TOWARD A TECHNOGRAPHY OF EVERYDAY LIFE: THE METHODOLOGICAL LEGACY OF JAMES W. CAREY'S ECOLOGY OF TECHNOCULTURE AS COMMUNICATION

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In this paper we identify Carey's contributions to the concept of technoculture and attempt to systematize his writings on communication, culture, and technology in order to craft a methodological strategy for the study of technoculture based on participant observation and contemporary ethnographic practices of representation. After introducing a definition of technoculture we outline how technography—the study of technoculture in everyday life—builds upon two sensitizing metaphors: technoculture as ecology and as semiosis. Our discussion of technography shows the potential of this research strategy for the study of the symbolic interaction amongst technics, technological practices, social agents, and the natural environment.

Keywords: Technology; Culture; Research Methodology; Ethnography; Symbolic Interaction; James W. Carey

To enter given technological worlds
is to enter actual social relations
J.W. Carey (2006, p. 214).

We can best summarize James Carey's vision of communication through three analogies. The first, communication as culture, draws upon a Geertzian and symbolic interactionist model of reality construction as emergent and inevitably social and semiotic. The second, communication as ritual, derives inspiration from a Deweyan view of sociality as the organic constitution of individual and collective habit. The third, culture as technology, fuses the modified instrumentalism typical of the pragmatist tradition with the material-ecological spirit of the Chicago School and the communication revolution spawned by Harold Innis. Together, these three analogies carry the genes of a

hermeneutic approach to the study of communication-as-culture-as-technology which constitutes Carey's most important epistemological legacy. We wish to capture the methodological essence of this legacy through the use of a barbaric sound-bite co-opted for the purpose at hand from diverse fields: *technography*, or the *ethnography of technoculture*, which we define as an analytical and reflexive strategy of researching from the participants' perspective the interconnections between social agents, their technological practices, their technics, and the natural environment. To the development of technography we dedicate our attention in this essay.

Our focus on methodology in this article is both pragmatic and honorific. The pragmatic objective comes from our interest in studying technoculture, a concept which refers simultaneously to the cultural dimensions of technology and to the technological dimensions of culture. A fundamental view of humans as engaged in *making* their unique ways of life is central to this approach. We can define technoculture the "*creative* process whereby people *produce* and *maintain* forms of life and society and systems of meaning and value" (Christians and Carey, 1981, p. 346, emphasis added). The concept of technoculture is not separate from that of culture writ large. There can be no culture without a "*creative activity* [which] is grounded in the *ability to build* cultural forms from symbols that express this will to live and assert meaning" (Christians and Carey, 1981, p. 346, emphasis added). Similarly, there can be no technology aside from an ecological system of meaningful symbolic practices arising from the joint interaction of humans, techniques, technics, and the natural environment. Because this definition is so vast, technoculture turns out to be a difficult subject matter to investigate ethnographically. To boot, the risk of falling prey to the threats of either technological determinism or cultural determinism is known to jeopardize inquiry in this field. As a way of solving these problems we propose here an original systematization of Carey's approach to the ethnography of technoculture. In aiming for that goal we are less moved by the need to write an exegesis and more by the will to solve a technical problem. Thus, despite our

obvious focus on Carey's work in what follows we take the license to both broaden his scope as well as to extend his views by borrowing other sympathetic scholars' lenses.

Our motive here is also personal and honorific. We have never met Carey face to face, but through his mediated word we have come to have a profound liking for the man behind the ideas. We love his stories, and wish he had at least once written an ethnographic work. His essays are so punctuated with precise anthropological observations, descriptive insights, and a thick "ethnocentric" attention to rituals that we cannot help but wonder what ethnography would look if Carey had done it. Here, therefore, by playing with his ideas and his vision for qualitative research we hope to prepare a Careyite-flavoured research strategy that will contribute to preserving his legacy.

We have organized our essay into two main sections. Each section corresponds to one root metaphor which we have identified in Carey's written work on technology, communication, and cultural studies and highlights a principle central in his scholarship. Each section also contains a short fragment of our field notes collected throughout our current ethnographic work. Our field notes serve to contextualize our interpretation of Carey's thoughts, explain our arguments, and evoke ideas and concepts. We begin with an introduction to our research strategy and subject of study.

Technography as a Research Strategy

We began to conduct fieldwork amongst ferry commuters in the winter of 2005-2006. What began as a single study of a small island community, Gabriola Island, in British Columbia's Strait of Georgia (Hodson and Vannini, forthcoming) has now generated an ongoing multi-site ethnographic project that looks at the role played by public and private marine transportation in the structuring of everyday rituals in coastal communities all over the coast of the province. For our fieldwork we employ typical ethnographic methods of data collection. Even though we do place an unusually

heavy reliance on group conversations and interviews—since we believe that some of the more complex questions we investigate can best be approached through group dialogue and collective reflection with informants—we do not think of our ethnographic approach to technoculture as a novel *method of data collection*. Technography is instead a relatively unique *strategy of making sense of and representing data.* Our approach attempts to draw upon a reflexive, narrative, embodied, and sensuous approach to ethnographic representation in order to make sense of, while evoking sensations of, corporeal presence and bodily movement in space and material engagement with technics.

Technography strives to rediscover McLuhan's rhetorical style as a way to decenter linear academic writing and as an impressionist technique liable to convey images of technoculture as multi-perspectival, complex, contradictory, rhizomatic, and heteroglossic (see Vannini and Vannini, 2007). As a creative practice, like art, technography reflects on the "miracles of social life" and aims to "take the sound of the sea, the intonation of a voice, the texture of a fabric, the design of a face, the play of light upon a landscape and wrench these ordinary phenomena out of the backdrop of existence and…"into the foreground of wonderment" (Carey, 1989a, p. 24). The social practice of writing is itself a form of techne and thus we envision technography as a self-conscious technological strategy; a form of inquiry guided by the reflexive awareness that its communication techniques directly constitute the object which it bespeaks. Furthermore, we intend technography to work by way of employing sensitizing concepts (Christians and Carey, 1981). Technography aims at bridging the binary opposition between postmodern ethnography and analytical ethnography by privileging the local without losing sight of the global, by consisting of multiple layers of evocative description and situated interpretation, and by satisfying criteria of in-depth observation, contextualization, comparison, and transferability of concepts (Christians and Carey, 1981) as well as narrative representation. Despite the importance of these criteria, however, as technographers in our empirical studies we believe "we [sh]ould talk less about rigor and more about originality […]

draw more on the vocabulary of poetry and less on the vocabulary of metaphysics" (Carey, 1989a, p. 94).

Technography is a way of investigating the ecological relations amongst environment, technics, techniques, and social agents without privileging any one of these in particular. Technography is intends to redress the partial views of much contemporary writing on technoculture which emphasize either "happy pastorals of progress or grim narratives of power and domination" (Carey, 1989a, p. 9). Technography views technics and resources as meaningful and powerful, but aims at avoiding the anthropomorphism typical of actor-network theory, as well as that perspective's tendency to downplay power hierarchies. Technography also intends to compensate for the anthropocentric bias of much ethnographic writing by placing a critical moral emphasis on the deep ecological rights of natural resources not to be exploited and by focusing on the ontologically-constitutive role of land, water, and air in culture and social interaction. Finally, technography aims to be cognizant of the qualitative aesthetic immediacy of techne and to be reverential toward the value of "life on earth" and respectful toward "the organic realm in which human civilization is situated" (Christians, 1998, p. 4).

Doing technography is a way of grasping technoculture as ecology and as semiosis. The role of these sensitizing metaphors is to work as "expressions that develop an insightful picture, which distinctively convey the meaning of a series of events" on the field of study (Christians and Carey, 1981, p. 357). Metaphors work like maps, both as representative symbols of a conceptual land, and as functional symbols for its navigation (see Carey, 1989a; Christians and Carey, 1981).

The field notes we include here were written following a group interview on Gabriola Island. Gabriola Island is a small community of approximately 3,500 people. It is located twenty minutes east, by ferry boat, of Nanaimo (pop. 77,000)—central Vancouver Island's economic and political center. Gabriola lacks major employment opportunities, government agencies, educational

institutions other than elementary and middle school, and commercial centers. Gabriolans are mostly politically progressive middle-class families of European-Canadian origin, generally proud of their island community and strongly active in any movement founded to preserve its uniqueness. Gabriolans are for the most part commuters. The M.V. Quinsam, operated by the British Columbia Ferry Corporation, connects Nanaimo and Gabriola approximately every hour from early morning till late evening. The aging vessel is notably slow, subject to periodical engine failure, and quite small—as it can only carry seventy cars.

Like other island communities in British Columbia's archipelago Gabriola is the outcome of an irregular and unplanned migratory movement which has colonized land previously occupied by Coast Salish peoples. What was once a treasured First Nations' burial ground is now a developer's dream, only hampered by heavy restrictions put in place by the Island Trust—a local semi-autonomous governing body functioning as an extension of the provincial government and legislative assembly. The choice that people make to move to Gabriola Island and away from the growingly suburban rhythms of Nanaimo has been and is driven by an admittedly hypocritical protectionist ideology: the wish to occupy a relatively pristine territory before too many others do and thus to form an ecological niche sheltered from, but entirely dependent on, its urban counterpart at the other end of the ferry terminal.

Technoculture as Ecology

Our first strategy in understanding the complexity of technoculture consists in approaching it as *the emergent outcome of interdependent relations amongst humans, technics, techniques, and the natural environment.* Carey (1999) identifies three types of overlapping ecologies: a physical ecology of movement, a symbolic ecology marked by struggle and competition over the definition of the situation, and a media ecology overlaying both of the two former processes. These ecological relations are situated within precise temporal and spatial boundaries. The temporary stability of these boundaries is

contingent on multiple factors. When any component of these boundaries, or any element this system encompasses, undergoes real or imagined change the relations amongst social agents, techniques, technics, and environmental resources change as well in indeterminate and emergent ways. This is evident in the first segment of field notes we present.

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"It was a good idea to organize this get-together"—I realize—"If there is one thing that brings this community together somewhere other than on the ferry is the desire to get together and reflect about the future of the island and, well, its ferry." "Hey guys"—I hesitantly blurt out trying to overcome the murmuring, munching, and laughter—"I have another question for you: how do you think life on the island would be different if we had a bridge instead of a ferry?" Murmuring suddenly explodes into collective indignation. "It would cease to be an island!"—Jessica exclaims, sounding almost offended. "True"—adds Jim—"The idea of putting in a bridge would make me wonder why we want a bridge. Do we want a bridge so you can move faster from A to B? Why did we move to an island if we want to move faster from A to B?"—Jim's loud voice is followed by an even louder, almost collective "yes!" by the group. Reinvigorated by the collective agreement Jim continues with a confident tone: "What would that do to the environment of the island? I mean the physical environment, the natural environment of the island. And what does that do to the overall cost of what we're doing to the globe? How does that mindset put us into then heating up, fixing up more and more cities with the…uh, the useless petrochemical fuels and that sort of thing? You know, the continuous back and forth flow that we continue to do everyday on the ferry is probably not even the way to go. Actually, I think we should be going the other way. We should, to be quite blasphemous, be cutting down on the ferries. We should make it less, not more easy..." "That would be difficult"—interjects Russ. "Yeah ...but, but…"—Jim continues—"just so, because people are assuming that the ferry on Gabriola is an impediment, it's like, I've heard it described as a

slow bridge. So you've almost got a bridge already. And one that's relatively getting smaller because of the growing amount of traffic. So in my view, what you need to do is actually make it in some sense more difficult so that people realize they're living on an island. They're living here, they're not living back and forth and back and forth, and a bridge only encourages that."

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Actual change in technics, or the threat/promise of it, carries the potential for significant changes in technocultural relations. A bridge in lieu of a boat would considerably de-insulate Gabriola, whereas a less frequent ferry service would increase the need for self-subsistence on the island. Informants' revealing realization that things could be otherwise is a deeply insightful one. Technoculture is mundane and taken for granted and inquiring about the possibility of a shock to the system like Jaigris did by presenting a hypothetical scenario is liable to reveal deep-seated beliefs, dispositions, and practices otherwise invisible.

Viewing technoculture as ecology allows us to focus on its relational nature. Carey's ecological view of technoculture emphasizes communicating as relationality, that is, as the life-energy holding together diverse symbolic and material organisms. Technoculture stands for the relational architecture of past, present, and future. It stands for the manufacturing of tradition, collective sentiment, and social institutions. Commuting by ferry is thus to be understood as a technocultural activity of material creation and symbolic formation of a place-based community, in this case a community of commuters.

Understanding technoculture as ecology also allows us to focus on the *networks of movement*—symbolic and material—through which we shape the natural environment and through which the natural environment and our habits of movement with it shape us. As Hay (2006, p. 47) observed Carey's model of communication-as-culture emphasizes "ritualized representation and movement" by introducing a vision wherein production of space is "historically lived, practiced, and produced

through bodies in motion." These networks are both productive of and reproductions of spatial regulations and thus institutionalized relations of movement. In this sense the colonization of Gabriola Island by successive waves of immigration over the late nineteenth and twentieth century can be understood as part and parcel of the Canadian quest for the fulfillment of its unique version of manifest destiny: the conquest of remote places by way of growth in space-binding technological interconnectedness (see Kroker, 1984).

Technoculture is not only the coming together of social groups in harmony, but also the colliding of strategic interests. Carey's (1999) reflections on the teachings of the Chicago School of urban sociology are particularly revealing here. Much like waves of ethnic immigration to metropolitan areas resulted in the formation of new institutions of neighbourhood life and in the sharing of "a common heritage and fate" (Carey, 1999, p. 89) networks of movement to and from Gabriola Island have resulted in the social organization of a local culture marked by common technologies of movement and collective identification (like the ferry), but also in the indigenous diaspora of previous inhabitants.

A typical network of movement is what we may call *ecological carving*. The concept of ecological carving describes the struggle to "carve out ecological niches" (Carey, 1999, p. 90) within space by changing environmental resources and manipulating symbolic and material technics in order to parcel out space into two or more distinct boundaries separating, but also connecting, the self and its referent groups. Ecological carving—like in the case of Gabriola Island—is often relatively unplanned and always contingent to change. A focus on ecological carving shifts the emphasis away from an inquiry into social ecology that is driven by a "merely mechanical interest in social equilibrium" and turns the technographer's focus to the "political-economic history and decision-making context that result in the dominance of one type of transport over another, one mode of communication or social interaction over another" (Carey, 1999, p. 92).

Amongst other outcomes ecological carving tends to juxtapose communities distinguished by incongruent and often opposite *temporal and spatial identity markers*. An example of this in the lives of Gabriolans is their relation with Nanaimoans. Gabriolans like to take pride in their notion of "Island time"—a slowed-down version of central and southern Vancouver Island's allegedly hectic rhythms (Hodson and Vannini, forthcoming). At the same time Gabriolans take a countercultural pride in living at the margins of urban centers like Vancouver or Victoria. The same process occurs on a smaller island not serviced by BC Ferries located half a nautical mile to the north of Gabriola, Protection Island, where the locals are so much more insulated that they consider Gabriolans "big city people" (Vannini and Vannini, 2007).

Carving portrays well the symbolic and material aspects of technoculture and its embodiment in everyday practice. Carving is an activity that is both functional and expressive, both a way of assembling together ecological circumstances and manipulating them at the same time. When you carve, not only are you carving an image of the world out of organic material of that world, but you are also preparing a technic that can be used for future carving of that world. The carved technic and the carved world are transformations of the original world and a change in ecological relations. Their original potential undergoes mutation, and their new potential makes a new claim over the world. This is a form of *material claims-making*. The Quinsam thus stands both as an expressive symbol of Gabriolans' collective identity and landscape, as well as a tool with which to carve their identity and landscape. But the ferry, also makes a claim of its own: with its standardized schedules and the resulting hourly deadlines for movement it claims a new routine of its own, marked by the organization of time into a centralized grid, as to put everyone "on the same clock of awareness" (Carey, 1999, p. 97). We carve the world with our tools, and then we need to interact with what we have carved.

Technoculture as Semiosis

"No ideas but in things"—Carey was fond of saying, quoting the poet William Carols William. Despite the plausibility of a materialist-determinist interpretation of this pronouncement, as well as possibly of a few others scattered throughout Carey's oeuvre (e.g. Carey, 1989b), Carey was resolute in denying any form of cultural over-determination. For him technologies are things to think with, things to engage in dialogue, to give meaning to in practice, "things that shape the self and the mind" as well as the body (Carey, 1989a, p. 316) and not mere instrumental tools. In Carey's vision technology assumes the role of a central character in the drama of everyday life: at times a trickster, or a storyteller, or a higher authority of truth and teleological insight, or a monopolistic super-legislator of knowledge and truth. Regardless of the actual character technology for Carey (1989a, p. 317) is never a "force outside culture" but instead something "intrinsically cultural" and a "creation of human practice and ingenuity …embod[ying] concrete lifeways." This pragmatist approach to technoculture as meaning-making is what we wish to broaden here.

A technoculture takes shape as social agents strive to find ways to utilize the unique potential of technics in order to actively create solutions to concrete mundane problems of symbolic expression and material production and reproduction. The following fragment from our notes demonstrates social agents' critical awareness of the unique qualities of technologies as well as how these are simultaneously symbols *of* how the world works and symbols *for* coercing "the world into behaving" after our images of it (Carey, 1997a, p. 317). As we explain in this section, technoculture is an active way of making meaning, or in other words, a form of semiosis. While Carey never engaged Peircean or even Deweyan semiotics in any depth we suggest that an integration of semiotic thought with Carey's symbolic interactionist perspective prevents technographers from pursuing cultural and technological determinist solutions to research problems.

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Jim's point makes him the center of attention for a while. His argument is a popular one. "I think the fact is that we want to slow down development"—Chris loudly remarks, interrupting my thought—"And development is not necessarily exclusive to retired people, or to young people. It's just that we want to minimize development because of the fact that we're now experiencing environmental changes on the island because we're at maximum capacity really. You know…"—a murmur of collective agreement slows Chris for a second—"And… and… I... I kind of look at the ferry as a gated community. You know I can't think of a safer place... well no, honestly, if you look at it, can you think of a safer place? I mean seriously, you look anywhere else right now, and every other place, you know how they're worried about having their kids on the street; you wouldn't go walking alone; you know you would not..." "You wouldn't leave your house unlocked"—Donna interjects" "Yeah"—continues Chris, you wouldn't leave your house unlocked. Here, you know, there's consensus that, that we have all those luxuries, and it's a wonderful thing, but I think we only have it because of the ferry."

"Well, you know"—Jonathan says, somehow managing to capture everybody's attention, "in terms of ah... history on the west coast, I would say that the ferry system from the original Bennett deal onward was developed along the lines of a social contract with the coastal communities to provide reasonably good access, reasonably priced access to the alternate communities and thereby feel that they weren't isolated." "When you move to the Fraser Valley like I did"—Tom states—"you'll find that the commute to Vancouver is a real separation. There's a farm area and there's a rural area, and there is a road connecting them all the way, and it takes about twenty minutes to get in there so it's the same separation that you've got between Nanaimo and here. But maybe what we're talking about is two different areas separating the work area from the home area." "Now wait a minute"—May interrupts him—"I was just gonna ask you one question. In your commute from the Fraser Valley to the city, you're by yourself, right? In a car, right?" "Um, yeah, well, until there

was a bus service to there, and from what I understand there's a train now"—Jonathan replies. "Exactly!"—May exclaims "…because when I lived in the suburbs of Vancouver I took the bus every day and was part of a bus community and I'd always see the same people and same driver and we'd develop a relationship, and I thought it was a special feeling, so I transferred that feeling to the ferry!" People nod in agreement, following May's point: "Yeah, definitely that feeling"—murmurs Chris. "You know"—continues May—"I basically ride the same ferry every morning, and the same ferry workers who get to know me very well...I feel like I am part of that community as well, the Gabriola ferry community." "I agree"—remarks Mike—"the ferry promotes a sense of community, where as a bridge does not."

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Semiosis is a central concept in the philosophies of Dewey and Peirce. As we wish to argue, Carey's work builds upon a pragmatist legacy which clearly accounts for the indeterminacy of meaning and, as we demonstrate by way of extension, the indeterminacy of techne. A semiosic view of techne allows technography to avoid either cultural or technological determinism. The key argument resides in the parallel between the processes through which symbolic meaning-making and material engagement with the world take shape. We argue that because Carey's view of communication as ritual is built on a pragmatist and constructionist approach to meaning his conceptualization of the process of material engagement must be understood from within the same ontological parameters. We suggest that semiosis and techne are different words for the same concept, both in Carey's scholarship and in theory at large.

In the pragmatist tradition techne stands for the creative method employed in the production of meaning and value, in craft, in the transformation of the material world, and in the accomplishment of purpose. Techne is both a form of inquiry and creation; a form of symbolic attribution and material manipulation. Techne is a way of constructing reality and a way of making

and re-shaping the world: "an expression and creation of the very outlooks and aspirations we pretend it merely demonstrates" (Carey, 1989a, p. 9). Techne is a form of interaction amongst at least one agent, one distinct technique, one technic, and one desired, final state. Techne describes a generic process, whose basic concrete instance could be a situated *technological act* involving impulse, perception, manipulation, and consummation (Mead, 1938). By way of analogy to Peirce's semiotic theory, techne could also be said to be analogous to semiosis. Understood as semiosis *techne is a process whereby meaning is made of from, with, and toward the material world.* A semiotic understanding of techne highlights how symbolic meaning and material use, and thus culture and technology, are inseparable.

A semiosic understanding of techne can explain the origin of humans' material engagement with the world and the subsequent consequential significance of materiality in technoculture. Pragmatism teaches us that the meanings of an object or an act reside in the social responses directed to such objects or acts, on the basis of their qualities. Objects, therefore, are resources endowed with unique potential for making meaning. Technics—whether organic, like environmental entities, or non-organic, such as human-made products—are semiotic objects, and thus resources: tools for making meaning and functional tools for adaptive use. In pragmatist fashion the meanings of a technic, therefore, can be said to reside in the uses made of it and generated by it on the basis of its potentiality and circumstances of use.

According to Peircean pragmatist semiotics meaning emerges out of the triadic interaction between an object, a sign vehicle—known as representamen—that stands for that object, and the sense that someone makes of this relation—known as interpretant. This triadic model of signification can be extended to techne. A basic instance of techne—that is, a single technological act—can be explained through a similar model which comprises also three units: a technic, a technique, and an object to which the technique and technic are directed. The elements within the

models of semiosis and techne overlap as follows: the representamen corresponds to the technic, the interpretant to the technique, and the semiotic object in Peirce's model corresponds to the desired end to which the technic-mediated technique is directed. Within this model interpretation and embodied practice, meaning and bodily purpose, symbolic and material mediation of the world overlap. Viewing technoculture as semiosis is therefore equivalent to viewing forms of technology as "concrete embodiments of human purposes, social relations, and forms of organization" (Carey, 1997b, p. 319).

For example, Chris in the excerpt above interprets the ferry as a gate; the gate, in other words is both the symbolic connotation and the technological function of the ferry. This semiotic relation takes this meaning because of Chris's unique perspective as a member of a small island community keen on the preservation of its uniqueness. Chris's position can be understood as emblematic of a technocultural trait unique to the Gabriola Island community. Chris and fellow islanders routinely act toward the goal of maintaining the gatekeeping function of the small commuter ferry. Gabriolans are known, for example, to have lobbied against any plans for the construction of bridges, larger terminals, or the employment of larger boats on the route. We can refer to these actions as *interpretive techniques*: practical acts which make sense of the unique qualities of the technic in question (the ferry boat) in light of the purpose at hand (preservation of safety as well as cultural uniqueness and environmental conservation). By engaging technics in purposeful ways, aimed at the manipulation of the symbolic and material world, social agents make sense of and activate the particular qualities of technics themselves. Meaning emerges together with purpose as the process of interactive material engagement with the world works not as accident, not as design, but as a complex indeterminate joint act.

Interpretive techniques have a tendency to be used over and over again over time. In the pragmatist tradition these are known as habits of thought and feeling, like that of associating a flag

with nation and pride. In the technological act when interpretive techniques become common practices we can refer to them as *habitual techniques*. In our society habitual techniques tend to carry the imprint of the received view of technology, that is, they tend to be marked by a "ritual of control in which fascination with technology masks the underlying factors of politics and power," (Carey, 1989a, p. 195) often colonizing nature and suppressing creativity. Habitual techniques may therefore be adaptive in the short term, but not in the long term, and may be deeply shaped by common ideologies.

The semiotic model presented here does not lean askew on any of its components. Modeled on a vision of semiosis as authentic dialogue, techne as presented here "requires a primitive form of equality" because "it must leave room for response as a condition of its continuance" (Carey, 1997a, p. 315). A semiosic model of techne "enforces recognition" (Carey, 1997a, p. 315) of the world through practical and interpretive bodily engagement. Privileging one element over the other inevitably results in ontological problems: by emphasizing the power of technics one flirts with material/technological determinism, by viewing techniques as most significant one espouses cultural determinism, and by focusing too much on the needs, drives, or purposes of technologically-mediated human actions one ends up embracing views such as biological reductionism or passive evolutionism.

Because technics have unique potential they are not easily substitutable. That is why Gabriola Islanders wish to continue to utilize ferry boats instead a bridge, for example. This is not an argument in favour of material or technological determinism. The point that objects may have essences, inherent to them because of their qualities, does not compel one to embrace essentialist views of meaning (Halton, 2004).

Furthermore, just like misunderstandings and unanticipated consequences commonly occur within everyday processes of communication, so do unintended outcomes of technological acts.

Dissolution of habitual meaning and practice always threatens to break through, as Carey has repeatedly argued. A technological understanding of culture, after all, points to its ritualistic existence as "the ensemble of practices through which order is imposed on chaos" (Carey, 1997a, p. 314). Semiosis and techne are delicate, situated, existentially unique joint acts shaped by multiple symbolic and material elements assembled in complex ways. The same goes for the functions to which technics and techniques are put: multiple and at times contested practices can be just as common as uniformity of use and predictability of outcomes. To boot, signs always generate others signs in an infinite semiotic regression, as Peirce pointed out, and the same goes for technological acts: each technological act generates other technological acts in an infinite functional interaction of adaptive responses and unpredicted outcomes.

Conclusion: Technocultures as Degrees of Insularity

Throughout this paper we have argued that Carey's methodological legacy of technography is intended to "demythologize the rhetoric of the electronic sublime" (Carey, 1989a, p. 139) by taking technoculture studies out of the control of utopian and dystopian ideologues of the future. Technoculture resides in old docks, in toy stores, in the hobbyist's toolbox, and in the refrigerator as much as it resides in the cathodes of an electronic tube or in the chips of a personal computer Technography aims to de-center the hypermodern, "urbecentric" view of technoculture because it views techne as old as humanity itself.

Technography's approach to technoculture—regardless of the focus of investigation—is obviously based on a ritual model of communication (Carey, 1989a). A ritual model emphasizes "language, culture, and meaning [and] does not exclude issues of power and conflict" (Carey, 1997b, p. 10). Technography asks simple questions, questions that each individual living in a local technoculture asks mundanely, such as "what shall I do? How shall I live? Shall I support this or that?" (Carey, 1999, p. 101). These simple questions inevitably require complex answers as local

movements-across-place, habits, stories, and knowledge intersect with larger space flows, collective rituals, history, and discourses. Rituals of everyday life, in other words, are often the performative sites of larger collective habits of institutional control shaped the power of governmentality and by historical discursive structures. This is a model of inquiry that is "historical and reflexive: a model in which the history and intentions of the observer are part of the history and meanings of the observed" (Carey, 1978, p. 19).

Throughout our field note fragments we have attempted to display dialogue as the site of technocultural knowledge. In interpreting the significance of Innis's work, and borrowing from Feyerabend Carey (1999, pp. 100-101) once observed that inquiry into the constitution and operation of knowledge has taken two resolutely opposite shapes: the "observer tradition" and the "participant tradition." Whereas the observer tradition focuses on causality and prediction the participant tradition is more clearly situated in place, in a bounded-temporal context, and in the pragmatics of everyday life. Studying technoculture technographically is a form of inquiry based on the *participant* tradition of dialogue. Large or small group interviews, debate-like field conversations, and narratives allow technographers to check off the biases of traditional historical studies of technology with the bias of dialogue. At the same time technography is a way of viewing the personal as political and the biographic as historical. Thus it is important to concentrate on studying technoculture through the oral tradition and the mundane without losing sight of historical, political, "industrial, financial, and trade relations" as well the "mechanical extensions of communications" that shape the conditions of local dialogue (Carey, 1999, p. 99).

For example, local technocultures like Gabriola Island's are intertwined in large-scale networks. Local and global systems of knowledge and movement come into both harmony and collision, alternating-on-site through "ceaseless cycles of social organization, disorganization, and then social reorganization" (Carey, 1997c, p. 28). Large urban frontiers, like Vancouver, coordinate

commercial and political links with satellite centers like Victoria and hinterland cities like Nanaimo and Prince Rupert. When over three decades ago the Victoria-based BC Ferry Corporation opted to include service to Gabriola Island as part of its plan to extend the marine highway system, the web of market relations and provincial and national governmentality suddenly extended wider, "hooking island communities into a national society" (Carey, 1999, p.96). As the province moved closer to reaching its manifest destiny, local island institutions were "reconfigured as end points or nodes in national [and provincial] structures" (Carey, 1999, p. 97).

This did not cause the end of island communities, and represents no loss of local culture, however. As Carey (1997c, p. 27) remarked "we are forever building a city on the hill and then promptly planning to get out of town to avoid the authority and constraint of our creation." People have agency. Deterministic views of technological change that posit culture as the by-product of material forces wrongly fetishize history as culture, and inaccurately lionize technology as alienation. Technoculture is about making and remaking; again, we carve the world with our tools, and then we adapt to having to interact with what we have carved. Thus, with the onset of regular ferry communication on Gabriola and innumerable other Gulf Islands of British Columbia traditional agriculture gave space to counter-cultural organic food production and to eco-tourism, sacred aboriginal traditions gave way to New-Age religious practices and secular existential beliefs, an economy of subsistence was replaced by commuter-dependence, craft as hobby and art substituted craft as survival. As the ferries carved new waves onto water streams, as developers built over grounds revered by First Nations and bird colonies island people carved new ecological spaces in new ways: establishing new temporal and spatial identity markers and by shaping new and diverse degrees of insularity. These are new ways of carving, and not a cultural death by stabbing.

As Carey (1999, p. 100) wrote:

> Canadian life has been marked by the interaction of two traditions of knowing. One is the tradition of science and reason—a global, universal, well-articulated, familiar set of intellectual practices, but thin in the sense that it describes this continent superficially. This knowledge paralleled or was part of the same impulse that that led to the discovery or imagination of the continent. […] This new continent of knowledge encountered in Canada, as elsewhere, another tradition. It is local, rather than global, particular rather than abstract—a thick, well articulated set of practices. It arose not in generality or abstraction but on the ground in experience, in thousands on thousands of adjustments and adaptations made by Canadians (and before them Native North Americans) to the conditions of living on this continent.

Technoculture, in Canada and elsewhere, emerges as the outcome of the interaction between these two opposite traditions, as degrees of removed insularity from one or the other pole, as niches more or less sheltered from the rest of the networks, more or less contradictory, more or less technically "advanced," more or less unique and esoteric, more or less in tune with the received view and its collective habits, more or less in tune with its patterns of movement.

Technography focuses on degrees of insularity: on the everyday histories and biographies of the present as intersections between the space-bending imperializing traditions of science and reason and time-bending local forms of knowledge. As a participant-driven strategy, technography intends to blur the "distinction between knowledge and opinion" (Carey, 1999, p. 101) by studying technoculture as "immersion in the concrete particulars of a way of life" (Carey, 1999, p. 101), its networks of movement, and its practices of ecological carving. Technography does not divorce local knowledge from critical thought: local place is where polemics is expressed, where material and symbolic needs are fulfilled or unfulfilled. At the same time technography does not romanticize the local and the spoken tradition; much conflict and struggle in any ecological space, no matter how

small and seemingly harmonic remains muted, "buried, deflected […] and aggregated into interests" (Carey, 1997b, p. 10). Technography thus aims to remain driven by a critical vision of social *and* environmental justice. It wishes to experiment with new ways of representing the un-representable through the medium of the written ethnographic word and image: the ingenious aesthetics of techne, the spell of the ecological sensuous, and the sacredness of organic life. All in the name of "the end of scholarship:" a "free society…in which all traditions have equality and equal access to centres of power" (Carey, 1999, p. 102).

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