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HAROLD INNIS AND 'THE BIAS OF COMMUNICATION'

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Abstract

Fifty years after his death, Harold Innis remains one of the most widely cited but least understood of communication theorists. This is particularly true in relation to his concept of 'bias'. This paper reconstructs this concept and places it in the context of Innis' uniquely non-Marxist dialectical materialist methodology. In so doing, the author emphasizes ongoing debates concerning Innis' work and demonstrates its utility in relation to contemporary analyses of the Internet and related developments.

Keywords

bias of communication, globalization, Harold Innis, Internet, methodology

INTRODUCTION

Innis . . . offers a poetic polysemic discourse that is impenetrable to reason. He is sanctified as the rest of Canada's post moderns, a bricoleur whose output requires not rational assessment but aesthetic appreciation or Kabbalistic decoding by a contemporary priesthood of connoisseurs and cultists. (Collins 1986)

Innis' concern lay in the thought processes through which people of different civilizations define their vision of reality . . . [H]is focus is less on the individual than on the character of the society that produces individuals and either releases or suppresses their creative potential.

Why do we attend to the things to which we attend? (Cox 1995)
(Broeke quoted in Innis 1982)

Fifty years after his death, the body of work produced by Harold Adams Innis remains widely cited but frequently misunderstood by students of communication studies (Acland and Buxton 2000). Born at the end of the nineteenth century in south-western Ontario, Innis is most certainly Canada's most prodigious social scientist. Predating and directly shaping his work on communication, Innis was an internationally recognized political economist and historian. Through his early interest in markets, related social-historical structures, and the role of transportation networks in relation to them, Innis' interest in communication and culture began. Most famously, Innis introduced his concept of media bias in a 1935 paper on the intellectual habits of social scientists (Innis 1935) many years before his explicit studies on communication. It was only in his later years, particularly after being diagnosed with cancer, that Innis developed and applied bias in what became an increasingly obsessive effort to draw scholarly attention to the dynamics underlying the general inability of twentieth century Western civilization to redress its cultural imbalances.

Innis never considered his concept of bias to be some sort of analytical fulcrum through which the causal mysteries of history could be revealed tout court. Nor, as Collins believes, should his work be classified as some kind of subjectivist mantra useful only to a 'priesthood of connoisseurs and cultists' (Collins 1989: 218). Instead, as Cox recognizes, bias and other Innisian concepts were developed as heuristic tools to help us better understand those forces and relations shaping society's critical and creative capacities (Cox 1995: 20, 28). McLuhan, in his later 'Introduction' to Innis' 1951 publication The Bias of Communication (1982), adds that 'Innis taught us how to use the bias of culture and communication as an instrument of research' (Innis 1982: xi). Indeed, it is my view that Broeke's philosophical question – 'why do we attend to the things to which we attend?' – prominently quoted by Innis in this book, should be understood as the defining question in Innis' communication studies. This paper argues that

misreadings of Innis' work in general, and his concept of bias in particular, to some extent affirm the reason for Innis' initial formulation of bias — a concept first used in an attempt to enable social scientists to be explicitly reflexive. In what follows, I will explain Innis' concept of bias in both the context of his larger body work and in terms of its contemporary relevance. In Section 1, common place criticisms or misinterpretations of the bias of communication will be addressed and clarified. Section 2 focuses on Innis' more general methodology involving a form of dialectical materialism that is overtly concerned with the dynamics of power, how people think, and the long-term implications of technologies, organizations and institutions in relation to these. Here, a heuristic model is presented as a means of summarizing Innis' work. Section 3 applies both bias and this model to questions regarding the potentials and implications of Internet-based technologies in the early twenty-first century. The final section — the Conclusion — underlines Innis' political concerns with contemporary developments and the overwhelming cultural bias he observed — an orientation towards spatial dominance and away from temporal sustainability. It argues that in light of capitalist-based globalization and technology developments, these concerns are perhaps more pressing today than at any time in history.

Even in Canada, where Innis was born and worked (at the University of Toronto), his Bias of Communication (1982) was not immediately well received. Innis had established himself as that country's pre-eminent social scientist based largely on his 'staples approach' to Canadian economic history and its more general implications for political economy. This work involved Innis in a series of decidedly holistic, materialist and dialectical but explicitly empirical analyses of how frontier economies develop. Through this work, Innis revealed that the ways in which economists had come to understand economic history involved assumptions based on the experiences of relatively developed political economies. Moreover, Innis demonstrated how developments 'at the margins' of the world economy, based largely on the extraction of staple resources, entailed a complex of structural conditions and subsequent political economic dynamics. Through this work, Innis recognized, in extraordinary detail, the interconnections between various regions and vested interests and the crucial roles played by transportation, communication, and culture in these power-laden relationships (Innis 1995). As such, Innis' apparent turn away from Canadian economic history and his staples approach to his relatively abstract analyses of communication over four thousand years of history – a project conducted in just the final years of his life – seemed to his contemporaries a rather eccentric and less than successful pursuit (Buxton and Acland 2000: 8-10). Despite the apparent suddenness of this 'turn' and subsequent isolation from his many colleagues, in many ways these later studies directly involved many of Innis' earlier concerns and analytical tools. As Innis put it, 'it is part of the task of the social scientist to test the limits of his tools and to indicate their possibilities' (Innis 1982: xvii). Indeed, what had really changed was his use of a much broader historical canvas, his compulsion to emphasize concepts rather than empirical detail, and the explicitly political concerns driving his work both forward and, paradoxically, deeper and deeper into the intellectual wilderness.

What Innis referred to as the 'biases' of core institutions, organizations and technologies – the nodal points through which what we know and how we know are produced and reproduced –

constituted his core concern throughout these final years. For Innis, a communication medium may facilitate the capacity to control space (or territory) as a necessary prerequisite to increasing control over time. In other circumstances, similar attempts to increase control over space could lead to a decline in the capacity to control time. As explained below, the bias of communication is not a reductionist concept. It is a heuristic tool in which dialectically related contexts are crucial. For Innis, the cumulative effects of how people communicate through a broad range of media, over any given time and at any given place, are not reducible to isolated social or physical characteristics. To apply bias, a comprehensive assessment of history is required in order to identify key media and to generate an elaborated understanding of their influence on history.

CLARIFYING BIAS THROUGH HIS CRITICS

To help in the task of explaining bias, it is useful to be clear about what it is not. The acerbic comment by Richard Collins used to open this paper was published in his review of the rerelease of Innis' 1950 book Empire and Communications (Innis 1986). In his critique, Collins criticizes this collection of Innis lectures most essentially because they present neither a 'systematic' or 'well-focused' argument. Because, according to Collins, the 'impact of communications . . . is not sufficiently differentiated from the effect of other factors' on historical development, he believes Innis fails to show 'that the structure and nature of communications has been any more decisive a force in the life of empires' than factors such as social organization, legal and familial systems, and military rule (Collins 1989: 217).

The fundamental difficulty of this and similar criticisms is that they assume that Innis shares a popular definition of what 'communication media' are. Collins also assumes that the absence of both precise definitions and the presence of difficult prose constitute little more than 'a set of take it or leave it dogmas . . . camouflaged by a thick frosting of sparkling information — facts lining the nest of an intellectual magpie and concealing the fundamental intellectual disorderliness of Innis' system' (Collins 1989: 218). More to the point, Collins is taking an intellectual stand against the absence of 'a clear structure of argument presenting . . . propositions that are open to testing and selective discard or appropriation' (Collins 1989: 219). In contrast to what are deemed to be his unscientific communication studies, Collins commends Innis' earlier staples studies for upholding this standard. Faced with writings that are 'impenetrable to reason' (thus supposedly breaking 'the rules' of scientific discourse), Collins concludes that 'Innis' later works are weathering badly in comparison to his earlier monuments' (Collins 1989: 218–19).

More common than this complete rejection of Innis' later writings is the tendency to misread and/or misappropriate his work generally and the concept of bias in particular. Some who have done this have labelled Innis a technological determinist. Marvin, for example, writes that Innis 'leaps from technological "fact" to social "effect" (Marvin 1983: 32). Innis, she continues, 'failed to realize that meaning is not in the technological object, but only in the particular practices to which society puts it' (Marvin 1983: 35). Specifically, Marvin assumes an all too common

reading of what Innis meant by the bias of communication:

Innis uses the term 'bias' to specify media orientation. Time-biased media render the passage of time unimportant in the transmission of messages. However far back in time a message is launched, it remains unimpeded and undistorted. People separated by generations can have the same message in their hands. . . . Space-biased media render the expanse of space unimportant in the transmission of messages. From no matter how geographically distant a point a message is launched, it remains unimpeded and undistorted.

(Marvin 1983: 32)

In her reading of Innis, Marvin classifies 'media' in accordance with their space or time 'biases'. Time-binding media include the spoken language, clay, parchment and stone because they are characteristically durable and difficult to transport. Space-biased media, on the other hand, are light and fragile, permitting wide-scale distribution but limiting in their duration over time. These include paper, celluloid and electronic signals. According to this reading of Innis, time-biased media foster hierarchy, decentralization, provinciality and tradition, whereas space-biased media promote centralization, bureaucracy, secularism, imperialism and the use of force (Marvin1983:32). As Couch summarizes: 'Innis . . . sought to demonstrate how the media are social environments sui generis that determine broadsweeping everyday forms of social consciousness and social relationships' (Couch 1990: 112).

While these two planes of criticism – one rejecting Innis' communication studies as some sort of post-modernist ruse, and the other critiquing its supposedly obvious reductionism – appear unrelated, they both, in fact, are rooted in a general ignorance of the intellectual heritage of Innis' communication studies in the context of his methodology and related political concerns.

THE ORIGINS OF BIAS

As already mentioned, Innis first used bias in 1935, five years prior to the publication of his last well-known staples study, The Cod Fisheries (Innis 1940). This early application emerged out of Innis' attempt to specify the dynamics that shape the subjective tendencies influencing the work of the social scientist. Rather than a concept developed to prioritize the role of communication in historical development, bias was first developed as a heuristic tool employed in the task of empowering the social scientist, encouraging him/her to develop a reflexive mode of intellectual practice. The paper in which bias is introduced is called 'The Role of Intelligence in the Social Process'. It was written in response to an article by Urwick (1935) who argued that the natural science paradigm was not suitable for the social scientist because, unlike the natural world, the social world is inherently unpredictable and ever-changing. This state of affairs, said Urwick, is largely a result of the inherent unpredictability of the thoughts and actions of basically free-willed human beings. Reflecting debates that are very much with us today, Urwick wrote that the social scientist also is inevitably infused with subjectivist tendencies. As such, no human being could hope to be objective while examining and

interpreting the inevitably unpredictable subject of social behaviour. 'Life', according to Urwick, 'moves by its own immanent force, into an unknowable future' (Urwick 1935: 76).

Innis both challenged the belief that human behaviour is ultimately unpredictable and Urwick's subsequent rejection of the scientific project. While agreeing that most behaviour is spontaneous and that human beings (including academics) often act on the bases of ingrained behavioural patterns involving degrees of unreflexive thought, Innis countered Urwick by recognizing that these thoughts and practices are themselves developed and reproduced. He called these thoughts and practices 'biases' and generally recognized them to be historically determined. Innis thus made an important assertion: while objectivity is impossible, the social scientist can develop the analytical tools needed to become aware of his/her own subjectivities, how they are constructed, and how and why they are unconsciously expressed again and again. With a touch of tongue-in-cheek, this general point is made by Innis in the following passage:

The innumerable difficulties of the social scientist are paradoxically his only salvation. Since the social scientist cannot be 'scientific' or 'objective' . . . he can learn of his numerous limitations... The difficulty if not impossibility of predicting one's own course of action is decreased in predicting the course of action of others, as anyone knows who has been forced to live in close relations with one other person over a considerable period of time. The exasperating accuracy with which such prediction is possible has been the cause of more than one murder in northern Canada and the dissolution of numerous partnerships.

(Innis 1935: 283)

Innis goes on to explain that 'the sediment of experience provides the basis for scientific investigation' and that 'the habits or biases of individuals which permit prediction are reinforced in the cumulative bias of institutions and constitute [or should constitute] the chief interest of the social scientist' (Innis 1935: 284).

It is here that Innis establishes the framework for the development of the bias of communication. By examining how day-to-day lives are mediated by organizations and institutions – how the key nodal points of social-economic power affect thoughts and practices – Innis believed that the social scientist could and should take preliminary steps in the task of redressing his/her own biases and their sometimes negative implications for the state of social knowledge.

This concern pushed forward Innis' emerging focus on the role of communication media (broadly defined) in the history of Western civilization. Troubled by the rapid growth of specialization in social science in the early twentieth century, Innis was concerned that the university itself was becoming the arbiter of instant solutions rather than an essential source of critical questions. After 1945, he observed the dissipation of critical voices in the political culture of the Cold War. In the past, ignorance and a belief in quick solutions could produce military conflict. In the emerging nuclear age, this concoction could well lead to the annihilation

of humanity. Such weighty concerns compelled Innis to pursue the aforementioned question, why do we attend to the things to which we attend? Given the mobilization of weapons of mass destruction and accompanying Cold War paranoia, Innis believed that by applying this question while re-reading history – particularly in terms of what he observed to be the dialectic between what he called 'monopolies of knowledge' and 'monopolies of power' – social scientists potentially (and, for Innis, perhaps even heroically) could develop the intellectual keys to human survival.

BIAS IN THE CONTEXT OF HISTORY AND POWER

By monopoly of power, Innis was addressing the predominance of entities capable of applying extraordinary military resources. By a monopoly of knowledge, he addressed those interests possessing extraordinary control over what information is available and/or those having a predominant influence over more complex patterns or habits of social thought. In other words, this latter 'monopoly' involves explicit and/or implicit control over the social pool of information and how that information is used in developing what is 'known'. As a trained economist (who, near the end of his life, became the first non-American to be appointed President of the American Economics Association), Innis also recognized that both power (i.e. force) and knowledge are directly related to control over wealth.

By the time his first collection of essays that explicitly addressed communication — *Political Economy in the Modern State (1946)* — was published following the Second World War, Innis recognized organizations, institutions and technologies as 'communication media' in that they constitute core structures through which people interact and history itself unfolds. Through this focus, Innis again underlined his concern with the underpinnings of human biases and how they are affected by predominant institutions, organizations and technologies. As such, Innis came to understand the bias of communication directly to affect, and be affected by, those interests engaged in the struggle to control force, knowledge and wealth.

Contemporary interpretations and applications of bias often involve relatively narrow or uninformed readings. More often than not, fragments of Innis' work have been extracted and applied as if they could be read 'straight', without interpretation. In his communication studies many instances can be found in which Innis makes statements concerning the biases of particular technologies. For example, Innis would write that durable media, such as stone, 'emphasize time' and that the use of stone implies a time-biased society. Ancient Egypt constitutes an example of this. Through the use of pyramids and temples, Innis argues that the medium of stone provided the Phaoronic class with the bases for their sustained and long-term dominance.

In raising this technology-power relationship, it is important to point out that a deeper, more 'political' project is being pursued. Through his suggestive rather than empirically detailed mode of presentation, Innis' communication studies actively seek to engage the reader in a kind of dialogue. By focusing on, for instance, the durable character of stone, Innis is only addressing

one aspect of the physical capacities of what was then a predominant medium of communication. In his writings, Innis always took pains to use words such as 'emphasize' and 'implies' when referring to bias. To illustrate this further using a medium popularized during his lifetime – the radio – Innis at first considered it to have had tremendous participatory capacities as a result of its potential emphasis on conversation and debate, both in-studio and through its integration with listeners over telephone lines. Based largely on its physical capacities, he recognized that radio could be used to promote the development of democratic exchange and mass critical thought. Innis also understood radio to be potentially positive in terms of its capacity to act as a counter-balance to the largely one-way communication tendencies found in the popular press. Rather than reading centrally produced material, crafted to attract and maintain mass or specialized consumers, the radio presented at least the possibility of generating a thoughtful and socially inclusive dialogue.

Innis, however, understood that the application and impact of radio – as with all communication media – also involved the context and, more particularly, the economics of its development and control. As a predominantly commercial medium (at least in the American context), radio, like the press, for the most part became yet another vehicle used by private-sector interests to attract consumers to advertising. Through rigid schedules, well-defined personalities, and the sensual rather than the intellectual engagement of audiences, such mass market commercial priorities only served to deepen the emerging monopolization of knowledge in twentieth-century North America. While recognizing radio as a vehicle through which the predominance of short-term thinking could be redressed (through a very public exchange of ideas and interpretations), the context of its use, particularly in the USA, generated a bias characterized by the predominance of power structures interested in controlling demographic markets and political-economic territories. In the case of radio, for Innis, the context of capitalism most directly facilitated its use to further the already dominant cultural bias of spatial expansion over collective memory and longevity.

All in all, in order to understand both his writings on communication and his concept of bias, Innis must be read in the context of his concern with the very ideal that Collins defends in his critique – the scientific aspirations of the social scientist. The bias of communication and Innis' accompanying study of history were pursued in an effort to advance our understanding of why we attend to the things to which we attend. As a result of the technocratic tendencies and aspirations of most of his academic contemporaries, and the general absence of a critical public able to redress an emerging oligarchy of specialized experts, Innis feared that 'the conditions of freedom of thought are in danger of being destroyed by science, technology and the mechanization of knowledge, and with them, western civilization' (Innis 1982: 190). It is the task of the social scientist, thought Innis, to overcome this cultural bias through the rebalancing of scholarly concerns – away from a search for concrete facts and toward the elaboration of abstract ideas; away from answering questions and more toward the framing of them.

CRISES AND THE DIALECTICS OF POWER

The Bias of Communication (1982) is a collection of essays that apply the concept of bias in a decidedly non-deterministic way. The main goal of its chapters is to use communication media as focal points through which macro-historical developments can be better understood. More specifically, for Innis, the development and implementation of media – involving coinage, the horse, the price system, the university, the radio and innumerable others – signal a response to social and/or economic and/or military uncertainties or crises. In turn the application of a significant new communication medium or set of media itself contributes to the restructuring of the human and natural environments.

For Innis, periods of uncertainty or crisis constitute historical moments in which disturbances in the capabilities held by dominant interests become apparent. Put another way, the apparent decline in the capacity to maintain or expandterritorialcontroland/ormaintaincontrolovertimesignalstheneedfor a reorganization of institutions and/or organizations and/or technologies. This often involves attempts, as Innis often put it, to establish or extend the monopolization of knowledge and this involves implicit or explicit efforts to control predominant ways of seeing and thinking. Innis understood that media play important roles in the dissemination of ways of knowing through space and/or time. Efforts to control space and/or time also involve attempts to monopolize force which, according to Innis, involve a range of control activities from brutal oppression to the more subtle implementation of surveillance technologies.

Because Innis believed that the development and implementation of significant new communication media often signal attempts to redress uncertainty or crisis, he thought that the social-economic collapse of historical empires reflect the failure of existing strategies to control space and/or time – strategies that are directly conditioned both by what is known and the ways in which what is known becomes or remains known. By recalling that bias was introduced in his formative staples writings, and its application in reference to ways of conceptualizing the world, it becomes apparent that Innis' work consistently is concerned with the capacity of a society to recognize and resolve crises. As Innis warned, '[e]ach civilization has its own methods of suicide' (Innis 1982: 141). A contemporary example of this, our deepening environmental crisis, serves as an illustration.

An Innisian perspective would view the contemporary environmental crisis in terms of the predominant way we see or understand ourselves in relation to the natural world. This involves the presence of an almost ingrained bias, characterized by an obsession with the short-term and a generally acritical approach among most commentators and public officials in relation to the long- term systemic causes of pollution. Most fundamentally, the predominance of particular biases — such as the view that growth and competition are inherently 'progressive' — tend to limit what is culturally feasible or realistic in efforts to respond to this and other crises. As I address below, this malaise is being directly conditioned by contemporary media (e.g. the Internet) and its development in the context of capitalism.

Innis observed that biases tend to be cumulative and self-reinforcing. This is important because

what is feasible or realistic today – since it fundamentally reflects the way of thinking that facilitated crisis in the first place – may simply serve to 'hold-the-fort' or 'buy time'. Such 'solutions' also may serve to exacerbate the problem structurally thus making the crisis, over the long-term, less rather than more correctable. Owing to the cumulative tendencies and intellectual characteristics of bias, societies often unconsciously construct barriers to the long-term resolution of their systemic problems. Again using the environmental crisis as an example, watered-down versions of the sustainable development paradigm, for instance, become an apparent solution. Through the concept of bias – because it compels the analyst to focus on historically produced and structurally ingrained intellectual habits – this kind of thinking can be recognized and potentially redressed.

INNIS' DIALECTICAL MATERIALISM

As noted above, bias constitutes just one element in Innis' more elaborate methodology. A related concept is Innis' time-space dialectic. For Innis, throughout history, efforts by a particular group, collectivity or class to assert power, explicitly or implicitly, usually involves problematic efforts to control the temporal and spatial conditions (both mental and physical) of day-to-day life. Through historically structured biased media, powerful concerns often will attempt to normalize their interests as if they were natural, universal, inevitable. Thus, for example, the pyramids of ancient Egypt served the Pharoahs and priestly class by spatially representing their eternal presence and God-like capabilities. Today, as discussed in the next section of this paper, the Internet, in relation to the context of its development and use, can be viewed as a medium whose moment-to-moment obliteration of both spatial and temporal barriers serves to normalize (or make 'inevitable') the perspectives of those with vested interests in particular modes of globalization in relation to those who may not.

From Innis' general body of work, a heuristic model can be constructed involving his implicit conceptualization of a struggle involving not only time, space and the temporal or spatial biases of predominant media, but also (as discussed earlier) control over knowledge, wealth and force. This model (shown below) constitutes a means of anticipating and assessing potential developments involving how changing media environments effect power relations.

The struggle to control knowledge, wealth and force can be represented as a dialectical triad that serves to make explicit significant historical tensions and possible contradictions. In relation to bias, this struggle is directly shaped by predominant and historically structured media (institutions, organizations and technologies) at any given place and time and their often unobserved effects on social epistemologies. In the context of this model, hegemonic stability rarely is attained over sustained periods of time and resistance (whether organized or fragmented) constantly plays a role in the outcome of particular tensions and in the restructuring or development of media in the future.



According to this model (Figure 1), human beings, their histories and constructions, all take place within the context of the earth's natural environment. As arrows owing into and out of the middle of the diagram indicate, the ongoing and over-arching limitations of nature are themselves subjected to human generated modifications. The next and, of course, dialectically interrelated level in this model is the predominant mode of production or 'how we produce and reproduce' our collective lives. Through this level, how society at any given place and time organizes its material survival – from hunter-gatherer, to slave- based, to capitalist political economies – is recognized to be the next essential context affecting (and affected by) human thought and action. At the centre sits the triad itself. Here it is assumed that a given social or world order involves the predominance of, or struggles involving, the interests of some in relation to others.

Furthermore, relative stability (or hegemony) presupposes the capacity of particular interests to control the interrelated components of power: knowledge, wealth and force. How human beings conceptualize themselves, their world and their interests, in the context of this ongoing struggle, is conditioned by innumerable local, national and global media. As such, history unfolds in the context of our existence in relation to the natural environment, our predominant political economies and the realities (and perceptions of reality) shaping power struggles.

INNIS AND THE INTERNET

Innis' work provides valuable tools in efforts to assess what has become the focus of great interest almost fifty years after his death—the character and implications of the Internet and more general digital technology developments. In Innisian terms, questions related to these include: will such technologies serve to democratize communications, breaking the monopoly of knowledge built up over the twentieth century by mostly largescale corporate entities? Or, will

the context of capitalism and its complementary technological, organizational and institutional mediators suppress such potentials, thereby consolidating the power of capital in deeper and more expansive ways?

As discussed, through his historical research, Innis believed that the development or significant reform of media communication takes place, most typically, as a response by vested interests facing some kind of crisis in their capacity to control knowledge and/or wealth and/or force. In the twentieth century, Innis believed that time and again (with radio being his most contemporary example) the full potentials associated with communication technologies were superseded by the context of capitalist political economies and the many institutions, organizations and other technologies that emerged to shape the biases of policy makers and publics. In one of his final essays, 'A Plea for Time', Innis recognized that interests with inordinate control over knowledge, wealth and force aspire to structure the mediators of contemporary culture in efforts to consolidate or extend control.

Mediators of this sort, for Innis, would include the American state through its ongoing efforts to control or expand the boundaries of US interests specifically, and capitalism more generally. Another is the institution of consumerism and its promotion of constant up-to-dateness and individualistic growth through commodities. It also, of course, involves commercial mass media whose efforts to extend and maintain ears and eyeballs compelled them to promote the sensual here-and-nowoverrelativelyintellectualruminations. Moregenerally, it was the context of capitalism and its systemic tendency to dominate economic and other relations (not to mention the necessity, at least in its competitive form, to focus on short-term profits) that constitutes the context through which both the struggle for power takes place and the mediators of this struggle take shape. Under these conditions, as Menzies suggests:

For all the contemporary talk about a postmodern information society, Innis's ideas would suggest that a real test of change is whether the social movements using the Internet . . . serve the bias of time — not just at the innovation stage and at the end-user level of intertextual rhetoric, but at the stage of institutionalized technological development and the enabling infrastructures associated with it, not just at the level of language games, but at the material level of structures that determine who gets to speak about what and who referees and designs the game plan.

(Menzies 2000: 324)

AN INNISIAN STRATEGY

In pursuing this research focus, Innis' methodology directs us to assess Internet developments in the context of the world's predominant mode of production – capitalism. For the last twenty years or so, structural changes have been taking place in the global political economy involving free trade and other neo-liberal policy reforms. As a result of associated, unprecedented and increasingly transnational fixed capital formations, the demand for technological developments designed to facilitate more efficiency has become extraordinarily important. One aspect of this

systemic drive has been a dramatic extension in the capacity to profit from information-based products and services, sometimes generally referred to as the 'commoditization of culture'. Despite the significant and perhaps rising wave of non-commercial (and, sometimes, potentially counter-hegemonic) information and communication activities being accommodated by Internet-based developments, for the most part these new technologies are being developed and implemented to enable capitalist interests to expand their reach and improve efficiencies. All in all, the wealth and force under the direct or indirect control of the world's largest corporations and nation states constitute resources being used to promote the Internet as a means of increasing profits. In relation to this, what economist Ian Parker observed in 1988 remains insightful today:

The commoditisation of culture has intensified the cultural differential between those individuals and institutions with financial resources to purchase, retrieve and process large volumes of specialized and costly information and those who do not. At the same time, the increase in the average standard of living and leisure time and the extension of the mass media, particularly radio and television, have increased general access to a basic level of cultural programming which is literally unprecedented in global-historical terms. Particularly since 1945, we have thus witnessed the seemingly paradoxical phenomenon of a rapid and significant increase in the absolute general-informational density of advanced capitalist economies . . . combined with an increase in the relative concentration or monopolization of specialized knowledge.

(Parker 1988: 223-4, original emphases)

As a result of this historical context, and the role of Internet-related technologies in shaping it, knowledge is becoming an increasingly central means through which the production and reproduction of both capitalism and hegemonic order takes place. From a Marxist perspective, class rule requires the expropriation of material and non-material resources and a class's capacity to do this implies its relative control over key organizational resources. As in the past, the development of the Internet and related technologies was a response to insecurity or crisis. Certainly a communication blackout following a Soviet nuclear attack (the basic incentive for the precursor to the Internet's original funding by the US military) and, later, what has been called the collapse of the post-1945 Fordist regime of accumulation in the 1970s (Harvey 1990) would qualify as such moments of insecurity and crisis.

The direct and indirect references to Marx in the preceding paragraphs, indicating a number of similarities between Innisian and Marxist political economy, serve to remind us that in the 1970s and 1980s several, mostly Canadian, theorists argued that aspects of Innis' work, in fact,

provide a means of dealing in dialectical materialist terms with several crucial lacunae in Marx's analysis: those of the dialectic between forces and relations of production and between the economic base and the superstructure; and at a more concrete level, those of the theory of the State and of the international economy that were to have occupied the unwritten fifth and sixth volumes of Capital.

(Parker 1977: 548).

And while the debate over Innis' affinities or utilities for Marxist political economy (and vice versa) has largely come and gone (Macpherson 1979; McNally 1981; Parker 1983), the analytical and strategic possibilities of relating the former's conservative and communication-focused dialectical materialism with the latter's radical perspective remains pregnant with possibilities (Comor 1994).

In relation to the contemporary post-Fordist period of rapid change and, thus, insecurity, from an Innisian perspective, the Internet and many other media both reflect such social-economic conditions and modify their character. As Innis put it, 'the subject of communication offers possibilities in that it occupies a crucial position in the organization and administration of government and in turn of empires and of western civilization' (Innis 1986: 5). By 'civilization', Innis, of course, is referring to long-term macro-structures and processes – a level of abstraction so removed from here-and-now experiences that it was itself used by Innis as a frame of temporal-spatial reference for both analytical and political- strategic purposes.

AN INNISIAN ANALYSIS

Almost fifty years after Innis' death, the Internet constitutes the most significant of recent technological developments affecting how people may relate to one another over time and space. As a medium of communication, it also reflects and restructures power relations (involving control over knowledge, wealth and force). Indeed, Innis' holistic understanding of communication media compels us to guard against any kind of Internet- (and even technology-) centered analysis. The Internet is just one of many significant mediators and communication scholars should be wary of assessing its development and implications in isolation from its historical context and the other technologies, organizations and institutions. Nevertheless, Innis' methodology directs us to think through the bias of Internet- based technologies in terms of the dialectics of power and control.

In its use in the annihilation of both time and space (at least in terms of the distribution and exchange of electronic forms of information) and in the context of the systemic pressure on capitalists, political leaders, workers and others to make decisions, buy commodities and take part in consumption activities more quickly and efficiently, the emerging bias of the Internet is disturbing indeed.

I use the word 'disturbing' for two reasons. First, the historically and technologically produced bias of the Internet to annihilate both time and space – its tendency to impel people to do much more in less time and with little regard for spatial barriers – challenges a broad range of vested interests and other communication media that tend to favour relatively long-term memory ordecisionmakingand/orvariousmodesofspatialsegmentation. Vestedinterests such as the labour movement or some domestically focused corporations, and media such as the book, or paper currency, or the nation-state, will no doubt continue to influence the temporal and spatial activities and orientations of people. As such, the Internet and related technologies

constitute media that are, through their use, disturbing several established ways of doing and thinking.

The second reason for my choice of the word 'disturbing' to describe the bias of the Internet directs us to consider Innis' larger concern with how new communication media redress and/or stimulate other (or perhaps deeper) crises. In its implicit promotion of the short term – itself stimulated by the annihilation of spatial barriers such as nation-state borders (which could be used to 'buy time' for a culture, an economy or a government policy) – already we are experiencing disturbing trends. These involve the rapid erosion of the time to make decisions. Whether such decisions involve the bombing of an enemy, the security of one's investments, the options one has in the workplace and so forth, the Internet, the general commoditization of culture and the related values placed on speed and efficiency arguably have set the stage for deepening political—economic crises as transnational investors respond to market 'signals' with spasmodic acts of panic selling, as consumers fail to keep up with the demands of sellers to buy more commoditiesmoreoften,astheenvironmentalcrisisreachesapointofnoreturn, and as cultures around the world become increasingly concerned with the here- and-now.

At a more personal level, efforts to promote the Internet and related technologies – through media ranging from the growing number of corporate interests promoting online consumerism, to educational organizations seeking access to vast information resources, to officials in World Bank development offences – explicitly or implicitly are serving the interests of those promoting the globalization of capitalism. Beyond the efficiencies of instantaneous buying, selling, distribution and the agglomeration of information about consumer preferences, all of the world's people and places potentially will become networked in what Menzies calls a 'lego set of costlessly interchangeable production units' operating as a kind of transnational 'perpetual motion machine' (Menzies 2000: 331).

While an Innisian approach understands that media, once established and widely accessible, can be used in ways not intended by those initially structuring them, it does seem clear that if the main access points to the Internet continue to be dominated by pro t-seeking interests and if corporate interests continue to be most influential in shaping national and international policies related to its development, it appears probable that the Internet will become, predominantly, a spatially biased medium. The more that this technology is structured to facilitate the ongoing growth and expansion interests of capital to the detriment of its potentials as an inclusive network in which vested interests concerned with conservation and duration (such as community groups, workers movements, religious organizations, environmental activists, and others) remain marginalized, existing controls over knowledge, wealth and force, for the most part, will be entrenched rather than challenged.

On the subject of knowledge, Innis was referring to not just what information is available and who has access to it but, more fundamentally, why we attend to the things to which we attend. In other words, in his elaboration of various media and their structured biases, Innis was concerned with the annihilation of civilization coming when space or time becomes a cultural

obsession. Through the Internet and predominant media, the practices and thoughts of more people in more parts of the world are becoming increasingly obsessed with immediate concerns and individual needs. Rather than a condition of capitalism per se, for Innisians, this is an accumulated result of the context of capitalism shaping and deepening the powers of some over others in conjunction with the spatially biased structures constructed to mediate day-to-day life.

In its moment-to-moment use, the Internet links many in relations directly or indirectly promoted by the systemic demand for efficiency. For many others, it links people in innumerable and instantaneous virtual communities. Either way, the relative intimacy of many non-commercial and face-to-face relationships tend to be pushed to the periphery of the human experience. At this juncture in history, the bias of the Internet is being structured and used in ways that diminishes time into the functionary of space.

CONCLUSION

For social scientists and, particularly, communication scholars, Innis' bias of communication constitutes an important analytical tool for three main reasons. First, bias directs us away from both technological and structural determinist positions precisely because its flexibility compels the analyst to recognize that, for the most part, physical or structural capacities at any given time and place are historically constructed. In Innis, such capacities are dialectically related to the intellectual and cultural capacities of human agents. As such, the bias of communication directs us toward a relatively sophisticated, critical, and materialist assessment of why we attend to the things to which we attend.

Second, bias enhances our ability to locate historic and contemporary cites of instability and crisis. Specifically, it directs us to consider the contradictory potentials of 'ways of thinking' and subsequent 'ways of doing'. Using bias as a conceptual tool, the seemingly successful short-term responses of vested interests to social-economic crises, for instance, can be seen to themselves entrench the very biases that contributed to the original crisis. As the case of environmental collapse illustrates, habits of socially structured thought are both historically produced and potentially disastrous.

Third, bias directs the researcher to pay particular attention to the core institutions, organizations and technologies used to mediate social-economic power relations. But again, because these media and their biases are socially constructed, the study of bias directs the social scientist away from reductionist and determinist modes of analysis. In light of this point, contemporary myths involving the Internet and related digital technologies could use a stiff dose of Innisian critical analysis. The fact that these history-shaping constructions have become 'inevitable' and 'desirable' compels the critical scholar to investigate the biases at play, the vested interests involved in their perpetuation, and the implications of struggles associated with them. This involves a focus on what institutions, organizations and technologies — what communication media — are most directly shaping such developments and their accompanying

assumptions. According to Carey:

What Innis recognized . . . is that knowledge is not simply information. Knowledge is not given in experience as data. There is no such thing as information about the world devoid of conceptual systems that create and define the world in the act of discovering it. And what he warned against was the monopoly of these conceptual systems or paradigms. (Carey 1975: 45)

In the context of the early twenty-first century, the Internet and other emerging technologies, organizations and institutions constitute the deepening predominance of an obsession with spatial expansion, organization and control through evershortening time frames and an accompanying neglectof historical and social conceptualizations of time. As Innis put it in his essay 'A Plea for Time',

a stable society is dependent on an appreciation of a proper balance between the concepts of space and time. We are concerned over control not only over vast areas of space but also over vast stretches of time. We must appraise civilization in relation to its territory and in relation to its duration. The character of the medium of communication tends to create a bias in civilization favourable to an over-emphasis on the time concept or on the space concept and only at rare intervals are these biases offset by the influence of another medium and stability achieved. (Innis 1982)

Half a century after his death, the concept of bias and Innis' dialectical materialist approach helps counter the guarded optimism held by some members of the intellectual movement that Collins, among others, has associated with him – post- modernism. Today, Innis no doubt would be extraordinarily concerned with the trajectory of contemporary developments. While resistance would be anticipated, both the scale and rate of change associated with our obsession with growth, efficiency and immediacy – and thus the extreme difficulty of orchestrating sustained oppositional movements – would have surprised even him. The antidote to this state of affairs and its associated consolidation of power through control over knowledge, wealth and force involves a concerted effort (perhaps, paradoxically, involving the Internet and other such technologies) to restructure existing and emerging means of mediating relationships involving the promotion of a collective critical memory and general sustainability. As anticipated by his dialectical triad, this effort to counter space with time will involve a nearfuture featuring tension rather than harmony. The alternative, for Innisians, most certainly involves a violent turn in the century now upon us.

NOTES

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2 On its relation to the essays presented in The Bias of Communication, Innis writes that '[t]hey do not answer the question but are reflections stimulated by a consideration of it' (1982: xvii).

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