify the issue.
Burke defines man as the (1) symbol using animal; (2) inventor of the negative; (3) separated from his natural condition by instruments of his own making; (4) goaded by the spirit of technology; and (5) rotten with perfection. As with the pentadic terms, the clause 3 of this definition interact. Nevertheless, only clauses "3" and "5" will receive attention here. Examination of both reveals that Burke's concern is not with how technology "extends" man in the McLuhan sense of the word, but with how technology represents another instance of the symbol-using animal's "entelechial" motive--his striving for perfection. Thus, what is significant about the wheel is not that it is an extension of the foot, but that after the wheel's invention man will strive to create the "perfect" wheel--in the process becoming alienated from one another.

Man is "separated from his natural condition by instruments of his own making." That is, as humans exercise their tool-making capacity and increase the amount of "things" in their environment, a second nature develops which takes the created environment as natural. Burke uses the example of the infamous mid-1960's blackout in New York City, in which the resulting darkness was thought to be unnatural. The tool making capacity that ultimately makes possible the lighting of a city is ultimately divisive as regards human relations:

In any case, the toolmaking propensities envisioned in our third clause result in the complex network of material operations and properties, public or private, that arise through men's ways of livelihood, with the different classes of society that arise through the
division of labor and the varying relationships to the
property structure (Language as Symbolic Action
15).

Language is the one "invention" (Burke is hesitant to use that
term) of man that, although with instrumental value, is not in
its essence a tool. Language is symbolic action, necessary for
the creation of other instruments. Burke says that symbol users
strive to perfect their symbol systems, which leads to the next
clause.

As relates to technology, a more important clause from
Burke's definition is the notion of "rotten with perfection."
Burke borrows Aristotle's entelechial principle--the idea that
all beings strive to the perfection natural to their kind. For
the animal that can use language, the human, entelechy becomes
wrought with danger. Rueckert argues that the entelechial
principle has been operative in all of Burke's works since The
Rhetoric of Religion (Drama and Human Relations 274). The
force of the argument is that man will by nature attempt to
perfect any instrument or set of terminologies he develops.

If all things, especially human things, exist to perfect
themselves, it follows that technology left unchecked will
perfect itself to the point of destruction. This is the core of
Burke's problem with technology, a logical extension of his
technological psychosis musings from the Permanence and
Change era. The psychosis and the entelechial motive are highly
related, as man seeks "cures" to the technological problems by
building up more technology. Rueckert argues that "this is not
really a form of old-time millennial doomsdayism in Burke; it is
the logological consequence of his conception of man" (Drama 274). Burke chooses to deal with the situation through use of satire, as will be shown below.

The HELHAVEN Project

Burke deals with the technological problem through the establishment of a satiric account of the final perfection of technology: HELHAVEN, the "culture bubble" on the moon. Before examining the nature of HELHAVEN, it is necessary to discuss which Burke is at work here.

Rueckert has said that "there are as many Burke's as there are books and essays by him, and probably more Burke's than there are books because there are often many Burke's in one book" (Representing Kenneth Burke 1). He then develops Burke the aphorist, the Comedian, the dialectician, the logologer, the dramatist, and the poet. To better explain HELHAVEN, we shall here develop two more Burkes: Burke the ecologist and Burke the satirist.

Concern with the environment has always touched Burke's work. He shares Bateson's idea that "we are learning by bitter experience that the organism which destroys its environment destroys itself" (Rigor and Imagination 332). The congeniality of environmentalist thinking with the "technological psychosis" is evident. Environmental pollution is a powerful by-product of the psychosis. In the name of "progress," humans will invariably destroy certain necessities of living--the ozone layer, oceans and lakes, perhaps the entire planet, as Burke has suggested in places.
Burke finds ecology attractive also because as an environmentalist critique it is not man "debunking" technological defeat. Rather, it is technology's self criticism since the environmental rationale bases its arguments upon the material which the records and instruments of technology itself have provided for such a diagnosis (Rigor and Imagination 332).

It is clear from most of Burke's later writings that the ecological role is one he feels comfortable playing, perhaps the best example of the autobiographical strain in Burke's writing. One gathers from reading Burke that he personally does not appreciate breathing dirty air or fishing in polluted lakes. Donald Enholm's comments capture the spirit of Burke's involvement in this issue:

Burke himself does not escape the stricture of involvement. Anyone who has talked with him recently is well aware of his stand against the interstate highway system, particularly that part planned to run through his property in New Jersey (235).

Another Burke of concern here is Burke the satirist. Burke the satirist is not synonymous with Burke the comedian. The latter adopts a frame of acceptance, the former, rejection. In Attitudes Toward History, Burke describes satire as a frame of rejection characterized by the satirist "attacking in others the weaknesses and temptations that are really within himself" (49). Later Burke accepts this conception of satire, but
broadens its domain; satire is "end of the line" thinking:

Certain artists, or purely speculative minds, glimpse certain ultimate possibilities in their view of things, and there is no rest until they have tracked down the implications of their insight, by transforming its potentialities into total actualization ("Why Satire" 314).

Satire will feature an "excess of consistency." The satire takes already existing conditions and "perversely, twistedly, carries them to the end of the line" ("Why Satire" 318).

One might then dub Burke's final critique of technology "ecological satire." As previously mentioned, his major work along these lines is the "Helhaven" project. The project brilliantly ties together Burke's entelechial and ecological concerns within the context of a broad satire. It is arguably the culmination of Burke's entire system of thought, for in it one finds vestiges of all aspects of Burke's view of man. It presents a culture overwhelmed with the "thou shalt nots" brought on by technological advance; separated from their natural environment by instruments of their own making--taking the resultant "counter-nature" as natural; magnifying the "hierarchical psychosis" as advanced technology creates more departments and bureaus; and of course the entelechial motive--curing whatever technological ills exist with more technology.

A lengthy passage from "Towards Helhaven: Three Stages of a Vision," will highlight the essence of the project:

HELHAVEN, the Mighty Paradisal Culture-Bubble on the Moon. Safer than any Sea Meadows Venture (even
under the Arctic ice). More nearly attainable than a Martian project, HELHAVEN, the Ultimate Colony, merging in one enterprise, both Edenic Garden and Babylonian, Technologic Tower. And paradox of paradoxes: This Final Flight will have been made possible by the very conditions which made it necessary.

Profiting by the best resources of both the physical and the social sciences, along with experts of administrative and managerial capacity, the colonists range of options will be considerable. Some will, of course, prefer accommodations in the Luna-Hilton Hotel. Some will choose private quarters, as in suburbs (if that's how their past experience makes them feel most at home). But there will also be arrangements whereby dwellings can be equipped with picture-windows looking out, as it were, upon the wholly lifelike illusion of an austere mountain scene, or a deserted lake, either distant, or with waters that seem to lap at the piles on which the house itself is built (21).

It is Burke at his satirical best, driving home the point that the essence of humanity, the symbol-using capacity, is placed under attack as hypertechnologism takes over. In the Helhaven vision, rhetoric has lost its place as the instrument used to overcome division. This is the true tragedy behind the satire, the dehumanization of man's ability to negotiate a change through his verbal capacity.
The solution to the problem, in the present writer's judgement, may be found in an earlier work, *Attitudes Toward History*. The solution is a new approach to secular education. Instead of remaining in awe of the comforts and pleasures brought on by high technology, secular education should work to "discover what it means to be a symbol-using animal." Moreover, the basic educational problem at this stage in history would be: "How best adapt the symbol-using animal to the conditions of world empire that are being forced upon us by the irresistible 'progress' of technology?" (375). To the extent that humanity lets technology become an end in itself, without addressing these concerns, more division will result—only now the division will be robbed of its unifying capacity that is rhetoric.

There is something unfulfilling about Burke's technological views. While he acknowledges that as satirist he is in many ways attacking the weaknesses in himself—that he too is a victim of the technological psychosis—he is at least aware of his psychosis. Is this not significant? What was the role of technology in making him aware of his condition? Is not such intense reflection about the human plight unique to a high technology culture? Does not Burke reflect a raised consciousness regarding such matters? If so, does not technology manifest it chief influence within the mind, as the quote from Walter Ong at the beginning of this essay suggests? Does technology have an epistemic value that Burke, in an effort to fulfill his ontological position, is reluctant to accept? Is technology ultimately consciousness raising? The remainder of
this essay will explore the ideas of Professor Ong in arriving at an answer to these questions.

**Walter Ong: Technology and Consciousness Raising**

Professor Ong begins his discussion of technology by noting that humans typically think of technology as an external force, operating outside of consciousness. For Ong, technologies change the way people think while at the same time contributing to what can be thought. Technologies change the relationship between humans and information.

Ong is, of course, thinking of writing as a technology. It is the most important technology, because only knowledge of writing allows for criticisms of other technologies. One needs a technology to be critical of a technology. Humans do not think of writing as a technology as readily as they do print and the computer, yet this is a mistake:

Yet writing (and especially alphabetic writing) is a technology, calling for the use of tools and other equipment, styli or brushes or pens, carefully prepared surfaces such as paper, animal skins, strips of wood, as well as inks or paints and much more. Writing is in a way the most drastic of the three technologies of the word. It initiated what printing and electronics only continued, the reduction of dynamic sound to quiescent space, the separation of the word from the living present, where alone real, spoken words can exist ("Writing and the Evolution of Consciousness" 4-5).
The most drastic effect of writing is that it allows for a separation of the knower from what is known. Havelock's *Preface to Plato* has shown how Plato's rejection of writing and expulsion of poets from his *Republic* were thoughts inconceivable to the mind that has not interiorized the technology of writing. Thus Ong can argue that at the root of all supremely negative approaches to technology is the inability to accept writing as a technology:

... all effective remarks about technology, including the most acid critiques, make use of thought processes impossible without the technologies of writing, print, and to a greater or lesser extent, electronics (1978, p. 115).

In *Ramus, Method, and the Decay of Dialogue* Ong has shown how the interiorization of the technology of writing led to the subordination of rhetoric to philosophy. That is, what constitutes a "real word" at this stage in Western culture became identified less with the sound emanating from a person and more with the "thing on the page." Thus the rhetorician, because of his traditional province in the oral realm, loses influence. He is reduced by Peter Ramus to the role of "stylist." Real thinking takes place not in oral/aural exchange, but in the detached, reflective mode characterized by the philosopher in a reflective interaction with the page. Rhetoric becomes a tool for making an arrived at truth more effective. Its traditional epistemic features, invention and disposition, are given to philosophy.
It is hardly a coincidence that as writing became more "interiorized" the West witnessed the growth of more philosophical "schools" urging reforms in thinking about ethics, social behavior, and the like. Moreover, advances in industry and mechanics were greatly advanced by the ability to store information in a stable setting. Dare we suggest that what Burke refers to as the "technological psychosis" is in actuality a growth in literacy? All the signs of the technological psychosis identified by Burke, such as quantification and the identification of myth as "primitive," are thought processes strongly correlated with the advance of writing technology.

From Ong's point of view, the labeling of a culture as "primitive" is not due to a psychosis as much as to what he refers to as a "typographic bias." What is commonly referred to as a primitive culture is merely a culture in a different stage of literacy. The typographical bias holds a strong grip on the American psyche: "most Americans, even those who write miserably, are so stubbornly literate in principle as to believe what makes a word a real word is not its meaningful use in vocal exchange but rather its presence on the pages of a dictionary" (Ong, "Literacy and Orality in Our Times" 129). In the same article, he reacts to the tendency among literates to interpret of more oral cultures as "childlike": "this defensive, depreciatory interpretation of another culture by literates is itself curiously childlike" (p. 137). Our depreciatory interpretation is thus related to our interiorization of a technology, writing.
Yet because technologies, including writing, have dehumanization potential, it does not follow for Ong technologies are dehumanizing in essence. He argues that much of the popular and academic press, in their railings against the dehumanization imposed by technologies, forget that the highest expressions of humanity are often the products of technology. Technology enhances life when it is "properly interiorized." A modern orchestra, for example, expresses something "poignantly human" only because of the mechanical contrivances used. Each musician in the orchestra, to achieve such expression, has to have

interiorized the technology, made the tool or machine a second nature, a psychological part of himself or herself. This calls for years of 'practice,' learning how to make the tool do what it can do. Such shaping of a tool to oneself, learning a technological skill, is hardly dehumanizing. The use of a technology can enrich the human psyche, enlarge the human spirit, intensify the interior life. Writing is an even more deeply interiorized technology than instrumental musical performance is (Ong, "Agonistic Bases," 83). Viewed in this context, Kenneth Burke's satiric approach to technology becomes a itself a product of high technology. To say as such is not to undermine Burke, but to recognize that in alerting the human community to the potential dehumanizing aspects of technology, he has paradoxically also alerted humanity to the humanizing aspects of technology. Perhaps the real difference between the Ongian and Burkelian views of
technology is that Ong is more willing to acknowledge the humanizing effects:

By its ability to enlarge our noetic processes, to give us access to more knowledge and the ability to manage knowledge more effectively—where would we be with no printed books, products of technology?—technology can enlarge our understanding and make us freer persons. Technology will not of itself make us free, certainly not so much as truth does. "The truth shall make you free." But technology can make us free if we use it properly ("Technology Inside Us and Outside Us" 113).

From Ong's perspective, humanity would be better served by focusing on the dehumanizing capacities of humans rather than technologies.

The intensification of technology thus allows for forms of communication not knowable to pre-technological humanity. As technology intensifies, humans develop a higher consciousness about what it means to be human. Ong in no way denies that there is war, pollution, greed, and other human products that have been facilitated by technology. Yet he also argues that the human potential to make decisions about these products has also increased. In our natural tendency to react to "mechanical" nature of certain aspects of modern life, we often forget that the twentieth century has witnessed a tremendous growth in our understanding of human persons and their needs.
Based on Ong's belief that writing is a technology that contributes to a raised consciousness, he reaches a different conclusion than Burke as to the ultimate problem of technology. He argues that the real problem of technology concerns the opportunity it provides people to "withdraw" from society. In "Knowledge in Time" he posits that 1950s beatniks and 1960s hippies are manifestations of a serious technological problem: Withdrawal symptoms show up more and more in technologically advanced societies. Often they are factitious and even meretricious: the beatnik or hippie is not really 'dropping out' but looking desperately for an in-group that will satisfy his own demands. Often, seeming withdrawal is merely a way of securing attention without responsibility. Nevertheless, it creates real problems, and the withdrawal syndrome is certainly connected with the pressures of managerial expectations . . . Withdrawal, real or simulated, will probably be with us for a long time (27).

The alternative to withdrawal is cooperation. It is at this point that rhetoric achieves significance. Rhetoric becomes a necessary tool for making humans aware of their role in the technological "pl'tht." Rhetoric becomes a tool useful for encouraging cooperation and what Ong has referred to as "global planning." Yet the implication of Ong's view is that rhetoric does not operate in a vacuum. Rather, conceptions of what rhetoric is and is becoming change as technology exerts its force on consciousness.
Conclusions

The philosopher Albert Borrmann has argued that discussion of the "character of contemporary life" must assess the influence of technology on all aspects of living. This essay has examined the Burkeian and Ongian approaches to defining the nature of technological influence. Discussion of both perspectives has been all too brief. Nevertheless, some conclusions may be derived.

Kenneth Burke's satiric approach to technology, the fulfillment of his ontological view of man as "rotten with perfection," is quite persuasive on purely empirical grounds. We daily observe and utilize the automobiles, airplanes, and industrial products that are making it increasingly difficult to breathe. A recent New York Times article identified more bleak prospects:

The destruction of the earth's protective ozone layer, set in motion by the release of industrial gases into the atmosphere, will continue for decades despite the best efforts of governments and industries to control it, scientists now agree (Gleick, "Even With Action" 1).

One need not even mention Three Mile Island and Chernobyl here. Burke's "amplification" of the technological problem is rapidly becoming, it would appear, more of a real life tragedy than a satire.

Now to say that Burke's approach is unfulfilling is not to deny that technological problems exist. The problems are obviously real ones which, left unattended, will almost
certainly destroy our natural home. But Burke's ideas for resolving conflicts and unifying humanity—especially his articulation of the view that rhetoric needs to be a key instrument in the unification process, seem curiously lost when he addresses the technological question. As he has magnified his ontological system and taken entelechy to "the end of the line," he has implicitly minimized his belief in the ability of rhetoric to help humanity overcome the division which follows all human creation. The Helhaven project, while a clever and insightful way of alerting us to our environmental ills, does not leave the rhetorician with the same sense of hope that has come to be expected from Burke's writings.

Burke insists that what is necessary to alleviate some of our ills is a fuller knowledge of what it means to be a symbol-using animal. Walter Ong's work suggests that such knowledge is only possible with the reflective capacity brought on by the interiorization of writing. As we accept Burke's ecological warnings—and only a low intellect would deny such warnings, we need also remember that our raised consciousness of the environment is in large part a product of technologically induced thinking.

This of course does not mean that the rhetorician should praise technology, minimize its destructive capacity, or feel hypocritical when s/he complains about the paucity of clean lakes to fish in. However, it does mean that there are epistemic questions involved in the technology debate that an appeal to entelechy is probably not equipped to handle. Ong has written that "if knowledge is power, knowledge of how to
generate knowledge is power over power" (Rhetoric: 25). As the computer further technologizes the word, the task of the modern rhetorician (or at least one task) is to discern how such technologizing may reinforce and/or alter human thought processes.

It is hoped that approaches to rhetorical epistemology which feature concern with technology are not brushed aside as "reductionist," "deterministic," "agency-centered," or over concerned with the "channel" in the communication process. Such accusations, while perhaps accurate when used to refer to McLuhan or Innis, too often take under their wing a relationist thinker in the Ongian mode. The rhetorician can study the history, contemporary aspects of, and potential future of technological influence on communication while at the same time accepting that numerous other factors may enter into the discussion of why humans communicate the way they do.

This essay has shown that technological influence cannot be reduced to simple explanations. As professor Ong has put it:

> It is too easy to impute to technology all of the threats and evils in the world, or most of them, as it is also too easy to look to technology for all of the blessings available to mankind. Technology is a phenomenon far more complex than many like to believe ("Technology Inside Us": 121).

Kenneth Burke and Walter Ong will be remembered as twentieth-century scholars who resisted the over-simplified explanation. Let us hope their example remains as a century of even more advanced technology rapidly approaches.
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