There is no critical reflection on technology in the United States. The American discourse is firmly technological; indeed all social scientific questions are reduced to problems which can be solved through instrumental reason. This radical nominalism is the other side of the domination of all American thought by technology as an organizing principle of social practice. But to the degree that there is a discourse on technology present in the U.S., it is, like much of the elegant food currently imported to satisfy the more sophisticated palates of our rising professional class, a product of European or Canadian purveyors. American critics of technological society have surfaced in the past: among our earliest, Thorstein Veblen framed his discourse in a vast commentary on culture and its relation to the rise of industrialism and the corporations which sponsored it. Later writers, such as Louis Mumford, were ambivalent in their relation to technics: like the marxists, Mumford blamed the mask spread before the environment by technics on social arrangements. In the end, he held to the western idea of Progress and called for technological humanism, a discourse on technology that celebrates it but holds to the view that it is a golem that can get out of hand unless bridled by society.

After the second world war, even the most detailed descriptions of the social implications of technological development such as those of Siegfried Gideon could barely restrain their enthusiasm for its beneficent effects. And, those of the American Studies school, following F.O. Matthiessen, incorporated their study of technology into a myth/symbol framework borrowed from the Canadian thinker, Northrop Frye. This maneuver resulted in technological humanism that showed the centrality of images of the machine for the formation of our culture, but refrained from drawing ideological or political conclusions from this observation. Moreover, after the populist 20s and 30s, a discourse on American imperialism vanishes from even these meager studies. In the 50's myths, self-contained literary objects, and social and historical context within which they are forged, become merely "background" that fulfills the formal obligation of historical investigations.

In the 60s the prophets of the tragic vision of technological society found a public among younger Americans who, for a brief moment, achieved some distance from
what Herbert Marcuse called "One-Dimensional Thought". In the American academy there appeared a critical fragment, hardly worth the characterization of tradition, but it established a presence in some quarters. Yet, the sources of the discourse on technology were distinctly European: the Frankfurt School, Jacques Ellul, Edmund Husserl, whose work The Crisis of European Sciences appeared in English in the 70s. Although the discourse on technology created a brief stir, the roots of technological thinking were so deep in the American mind that the critical tradition was rapidly overcome by a discourse on the effects of technology upon, for example, employment, new conceptions of leisure, problems of occupational safety and health, the impact of television on learning. In short, technology produced a series of discrete problems begging administrative and political solutions. Alongside these less than dark ruminations, the celebration resumed its momentum. As Americans became aware that the international marketplace was once more competitive now as before, technology was seen as the way out: the mechanism through which empire could be saved, domination once more secured. Sceptics were no longer tolerated even as marginal voices to be heard above the whir of the computer's soft tapping. They were committed to the purgatory of silence, permitted to speak as long as nobody listened.

Americans have been blinded to the dangers of modern technology because it has been central to building a world empire that has sustained material prosperity and political and economic domination over others. Canada, caught between its partial integration into technological society and the past of European culture has forged a discourse about technology that grasps, in the words of philosopher George Grant, that 'technology is ourselves'. According to Arthur Kroker it is precisely owing to Canada's existence in the interstices of this conflict that technology is the Canadian discourse, and Canada's identity is inextricably bound up with technology. Marginality is the stuff of which insight is made, but not the marginality that derives from exclusion. Kroker's key argument is that Canada is a technological society whose membership within the American empire is today unquestioned, but is not free of the deprival of those who lack the power to determine their own destiny.

This book, the first in a series titled New World Perspectives, is a compact study of three Canadian thinkers who have contributed to the Canadian discourse on technology — George Grant, Marshall McLuhan and Harold Innis. Kroker invokes others — notably Margaret Atwood, artists Alex Colville and Don Proch, Dennis Lee and Pierre E. Trudeau — all of whom helped invent and define this discourse. But, Kroker has focussed on these three because they illustrate three perspectives on technology: Grant's technological dependency, McLuhan's technological humanism (who, for Kroker, are the "polar opposites of the Canadian Mind") and Harold Innis' mediation, technological realism.

Grant is portrayed as the Nietzsche of North America, a religiously informed philosopher whose work parallels but does not duplicate the work of Jacques Ellul and the Frankfurt school. For Grant the question concerning technology is whether freedom is possible when national and personal existence is indistinguishable from technology, when the horizon of modern culture is the "will to technique" or, even more horrificly, the "will to will" that now defines the human condition.
Grant is concerned with the ancient questions of all philosophical thought, the meaning of human life. The worst is not so much that our horizons are dominated by the ideology of “freedom through technique” but that we no longer know the difference between this concept of freedom which, after all, ties humanity to the technological imperative as an ethical norm, and an alternative idea of the “good.” Grant despairs, as did Adorno and Horkheimer in their Dialectic of the Enlightenment (written more than 40 years ago), that we possess the capacity to even imagine a moral order that is separate from modernity. This leads him not merely to inveigh against the darkness of this fully developed cultural homogeneity, but to enter what Kroker calls a “double refusal” of both the results of the American revolution and the “deep assumptions of the modern project”. As Kroker points out, this makes him a representative of the “dying class” of European loyalists for whom the revolution was nothing if not the embodiment of industrial and commercial “progress”. Grant retrospectively identifies himself with the past of European culture, or more exactly, that fleeting time at the dawn of capitalism when bourgeois morality was still bound to tradition and, at the same time, had a clear idea of the individual as the subject and the object of historical temporality. Grant stands at this intersection, a place which has long since become marginal, but appears to be the only space available to the critical temperament.

In one of his more acute distinctions, Kroker calls Grant’s critique a discourse of lament rather than emancipation, surely the appropriate term to describe those for whom no hope is given since the social forces that might embody their vision have disappeared. Grant was, of course, aware that his conservative vision was doomed because of “the impossibility of Canada”, a country that wished to build a conservative, i.e., European, nation in a time of progress. Although Grant’s nationalism is emancipatory, his critique of technology is not since by his own account an “historical refusal” while enabling for the individual to “live an active life and affirmation of human freedom”, it provides no ground for more than a faint hope that the “indigenous cultures” of Canada could provide a bulwark against the tyranny of technological will.

Kroker shows that Grant is an entirely original critic of the instrumental rationality that marks the march of modernity. Kroker’s account of Grant’s analysis of the disintegration of the idea of justice in western societies — the rise of contractual liberalism that replaces the ancient Greek idea of substantive justice — illustrates the central point of Grant’s anti-technologism. Technology is not understood as merely the application of machines to the production of goods and services, but the organizational principle of our lives. We can no longer imagine an idea of justice that corresponds to some notion of individual traits because justice has been subordinated to the doctrine of expansionism at all costs. For Grant, purely conventional and contractual justice leads inevitably to nihilism. Unlike poststructuralism that wishes to banish “essentialism” from our critical vocabulary, Grant wishes to restore a moral conception of justice grounded in the relation of humans to the natural order.

Two things are striking in Kroker’s superb account of Grant’s “technological dependency in new register”. First, the critique of technological society as the “will to will” finds its categories from some anterior idea of a moral order, whether it
be early Protestant capitalism, ancient Greek society, or agrarianism. In different ways, Ellul, the Frankfurt School and Hannah Arendt found themselves constrained to defend early civilizations as ideal types in which substantive rationality could be said to prevail, an idea of a normative order based on the place of "man" in nature that was more or less fixed and, most important of all, a distinction between the private and public realms in which production was subordinated both to politics as communal consensus and to culture. In short, technological society derives from the primacy of the economic, especially the ideology that progress is identical with production with its concomitant notions of efficiency and expansion (empire). Grant joins the tradition which discloses technology to be nothing less than a mask for power sought and exercised for its own sake. "Will" is the drive for aggrandizement without moral presuppositions. The conservative critique turns out to be a discourse on technology as domination, and domination as a mode of life.

The second point is not brought out by Kroker although his sympathetic treatment of Grant as a radical Tory cries out for the connection. In recent years, post structuralism has mounted a relentless attack on metaphysics, showing that all philosophies are ensnared in the logos of western thought. Derrida's main point is that if the task of philosophy is to start at the beginning, to challenge the taken-for-granted-world, the 'common sense' of ordinary discourse, its only modality is deconstruction which liberates itself from all presuppositions, even the negative dialectic.

Thus, all efforts based upon Kant's transcendental dialectic or Hegel's historical dialectic are doomed to betray the task of philosophy since they are entwined with the logic of identity. Derrida's category difference, meant to combine both the spatial ineluctability of difference and its temporal dimension constitutes a radical criticism of doctrines of reconciliation. But post-structuralism's relentless refusal of the search for meaning and its substitution of the semiotic idea of 'signification' (a context bound 'meaning' which has no transhistorical aspect), is compatible with technological society as organizing principle to the extent that nothing is substantive and substance is, itself, shown to be an ideological category. As with all modernizing philosophies, including marxism, the substitution of historicity for the natural order, turns out to be the necessary ideological move to prepare the way for 'progress'. The question posed by Grant is whether we are caught in the antinomies of conservativism and a technologically transformed liberalism? In what sense have the 'revolutionary' ideologies of marxism and post-structuralism done more than clear away the ambiguities of liberalism that stand in the way of power as the prevailing discourse of modernity? Once the world is emptied of meaning, once we declare history as the substitute for morality, when the 'emancipatory' labor of critique is devoid of presuppositions, what stands in the way of the tyrannies of imperialism and technologically-mediated willing?

Marshall McLuhan is more than a celebrant of what has become the crucial technology of social power — communication. He is the theorist who addresses the problem posed by technology's critics: what is the relation of technology to human nature, to the eternal search of humanity for a way to reconcile itself both internally and with the object of its domination? Although he fully acknowledges that the new
communications' technology has abolished 'content' from communication in the sense which corresponds to Grant's lament, the now cliched slogan "the medium is the message (massage)—contrary to its recording by Grant and Jean Baudrillard to mean mass-age) — signifies for McLuhan the age of process. Surely we want to bring to consciousness the way in which the media "work us over" imposing themselves on our environment, yet says McLuhan "all media are extensions of some human faculty psychic or physical." Kroker draws on McLuhan's comments on narcissism to illustrate the point. "The youth Narcissus mistook his own reflection in the water for another person... The extension of himself by mirror numbed his perceptions until he became the servo-mechanism of his own extended repeated image."

If McLuhan is "no less critical than Grant of human fate in technological society" Kroker shows that he tries to find a way out by getting on top of the by now pervasive technology rather than remaining passive victims. The technique analogous to that of the artist, or more accurately, the psychoanalyst, is to wring out all of the ways in which technology extends our unconscious anxieties and wishes. When we have learned to counter the numbing effect of technology in culture, we may become its master. But in becoming technology's master we are learning to master ourselves since, as Kroker argues, McLuhan shares with Grant the understanding that technology is ourselves. McLuhan's answer to the pessimistic view of technology is to engage in a discourse of interiority, to show that it is not that "we" have been taken over by technology but that we have also created it as the image of our own constitution. McLuhan's idea of self-production also contains the concomitant concept of reification. The numbing is the form of forgetting that prevents us from recognizing ourselves in the objects we have produced, in the processes we participate in. Beneath this highly literary and mythic analysis is the argument that technological society is the image and extension of human nature objectified as otherness.

Although framed epistemologically, rather than as an historical dialectic, McLuhan optimism leads to a new idea of the subject/object identity. Harnessing the technology that we have wrought means to recognize ourselves in the machine, to understand technology as enhancing our own power and to grasp technology as human power (rather than stopping with the insights that technology effected "closure on human perception" and numbing). To take the latter view means that technology always stands as an imposition from without, a power over us. The way out, according to McLuhan, is to treat technology not as a threat but a scientific problem to be resolved through experiment. When we have succeeded in recovering technology as an expression of human faculties and stopped lamenting the advent of the processed world, we can achieve the "global village" where human understanding transcends the narrow limits of national boundaries. McLuhan's project remains nothing less than the achievement through communications technology of the classic aspiration towards the universality of humankind. Kroker admires McLuhan for the internal consistency of his thought, offering only a criticism of the 'blindspot' in the communications theory — the private appropriation of technique by capital. McLuhan became a corporate darling towards the end of his life because his vision of technology as human destiny gave
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purpose to the American empire. This may have been the almost inevitable consequence of the convergence of his rather deterministic theory with the technological imperative that provided both ideology and strategy to large, international corporations. Yet, 'nightmarish' as Kroker finds the perversions of the global village in mass culture, the fact of technological mediation of all social relations as well as individual existence raises the most serious questions about conservative or neo-marxist critiques.

Surely, neither Kroker nor others who justly distance themselves from McLuhan's embrace of the technological sensorium would maintain either that technological domination is merely the result of its private appropriation by capital or that its penetration of human sensibilities is not virtually complete. Nor can the idea of 'imposition' be taken as more than a moment in the self-negation of modernity. We might reject McLuhan's embrace, but his strategy of unpacking the elements of technological society in order to engage it from within is better than the lament for the lost age that inheres in any possible nationalism or Eurocentrism. The key question is to mediate the transformation of the world into a field rather than a series of events, to understand its spatialization in contrast to the older notion of historicity. And this is what Innis tries to do.

In Kroker's reading, the fundamental difference between Innis and either dependency theorists or humanists was his commitment to the formation of a "democratic public" for the discourse on technology. In order to perform this not inconsiderable feat, his own work had to go beyond philosophy and literary criticism. Innis developed a political economy of technology "playing both sides" of the dualism rather than ignoring them in favor of historical specification that, in the end, loses its critical edge. Innis explored the emergence of the "technological habitat" from the staple commodities which marked Canada's place in the international division of labor: fur, lumber, cod, and other raw materials. According to Innis, the development of these trades lay at the root of Canadian dependency and Innis saw them as "historically grounded (media of communications)".

Kroker traces Innis' originality to his connection of technology and communications as economic relations, or, in other words understanding the ideological basis of economics and the economics of ideology.

Further, Kroker adds some interesting information on the relation of Innis to parallel movements in the United States, particularly Robert Parks' social ecology and the critical pragmatism of C. Wright Mills and his progenitor, John Dewey. In the section on Innis, Kroker's own perspective, although always implicit, becomes more clear. Kroker sides with Innis precisely because of his refusal to capitulate to technology as the mode of existence of Canadian dependency. His, among the others, is a genuine emancipatory discourse because it has implications for politics. One cannot simply refuse the deep structure of the American Revolution and return to the myth of an integrated civilization as a heuristic device from which criticism may emanate. Nor is it possible to resort to the utopianism of McLuhan's cosmic hope for technology as the means through which community can be reconstructed. At the theoretical level, Innis undertook concrete studies of the political economy of Canadian dependency and its technological imperatives in order to preserve "historical rememberance" of origins, a necessary element in a
broad-scale resistance to technological spatialization, or to put it differently, the "flattening" of the earth by mechanized communications. So, it is no longer a question of lamenting a lost oral culture, but of undertaking the work of reclamation which exposes the development of technological, economic and finally cultural dependence of Canada on the United States.

Although Kroker says that Innis succeeded where Mills, who aspired to the creation of a new critical public, failed because of the dynamo of American empire, it is hard not to make strong comparisons between them. Mills documented the centralization of imperial power at the center, Innis showed how mass communications constituted the key lever for that power; Mills showed the main drift towards authoritarian democracy in the most formally free of all the countries of the free world; Innis demonstrated that this freedom was purchased on the backs of marginalized peoples who were obliged to feed the technological dynamo with raw materials while receiving the imperial "word" from the center. Kroker's comparison between the two is apt. Their contributions are supplements of a project that has so far failed to create a new sphere of critical discourse and a practice that fulfills it in various arenas of power.

One of the most significant features of the technological dynamo is that it homogenized culture in the form of pluralities of cultures. To the extent that even the oral tradition is represented through mass communications, it becomes a feature of the dynamo. Thus, the nostalgia for a popular culture free of the technological imperative is a necessary lament without which alternative visions become improbable. Yet, popular culture is really a metaphor for the possibility of autonomous discourse. The 'lesson' of this extraordinary book is that marginality is a condition for a discourse on technology, surely one of the most important critical tasks of our time. But the second point, that we are obliged to look within the technological dynamo rather than fleeing its force, is equally evident. George Grant found that he was obliged to jettison the entire legacy of the French revolution when he discovered the intimate link between technology and individuality. And McLuhan became a futurist, trying to find the cracks in the colossus of mass communications which allowed the old humanism to survive. Innis banked on a new politics, but plunged ever deeper into the constituent elements of technological society in the hope that he could come out the other side. In this sense, he may be the north American Walter Benjamin even more than the Canadian Mills. Recall that Benjamin extolled mass reproducibility of art, not only because it opened up hitherto blocked democratic access to auratic art, but also because it laid to rest aura itself. He argued that one could not escape the mechanism through which modern culture had been sifted, but the task of the critic was to squeeze the emancipatory possibilities of technology before condemning it. Yet, like Innis, Benjamin could not escape the recognition that technology was not mere means, it had become the culture itself.

In the text, Kroker quotes McLuhan's repudiation of the distinction between center and margin because the new technologies of mass communication make these categories obsolete. This is in the context of refusing Grant's nationalism. Perhaps the "Canadian" mind is simply a harbinger of the global mind that has become dependent on technology, experiences the world as increasingly processed,
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and in Herodotus's words has achieved consciousness without control. We may not be able to transcend modernity, but the time is surely at hand when it ceases to be the common sense of advanced industrial societies. Ecological thinking which tries to overcome the dualism of subject and object by treating nature as a subject, feminist theory which finds patriarchy alive and well despite humanism, and the new religious left which has insisted that ethical discourse must be restored to political and economic life find their resonances in the critical work of Canadians on technology. Innis' public may be forming, but has not found its theoreticians. Kroker's study is a magnificent step in that direction.

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