Hong Kong's CyberPort

Do Government and High Tech Mix?

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> Do you see a man who considers himself wise?
> There is more hope for a fool than for him.
>
> **—Proverbs 26:12**

About three and a half years ago, Hong Kong's CyberPort was launched with great fanfare and high expectations. It was to be a site that would serve as a hub for a constellation of companies engaged in high technology, especially information technology. However, the project has experienced a number of unexpected significant difficulties. My hypothesis is that these difficulties are rooted in the problematic way in which knowledge considered relevant to the policymaking process was conceptualized.

CyberPort was announced in March 1999 ("'Cyberport' Proposed in Telegraph Bay" 1999). It would be launched by a new company, Pacific Century Cyberworks Ltd. (PCCW), with Hong Kong government support. The company had just been founded by Richard Li, son of Hong Kong's wealthiest individual, Li Ka-Shing. Contrary to the usual practice, the Hong Kong government sold PCCW the land for the CyberPort without allowing other tenders. Nevertheless, PCCW is currently in finan-

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cial straits. Its share value has dropped significantly, and its debt has increased as loans to purchase other properties, such as Cable & Wireless HKT, have been taken out (Beveridge 2000). PCCW has finished constructing roads and bridges, but as of autumn 2000 it had yet to put up the office buildings and apartments that were supposed to begin operation in late 2001 (Beveridge 2000) but ultimately did not. Instead, according to a Hong Kong government press release, CyberPort, still unfinished, would open in April 2002 and take in its first tenants. Completion is not expected until the end of 2003. At that time, "the Cyberport will be able to accommodate over 100 IT [information technology] and IT related companies" ("Excellent Mobile Services Offered in Cyberport" 2002). This outcome will take some doing because, as of May 2001, only fifteen tenants had been found ("Transcript" 2001).

These difficulties have been compounded by a disadvantageous competitive position. At the time the CyberPort was announced, Swire, a rival of PCCW, already had buildings and office space available for a site dedicated to firms engaged in information technology. This "SwirePort" is approximately six times bigger than the eventual PCCW CyberPort will be (Phoon 2000).

It would seem not merely in retrospect but at the time of the decision that the Hong Kong government's backing of PCCW's CyberPort plan was a mistake. The root of this error can be found in an inappropriate epistemology.

Policy

The problem of epistemology has two dimensions: how knowledge is conceptualized and what impact power has on this process. I consider first the mode by which knowledge was conceptualized in the case at hand.

It is apparent in this case that Hong Kong government policymakers acted under a series of assumptions. First, they assumed that they could identify and define societal goals. Second, they assumed that they could determine the best means for achieving these goals. This view rests on the presumption that these administrators could gather complete information on policy problems and act accordingly. They sought little input from the public. The one notable exception was PCCW's founder, Richard Li.

Policymakers acted in this fashion because they view policymaking as a science that is the preserve of a trained administrative cadre. The cadre's elite university social science training, highly selective recruitment, and continued training reinforce this administrative culture. Such people's mindset can be seen in the thinking of Chau Tak-hay, Hong Kong's secretary for trade and industry. Without seeking information from Hong Kong sources outside the government, he anticipated the problem of an inadequate knowledge base and formulated a solution (Chau 1999). Oddly enough, though, this insight appears to have come from information he and others in the Hong Kong government sought overseas.

Policymakers appear to have looked to Singapore, Malaysia, the United States, Australia, and Europe for insight. A Web site that appears to be a joint govern-

ment/PCCW production reveals their awareness of these examples (Hong Kong Cyber-Port 2000). Oddly enough, however, the Web site omits coverage of the state from which Hong Kong policymakers appear to have gleaned the most insights—Israel.

A group of critical actors in the policymaking process in this case, including Hong Kong's chief executive Tung Chee-Hwa and Richard Li made an official trip to Israel in February 1999. Tung visited the Weitzmann Institute, among other places. He was interested in biotechnology and high technology. Tung was also interested in particular in the Israeli concept of a government-academia-industry partnership and government-funded research, especially as it relates to the establishment of technology incubators where "new ideas are baked into commercial products" ("CE to Mull Over Israel's High-Tech Approach in Hong Kong" 1999). Furthermore, prior to this visit, Israel's chief scientist Orna Berry went to Hong Kong to discuss these issues ("CE in Jerusalem for Landmark Visit to Israel" 1999; "CE to Mull" 1999; Chau 1999; "Day of In-depth Briefings on Israeli High-Tech for CE" 1999). The Hong Kong government then translated many of these interests into emphases within its policy to promote high technology.

The gathering and processing of information led Hong Kong's policymakers to propose several measures to deal with the knowledge-base inadequacy. According to Chau (1999), "the Chief Executive . . . laid down his vision of developing Hong Kong into an innovation centre for Southern China and beyond." This vision can be seen in the Commission on Innovation and Technology's final report to the Hong Kong government. The major proposals of this report were:

> *(a)* the establishment of a standing advisory body reporting to the Chief Executive and a policy group headed by the Financial Secretary so as to strengthen the formulation, coordination, and implementation of policy on innovation and technology;
> *(b)* the merging of the Hong Kong Science Park, the Hong Kong Industrial Technology Centre Corporation, and the Hong Kong Industrial Estates Corporation so as to achieve better synergy among the various components of our technological infrastructure;
> *(c)* the relaxation of present immigration restrictions to enable talents from the Mainland to work in Hong Kong; and
> *(d)* the fostering of an innovation and technology culture through an expansion of the existing incubation programme and the provision of matching grants for technological ventures undertaken by entrepreneurs. (Chau 1999)

These points compose the essential elements of a policy that anticipated the knowledge-base problem and aimed to solve it. Hong Kong consequently established a $5 billion Innovation and Technology Fund to finance projects that contribute to

the upgrading of innovation and technology. It is also establishing the Applied Science and Technology Research Institute. Liberalized immigration requirements for Chinese with the requisite skills from the mainland also have been proposed.

According to Hong Kong's then financial secretary (and current chief secretary) Donald Tsang, "the CyberPort [would] also generate demand for support services such as accounting, legal and other back-office functions. Most important, the CyberPort [would] provide quality products to upgrade our current economic activities and enable us to reach out to the limitless cyber market." Tsang also mentioned the importance of expanding the pool of talent to enhance competitiveness and of promoting the development of technology-based industries. He said the government would set up a special task force to review Hong Kong's immigration policy critically in order to facilitate the inflow of talent. "In particular, the Task Force will consider how best to remove restrictions on scientists and highly-skilled technologists from the Mainland entering Hong Kong to work." The task force comprised representatives from the Security Bureau, the Education and Manpower Bureau, the Trade and Industry Bureau, the Immigration Department, and the Industry Department. It was to complete the review and put forward implementation proposals in six months ("Cyberport Proposed" 1999).

These measures apparently came to naught. According to Francis Ho, commissioner for innovation and technology and one of those who formulated these policies, "information technology applicants [for funding] have declined [in quality]" (Levander 2000). He added that he may set narrow areas for funding in order to help focus scattered efforts. Furthermore, Hong Kong's research labs suffer from a dearth of ideas worth funding. This critique, the latest blow to Hong Kong's tarnished image as a technology center, originated in a confidential report issued by the Hong Kong $5 billion (U.S.$641 million) Innovation and Technology Fund.

These dismal reflections on Hong Kong's knowledge-base are not surprising, considering the quality of its rote-learning-oriented educational system. In 1999, 18 percent of the students taking the major public examination at the conclusion of their secondary-school studies failed to obtain a passing grade. They were deemed unfit for further study and unemployable ("Education in Hong Kong" 2002). At the tertiary level, 30 to 50 percent of the students, according to many professors, are unfit for university study and should be ejected. Furthermore, employers in the private sector often complain about the poor quality of university graduates (Shaw 2002).[1] Clearly, the policy experts of the Hong Kong government have assessed the quality of the territory's knowledge base incorrectly.

1. As a professor at the Chinese University of Hong Kong, I received such complaints on a number of occasions from employers, as if I alone bore personal responsibility for the deficiencies of our product. I use the term *product* deliberately. After more than twenty years of teaching experience in Hong Kong, I perceived that government education experts and university professors view students in this way. Students also appear to be "processed" from the primary to the tertiary level.

The mentality of policymaking as a science best left to experts is demonstrated by Secretary for Trade and Industry Brian Chau. In a speech to the Israeli Chamber of Commerce of Hong Kong, Chau revealed the Hong Kong government's approach to policymaking regarding the CyberPort (Chau 1999). One can see from his discussion that the process is an internal one in which outsiders within the community are not solicited for advice. Furthermore, policymakers see themselves as far-sighted and rational decision makers, as indicated by Chau's anticipation of the problem of a shortage in skilled high-tech labor in Hong Kong and the proposed solution of special immigration policies to allow for skilled mainland Chinese to take up the slack. Furthermore, Chau attributed this policy to the specific vision of Chief Executive Tung Chee-Hwa.

Individuals such as Chau and Tung demonstrate a particular attitude toward the policymaking process. This attitude reflects a certain set of values that possess coherence as they relate to each other. As such, they are amenable to analysis as a system of thought.

Epistemology

The views of Hong Kong policymakers demonstrate critical epistemological assumptions. These actors presume to possess a high degree of rationality and a distinctive expertise in making societal calculations. This presumption reflects what Charles Lindblom has called a synoptic model of decision making (1959, 1977, 1979). It presumes a mode of knowledge accessible to only a minority of the public. This knowledge may be conceived as rational and empirical but too complex for the general population to grasp (the Leninist view of dialectical materialism) or as transrational and intuitive (Plato's form of the good and its derivatives). In the Hong Kong situation, the former is the case. However, the essential implication of both is that policymaking should be confined to a knowledgeable minority for the public good. To open the policymaking process to the public at large risks the intrusion of ignorance and society's movement away from the good and the true. The good and the true are viewed as absolutes that can be known in their entirety, with certainty, but only by a talented minority.

Plato conceptualized valid knowledge as eternal truths. Anything subject to flux cannot be considered to be an example of valid knowledge. Because this world consists of material objects, truth cannot be sought in what can be observed here empirically. In his dialogue *Parmenides,* Plato (1973a) sought to conceptualize an alternative basis for truth. He started by elaborating on the concept of oneness, an attribute shared by numerous objects. It is ironic that these objects are to be found in the empirical world, and the search for oneness commands observation of this world. Although certainly many objects share the attribute of oneness, the question is still begged of whether oneness has an independent ontological status. Plato believed that the concept of oneness exists independent of the material objects that share in it.

Plato's view cannot be dismissed immediately. Mathematicians make a distinction between numbers and numerals. When one takes a piece of chalk and writes a mathematical formula on a blackboard, technically speaking the writer is not placing numbers there, but numerals. The numerals are symbols existing in the empirical world. They represent concepts that transcend this world—in this case, numbers. Numerals are subject to change. After the class, a custodian might enter the room to clean the blackboard by erasing it. The numerals are erased; the numbers are not.

A path to greater understanding of this view of truth appears when one asks the following question: Did Pythagoras discover or invent his theorem? When we answer that he discovered it, we are recognizing that the relationship among numbers (and the sides of a right triangle) expressed by $a^2 + b^2 = c^2$ existed even before Pythagoras expressed it. The relationship as well as the numbers exist independent of Pythagoras, which suggests that the realm of truth includes not only concepts such as oneness but also laws of nature on which the cosmos rests.

Derived from Plato, such a view may strike one as dated, despite whatever logical power it contains. However, more recently, Karl Popper, an antagonist of Plato, has conceptualized a realm he designates as World 3 (Popper 1992). In contrast to Worlds 1 and 2, which contain physical objects in the empirical world and feelings generated by human beings, World 3 contains laws of nature and mathematics that can be perceived by human beings but exist independently of us. They are discovered, not created. Popper is unwilling to concede, however, that this view is similar to Plato's because Popper upholds the scientific method, especially falsification, as the path to the discovery of knowledge (Magee 1973). This epistemology conceives of knowledge as empirical, rational, and subject to wide dissemination among the public at large. Unlike Plato's view, Popper's suggests that many can have a share in the truth.

Plato, however, does not stop with the proposition that the realm of truth consists of mathematical concepts, items found in Popper's World 3. He suggests that if principles of mathematics exist, principles of ethics and aesthetics also might exist. In other words, not only does oneness exist independently of a knower, but so do concepts such as Justice and Beauty. Plato refers to these concepts as forms. Because they are all good, he would say they partake of the good. In other words, they derive from a higher form, the form of the Good.

In his book *The Republic,* Plato (1973b) presents the realm of forms as the source of valid knowledge. Furthermore, he suggests that if one can find a person who can perceive this realm, that person should be the ruler of the state. Such a person would know what is good, what is just, and what is beautiful. Only such a person is suitable to rule. Furthermore, because this knowledge is neither empirical nor rational, it cannot be propagated easily. Therefore, the supply of people who possess it is likely to be very small. Only those who possess this knowledge can be said to know the truth. The rest possess only opinion and are therefore ignorant. There is no

middle ground. This conception is a recipe for rule by one or a few. It is highly congenial to those who run Hong Kong.

There are two ways to criticize this understanding of knowledge and the mode of policymaking to which it gives rise. One can consider why such an approach was taken and also whether this conceptualization of knowledge is reasonable.

The involvement of a scion of the Li family makes it obvious that power had a significant impact in the Hong Kong government's decision to launch CyberPort. A number of thinkers—including Marx (1978a, 1978b, 1978c), Gramsci (1971a, 1971b), Mannheim (1968), and Foucault (1980a, 1980b, 1997)—have analyzed how power dictates what is presumed to be true. The last of these, advancing from Nietszche's (1969, 1973) questions about the certainty of good and evil, raises the question of whether truth can be said to exist in any fixed or eternal sense.

Power can dictate the paradigm of knowledge or the content of truth directly. Those with power can determine what is the legitimate methodology to acquire knowledge as well as what is the legitimate knowledge itself. A blunt example used by Foucault (1980a) is T. D. Lysenko, who unintentionally devastated the Soviet agrarian economy. Lysenko's revival of Lamarckianism gained Stalin's favor because it opposed Mendelian genetics. Lysenko considered Mendel's ideas contrary to dialectical materialism. He was put in charge of a wide range of scientific endeavor, including agronomy, and he decided to increase the number of annual harvests by "training" spring wheat to be winter wheat.

In considering whether and how to embark on developing a cyberport, policymakers were content to rely on government expertise or were driven by government consideration. Ironically, had they accepted the legitimacy of input from the wider public, they would have found some support, even from some who did not share their values. Some who did share their values, including prominent local professors with strong technical and engineering backgrounds, were enthusiastic about the project for its potential to catapult Hong Kong into a leading regional role in information technology (Taylor 1999). Others, with a different value priority, also supported the government. A Beijing-leaning labor leader, Zheng Yaotang, expressed support for the CyberPort project because he thought it would reduce unemployment (Shi 1999). More typical, however, was criticism sensitive to the issue of justice. Such criticism focused on how open bidding was dispensed with so that a government contract was awarded to Richard Li without any competition (Z. Li 1999; Segal 1999).

In the context of East Asia, as Helen Hughes (1999) notes, such crony capitalism is not unusual. Taking their cue from Japan, Inc., many states have adopted a strategy that limits domestic competition in the mistaken belief that international competition might be pursued more effectively. Bureaucrats have picked large corporate players, whom they believe would have an advantage in international competition, and given them favorable concessions. Smaller domestic players have been discouraged from competing with the favored contenders. Hughes believes such corporatist practices led to the Asian financial collapse in 1997. Ironically, she implies

that such crony capitalism was unable to develop in Hong Kong to the extent that it could frustrate competition. Clearly, in the case of CyberPort, it did.[2] This outcome should not be surprising, considering that the phenomenon of *guanxi* embedded in Chinese culture encourages such a phenomenon.

Guanxi ("relationship" or "connections") consists of networks of horizontal and vertical (patron-client) relationships that create informal groups. These networks are used, especially in the absence of a free market supported by the rule of law, to obtain goods in limited supply—material goods, such as cars, or nonmaterial ones, such a student's admission to a university. Hong Kong does have a free market with a fairly well-established rule of law (although it has been a bit under threat since July 1997 owing to some Tung administration decisions made in violation of due process and of the Basic Law, Hong Kong's miniconstitution.).[3] However, traditional methods

2. One should not assume automatically that prior to the transfer of sovereignty from Britain to China in July 1997, such crony capitalism did not occur. It may be merely that whereas today crony capitalism in Hong Kong is dominated by the Chinese, in the past it was controlled by the British. Prior to 1997, for many years, Hong Kong's economy was dominated, apart from the banks, by four major conglomerates called *hongs*. Some of them date back to the era of the Opium War. They included Jardine Matheson, the Swire Group, Hutchison, and Wheelock Marden. These *hongs* had intimate relations with the Hong Kong government. The British government also was disposed favorably toward them ("Yingzhi" 1976a, 1976b). The nexus of these conglomerates and the Hong Kong government favored British interests in the territory ("Caituan" 1974; Hong Kong Research Project 1974, 22). This condition likely has much to do with how the contract for the first generation of train cars for the Mass Transit Railway (MTR) was awarded.

Hong Kong's MTR, a subway system running throughout the urban center of the territory and extending into some of its Kowloon suburbs, began construction in 1974 and commenced operations in 1979 (see statements at http://www.geocities.com/Tokyo/Bay/9585/index.html, http://www.tc-li.com/rail/mtrhistory.htm in Chinese and http://www.superexpress.com.hk.ro/transport/mtr/history/01.htm, in Chinese). Through a process of open bidding, the concession to supply the subway cars was awarded to the British company Metro-Cammell in 1976, even though a Japanese firm presented a lower bid. A consortium consisting of Hitachi, Tokyo Shibaura Electric, and Mitsubishi Electric was closed out of this contract and out of other electrical contracts related to the MTR ("Diche dianji" 1976; "Diche fazhan" 1976; "Japanese Unhappy" 1976; "Tou diche" 1976). Of course, price is not the only basis for determining to whom one should award a contract. However, it is possible that Hong Kong's status as a British colony at the time had something to do with who won the contract. The bidding process may have been merely a facade.

An official of the Mass Transit Railway Corporation has taken issue with this suggestion. I received a communication on April 18, 2002, stating that "the Corporation has always been using, and will continue to use, a well-structured tendering system based on a set of clearly defined criteria to evaluate every contract, taking into accounts [*sic*] a number of factors before making a conclusion. The tendering of the first generation of MTR train cars in the 1970s had also gone through this stringent tendering system." Let the reader be the judge. However, whether the bidding process was a facade or not, at least there was a bidding process. In the case of CyberPort, there was none.

3. The most flagrant example concerns the threatened deportation of mainland Chinese children from Hong Kong. The Hong Kong government was disappointed in 1999 by a High Court decision affirming the right of abode for a number of people, notably including many children from the Chinese mainland whose parents were legal Hong Kong residents. This decision was in accordance with the Basic Law. The Hong Kong government was worried about a flood of new young immigrants from the mainland who would become a burden on its social services. It appealed to China's National People's Congress (NPC) for another ruling on its policy of deportation, although the Basic Law makes no provision for such an appeal. The NPC obliged with the ruling the Tung government desired, and many people were expelled from Hong Kong. The Hong Kong government insisted that these people still retained the right of abode but had to apply first through various forms and wait for approval. In effect, it has converted what was supposed to be a right (according to the Basic Law) into a privilege that it can grant or withold as it sees fit. In other words, the Basic Law means whatever the Hong Kong's chief executive declares it to mean. Frank Ching (1999a, 1999b, 2000) followed this issue closely in the *Far Eastern Economic Review.*

developed long before the free market came to being in the current age. Politics and the outcome of policymaking in China have long been marked by *guanxi* networks.[4]

Power transmitted through *guanxi* designated what information bearing on the CyberPort would be considered valid and what means could be used to acquire such data. This condition casts doubt on the validity of the Hong Kong government's enterprise. However, beliefs are not invalidated by their source automatically. A more telling attack on the synoptic model of decision making requires a consideration of knowledge itself.

The essential question is whether knowledge, by its nature, especially that pertaining to policymaking and political rule, is nonempirical and transrational. Although the ontological status of mathematical concepts and laws of nature cannot be disputed, concepts of ethics and aesthetics can be. Mathematical concepts and physical laws of nature are objective. Their content is not influenced by personal preferences or power relations. At most, the interest of the seekers directs them to make inquiries in a certain direction. However, despite Kuhn's (1970) argument for shifts in scientific paradigms and how these paradigms can influence or bias thinkers, individual interest or bias need not cloud the content of what is postulated. If it did, the proposed theory would be unlikely to stand because many other scientists and mathematicians would put the proposal to the test. A theory backed only by institutions might stand for a time but would be exposed and replaced eventually. Newtonian physics was one of the most powerful scientific paradigms, yet it was upended when Einstein discovered that Newton's laws of motion do not apply in the subatomic realm or for bodies approaching the speed of light.

Principles of ethics and aesthetics, on the other hand, can escape subjectivity only if they have a divine foundation. Even then, there are many beliefs in divinity. Whether one's belief is correct or not makes no difference: one cannot make it universal. For all practical purposes, there are consequently as many different views of justice as there are viewers. Of course, Plato could accept this situation and still claim that only one view is correct. How do we know, though, which view is the correct one? In the realms of ethics and aesthetics, nothing comparable to the scientific method serves to identify the best alternative, let alone the truth. At best, arguments and analyses compete in support of rival ethical or aesthetic views. Such competition is even more difficult in aesthetics than in ethics. How can one argue for which is more beautiful, a classic Chinese *shanshui* (landscape) painting or a Van Gogh? Different cultures, let alone individuals, have different perceptions. How can one say that one view is superior to another?

4. Extensive discussions of *guanxi* in the People's Republic of China can be found in Dittmer 2000, Dittmer and Lu 2000, and Yang 2000. In Ostrov 2000, I discuss the consequences of one specific type of *guanxi,* the patron-client relationship, showing that because of this relationship, although purges throughout the political system were rampant during the Cultural Revolution, the organization in charge of China's nuclear weapons program not only survived but thrived. The Science and Technology Commission for National Defense expanded, taking resources such as scientists, research institutes, factories, and even ministries from the control of others, and it did so while protecting its own personnel from attack.

The problem of the subjectivity of ethical and aesthetic knowledge has direct bearing on whether valid knowledge is limited to a select few. The limitations of knowledge depend on the type of knowledge we are considering. Some kinds of knowledge involve a highly technical skill or scientific ability gained only after years of study and certainly not possessed by the many. Public policies, however, basically involve normative questions; they fundamentally are concerned with ethics. It is possible for many to have at least an opinion of what ought to be. Is such opinion merely ignorance, as Plato would have it? If moral truth is transcendent, yes. It seems more reasonable, however, to aver that reasonable people can learn from experience. They can reflect on values transmitted through tradition and make adjustments in the light of experience. A spontaneous order in which values evolve and knowledge progresses is not merely an ideal; it can also be a reality (Hayek 1982), as demonstrated by the possibility of discovering the practical basis of values that have outlived the original purpose that guided their evolution (Harris 1980).[5]

Besides, one wonders whether such transcendent truth exists. Even if it does, how certain can anyone be of its possession? Ultimately, to assume the existence of such knowledge and such a knower would seem tantamount to presuming moral omniscience.

As Adam Smith put it in *The Theory of Moral Sentiments,* human beings are more complex than the pieces on a chessboard. Although a chess player can understand the principle of motion of each chess piece, no one can understand the principles of motion of each member of society. To presume to do so would result in great suffering ([1759] 1976, 380–81). Indeed, this sequence occurred repeatedly in the twentieth century.

It is consequently reasonable to make a distinction, as Michael Oakeshott (1991) does, between technical knowledge and what he calls practical or traditional knowledge. The former requires advanced training, whereas the latter is accessible to the many. When Aristotle (1976, 1962) claimed that politics is the master science, he meant that the fundamental questions governing the direction of a society were to be decided by the citizens at large. Once social goals had been determined, specialized experts might be employed to develop appropriate means for the achievement of those goals. This view leads to a particular normative perspective on the gathering of knowledge. One should be humble in regard to claims of truth possession, especially in matters of ethics or aesthetics (societal goals), on the part of oneself and others. This attitude fosters open-mindedness not only in the search for answers but even in regard to what constitutes a problem worthy of being dealt with.

Today, even knowledge once considered too technical for the many has become more widely accessible, thanks to *hypertext*. Theodor Nelson, who coined the term

5. If the Jewish laws of Kashrut (dietary laws usually termed *kosher*) are assumed not to be of divine origin, they can serve as an example. See Harris's explanation of the basis of these laws in the aridity of the Middle Eastern climate and the pig's inability to sweat, in *Cows, Pigs, Wars, and Witches* (1975). The requirement of great amounts of water to cool pigs made their cultivation economically infeasible. Islam, which arose in the same kind of climate, also prohibits the eating of porcine products.

and developed the pioneering hypertext program Xanadu, defines it as "non-sequential writing—text that branches and allows choices to the reader, best read at an interactive screen [as] a series of text chunks connected by links which offer the reader different pathways" (1993, 0/2). A computer is the best tool to utilize hypertext. The number of chunks and pathways can be expanded through use of the Internet. Information gathering is enhanced because information linkages become nonlinear. No central coordination is required. Data presented independently by many sources become linked so that knowledge searchers can jump from page to page, site to site, concept to concept (Calise and Lowi 2000). This process appears most clearly in the World Wide Web, where one can move from page to page following an idea, limited only by the contents of the Web itself.

A fine example of how hypertext has enhanced individuals' ability to acquire knowledge appears in the story behind Lorenzo's Oil. Lorenzo Odone was diagnosed in early 1984 with adrenoleukodystrophy (ALD), an incurable degeneration of the brain, at that time beyond the help of conventional medicine. His parents, unwilling to give up the struggle to help Lorenzo even after having resorted to several ultimately useless therapies, began their own investigation of the disease. They took advantage of the development of the Web to search for a way to save their son's life, and they found one: a special diet together with what came to be known as Lorenzo's Oil—four parts glyceryl trierucate oil (GTO) and one part glyceryl trioleate oil (GTE). They eventually succeeded in stopping the progression of the disease ("Adrenoleukodystrophy" 1994; Kane 1997; "Michaela Odone Dies" 2000; Odone and Odone 1994).

Conclusion

It seems a supreme irony that the policymakers behind a project to promote high technology have been unaware of the ramifications this technology has for the dissemination of knowledge. Everyone's interest is served by making the policy process as open as possible. The chances of avoiding mistakes and the likelihood of arriving at a superior resolution of a problem are increased. The problems surrounding CyberPort and its parent company, PCCW, demonstrate this truth. Policymakers too often embody a hubris that ultimately leads to a fall. Policymaking is not a science but an art. It should not be presumed to lie within the domain of a Weberian priesthood of rational-legal experts practicing a supposed science of policy analysis.

When the policymaking process is informed by its participants' belief that they are uniquely privy to relevant knowledge, the process will be closed. Such a belief is certainly self-serving, but that aspect of it is not the crucial issue. More important is that official policymakers have misconstrued the nature of knowledge and have excluded valuable input from those outside their ranks. The outcome is likely to be failure.

Unfortunately, it seems that more such policy outcomes will occur. The first policy address of Hong Kong's financial secretary, Anthony Leung, has placed the offi-

cial imprimatur on such hubris. He has announced the official abandonment of the decades-old "positive noninterventionism"[6] that guided Hong Kong in the past in favor of the government's taking on the role of "proactive market enabler." Now the government, assuming its possession of vast knowledge and understanding, will pick winners and back them (Leung 2002a, 2002b; Restall 2002; Yeung 2002).[7] Indeed, as the CyberPort case indicates, this change of direction had begun already before Leung became financial secretary.

Those wise heads in the Hong Kong government do not seem to recognize that knowledge on an individual level is partial as well as rational and empirical. As such, it can be disseminated, shared, and augmented. Power should not be allowed to dictate the arbitrary exclusion of certain knowledge inputs. Institutions that both constrain government and open it up to public scrutiny are necessary. Maintaining the rule of law is critical. As shown by a series of assaults on this bastion of liberty since July 1997, such institutions are unfortunately in jeopardy in Hong Kong.[8]

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6. *Positive noninterventionism* is a phrase coined by former Hong Kong financial secretary Philip Haddon-Cave to describe the Hong Kong government's laissez-faire attitude toward intervention in economic and social matters. He based it on an acceptance of government's limitations regarding knowledge. Prior to 1997, however, the government's attitude toward intervention in the society and economy was more complex than the phrase suggests. In the 1970s, it did embark on a ten-year public housing program so that today nearly half the public lives in some form of government-subsidized housing. This program was conjoined with the development of new towns in rural areas to reduce population density in the urban interior and to avoid the social problems that would accompany overpopulation. However, contrary to the business of picking industrial winners and leading the economy, the government intervention prior to 1997 was more concerned with supporting the infrastructure and foundations of society and the economy. See Kwong and Shiu 2002 and "A Dark Day for Hong Kong" 2002.

7. In his policy address, Anthony Leung (2002a) discusses the economic role of government as proactive market enabler, listing five ways in which this role should be played. The fifth of these ways gives pause to those of more humble minds. Leung perceives a need to take appropriate measures to secure projects beneficial to the economy as a whole when the private sector is not ready to invest in them. In other words, the government should search for projects that are not profitable but are beneficial to the community, invest in them, and make them successful. This strategy presumes that government policymakers possess more knowledge than the entrepreneurs and other participants in the market.

8. Since the transfer of sovereignty over Hong Kong from Great Britain to China, several events injurious to the rule of law have occurred (see note 3 for a specific example). The Basic Law makes no provision for either the actions taken by the Hong Kong government or an NPC ruling on a judicial decision in Hong Kong. The NPC may rule only on laws passed in Hong Kong, not on court judgments. For example, Hong Kong's chief executive and other high government officials recently slandered the Falun Dafa (more commonly known by the name of the meditational excercises they practice, Falungong) as an "evil cult," parroting Beijing's line, and they have threatened to create new legislation targeting it.

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