

Education and the Funding of Research

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Owners and Workers in the Knowledge Business

We are as remote spiritually as temporally from the medieval adage that all knowledge belongs to God. Perhaps our distance from the medieval view that all knowledge belongs to God is manifest in the fact that the key to decoding human genetics is owned by the Wellcome Foundation's Genome Project, which has patented tests and cures for some of our most disturbing diseases, and can hold our health systems up to ransom by profiting from tests for breast cancer or for drugs for AIDS. God no longer holds the code of life, as nanotechnologies created by the biotech industries can rectify the errors in God's creatures or natural beings (Falk 2004; Kellner 2002, 229-31). Private and corporate ownership of knowledge is not new; most craft guilds zealously held onto their craft secrets to ensure a higher price for the products of their trades. The bold voyages of discovery around the world in the sixteenth and seventeenth centuries have handed on to us the names of famous sea captains but these men were contractually bound not to yield any information to anyone other than those who financed the expeditions (Merwick 2001). But the tension between knowledge as private property and as a common good has vividly come to the fore in recent years. A team of Australian Nobel laureates in medicine recently split apart because one laureate thought their discoveries belonged to the world of science and the other thought they belonged to Novartis, which funded their research in biochemistry. I wish to highlight the question whether knowledge belongs to God, or as the Enlightenment would have it, to humanity, or whether it is private property.

The view that knowledge cannot be owned seems lofty but corresponded to the reality that the Catholic Church had a monopoly in knowledge production and distribution. Between the medieval world and us are the Renaissance and the Enlightenment, in which knowledge was produced with royal and aristocratic patronage but came to be distributed through the technology of print to readers besides the patrons. The commercial or capitalist print culture that emerged co-existed with, and then supplanted royal and aristocratic patronage, in late eighteenth century England and nineteenth century France. An intermediate step between aristocratic patronage and commercial publishing was the practice of publication through prior subscription. In this way, aristocratic patronage was

collectivized through subscription lists; Pope, Voltaire and *L'Encyclopédie* made money by aristocratic subscribers guaranteeing capitalist publishers that they would buy their works (and indeed it was the demands of the aristocratic subscribers more than the combined efforts of Diderot, D'Alembert, their publisher, and their protector, Malesherbes, that ensured completion of the work once the government attempted to suppress it). In the process of developing a commercial marketplace of ideas, intellectual property rights were contested by publishers and authors, and the idea of individual and corporate ownership of knowledge emerged but with it, the idea of the author and scientist as creative genius and servant of humanity.

To sum up these opening paragraphs, we have three models of intellectual activity: the medieval model of clerics serving God and the Church, which had the authority to distribute or suppress the ideas of its servants; the Renaissance-Enlightenment model of patronage of the arts and sciences (during which time ideals of intellectual autonomy and creative genius serving humanity were fabricated under actual conditions of dependence on royal or aristocratic patronage); and the modern ideals and practices of professional employees of universities and capitalist corporations. Tenure at universities has minimized the need for political protectors, which the thinkers of the Enlightenment required; social security has lessened the need for economic patrons to provide for the old age of thinkers; ubiquitous examinations, peer-reviewed standards of competence, and open competition for positions has again lessened—or at least changed--the role of the favour of the powerful for posts inside and outside the university. Moreover, the professional status of professors and scientists means that they look to their peers for recognition as well as their employers for money.

However, to return to the Enlightenment practice of patronage, which has not entirely died out but lives on in a withered form, a patron-client relationship is not a relationship of master and servant, or that of employer and employee. Patronage is part of a gift economy where there are unspecified obligations on the part of both donor and recipient; reciprocity is expected but it is bad form to leave the price tags on the gifts. Patronage is less clear-cut than feudal homage and capitalist contracts where the terms of service are clearly spelled out. Patrons referred to clients, and clients to patrons, as friends, though it was not the friendship of equals but an asymmetrical friendship of social superiors to talented inferiors. Burke defined patronage as “the tribute opulence owes to genius” and Rousseau understood patronage as “the consideration riches owe to talent.” All major thinkers of the eighteenth century depended upon patronage (Chartier

1995, 1-2; Lough 1978; Griffin 1996). Those as wealthy as Voltaire and Montesquieu needed political protection more than financial support—although both men received substantial financial support from royal and aristocratic patrons; less wealthy men, such as Hume, Smith, Rousseau, Diderot and D’Alembert enjoyed both economic support and political protection. Thinkers also were attracted to the powerful in order to put their ideas into effect; Price and Bentham did not receive money from Lord Shelburne as Priestley did, or as Burke did from Lord Rockingham and others, but they received recognition, Shelburne’s connections to French translators and publishers, and the elder statesman’s support for their fiscal and penal projects. In his *Enclyopédie* entry, *gens de lettres*, Voltaire claimed that royal patronage was essential to strengthen the independent-mindedness of *philosophes*, as the alternative was degrading supplication to aristocrats. Rousseau, on the contrary, was reluctant to accept royal patronage, although he accepted a pension from Frederick the Great’s Marshall, Lord Keith, and later from George III (insofar as Hume was eliminated as the broker of royal patronage), but he accepted largesse from the bluest of the blooded French aristocracy. The differences amongst Enlightenment thinkers were more about whether royal or aristocratic patronage better fostered independence of thought than whether it was essential to the republic of letters. However, many in Britain and a few in France maintained the illusion that scholars and philosophers could earn a dignified independent existence through the activities of their pen, made possible by the expanding readership of the eighteenth century. Adam Smith thought scholars and beggars were the same thing “until the age of print” and various thinkers followed Samuel Johnson’s dictum that booksellers are the modern patrons of literature. But, whereas Johnson was the prototype of a professional writer, who thought only blockheads write other than for money, Rousseau refused to prostitute his pen as a professional writer, since his genius came from the heart rather than catering, as his peers did, to anticipated demand of readers and patrons, and claimed to earn his living as a music copyist (while his wife and mother-in-law collected gifts from the aristocrats who used Rousseau’s services as a copyist).

Certainly few members of the Enlightenment saw themselves as servants or instruments of their patrons. A patron is not just an employer of a client; he or she gives political protection and economic support as a gift for which gratitude and unspecified services are due in return. The *lumières* were and were not servants or employees of their patrons. If the ideal of intellectual autonomy or independence of thought was in part an illusion, thinkers had a multiplicity of patrons, regal and aristocratic, inside and outside of government. It is in this

environment of multiple patrons, rather than a free but unpatronized marketplace of ideas, that thought flourishes. To be sure, the character of thought is conditioned by the mode of patronage. In aristocratic salons, wit and facility in conversation were more prized than erudition and systematic thought, and the philosophic literature of eighteenth-century France lacked the heaviness of seventeenth-century rationalism. After the commercial failure of his *Treatise of Human Nature*, and his failure to obtain a post in Scottish universities, where a certain ponderousness was acceptable, David Hume, like *les philosophes*, wrote “for the ladies.”

Despite the blessings of academic tenure, open competitions for scholarly and scientific positions, old age pensions, etc., patronage has not disappeared from the intellectual marketplace. I strongly endorse Pierre Bourdieu’s (1995, 54) view that “patronage is a subtle form of domination that acts thanks to the fact that it is not perceived as such.” In the contemporary world, support for the arts and sciences comes either from government or capitalist corporations. I further support Bourdieu’s concern with the threat to artistic and academic freedom when government cutbacks in the arts and education leave artists and researchers dependent on corporate patronage. Bourdieu wrote:

Research activities, in art as well as science, need the state to exist. To the extent that, *grosso modo*, the value of works is negatively correlated with the size of the market, cultural businesses can only exist and subsist thanks to public funds. Cultural radio stations or television channels, museums, all the institutions that offer “high culture,” as the *neocons* say, exist only by virtue of public funds—that is, as exceptions to the law of the market made possible by the action of the state, which alone is in a position to assure the existence of a culture without a market. We cannot leave cultural production to the risks of the marketplace or the whims of a wealthy patron (1995, 69).

One cannot expect businessmen who fund the granting agencies to support forms of thought, research and expression critical of their activities; he who pays the piper calls the tune. As William Simon (1979), who funded hundreds of right-wing thinkers and enterprises through the Olin Foundation, asked (PFAW): “Why should businessmen be funding left-wing intellectuals and institutions which espouse the exact opposite of what they believe in?” Simon wrote:

Funds generated by business...must rush by the multimillions to the aid

of liberty . . . to fund desperately needed funds to scholars, writers and journalists who understand the relationship between political and economic liberty. [Business must] cease the mindless subsidizing of colleges and universities whose departments of economy, government and history are hostile to capitalism (1979).

It has been argued that the millions donated to right-wing scholars, journalists, and institutions helped shape the political culture of the USA from the Reagan years until now.

As patrons merge with capitalist employers, intellectuals are in danger of becoming employees rather than “friends” of their patrons, with knowledge owned and at the disposition of the employer. The outdated idea of the state as an oppressive Big Brother fosters the unimpeded sway of the capitalist corporations. Just as the Enlightenment thinkers flourished through a plurality of royal and aristocratic patrons, contemporary thinkers need a variety of sponsors inside and outside government to avoid becoming servants of the corporate funding agencies.

The most dramatic tension between knowledge as public or private property, whether in science or in law, is in the sphere of biochemistry. Recently, the Supreme Court of Canada (2004) upheld Monsanto’s ownership of canola seed because neighbouring farms using genetically modified seed had cross pollinated with Percy Schmeiser’s seed and nullified his ownership of his seed crop. One would think that ownership of a life form would be limited by legislation insofar as the life form is not sterile, as Monsanto claimed, but invasive, and reproduces without farmers’ will or knowledge. This split decision was the opposite of the ruling by Indian courts that farmers should be able to own and experiment with seed crops, and no corporate ownership of a life form would take precedence over nature’s common provision to humanity. In general, we can say that biology has replaced physics as the queen of sciences since the American Congress, in the wake of the end of the cold war, refused to fund a high-speed particle reactor. Biotech and biochemistry are the high profit areas in which corporations create demand for their products. Prescriptions for anti-depressants like Paxil and Prozac, and Ritalin for hyperactivity and attention deficit disorder, have increased by a thousand-fold in the last two decades (Somerville 2004, 24). No wonder that Lilly Chemicals pressed the University of Toronto to rescind the offer to David Healey to head the Clark Institute because he questioned Lilly’s claim of no negative side effects of Paxil, or that the University of Toronto would

make life hell for Nancy Olivieri when she questioned the safety of the products of Apotex, a major sponsor of research at the university. The Bush family is present at the University of Toronto both as directors of Peter Munk's Barrick Gold and as a major shareholder of Eli Lilly. That George Bush senior received a doctorate from the University of Toronto is of less interest to me than the fact that the Munk Centre for International Relations produced a long list of distinguished speakers sounding drums and trumpets for the recent Iraq war, and the director of the Munk Centre declared the Canadian government's position on the war cowardly and indecisive. The questions of whether the pharmacological industry can allow independent research, whether research can or will be done by scientists not sponsored by the biotech or pharmacological industries, whether government-sponsored scientists can monitor the safety of bio-chemical discoveries, can be generalized—namely, whether all research must serve the military-industrial complex or have its funding cut off. As the Canadian government reduced its funding to universities, and provincial governments are squeezed with mounting health care costs, universities have looked to business corporations to maintain their funding. Within universities, academic weight or standing is measured by the ability to obtain research grants. Social scientists look to the Olin, Bradley, Liberty, Earhart, or Donner Foundations, or the American Enterprise and Fraser Institutes, to enhance their standing in the academy.

Joseph Priestley, in *The History and Present State of Electricity* ([1767] 1775, xv-xvi), insisted that “natural philosophy is a science which more especially requires the aid of wealth...The patronage of the great is essential to the flourishing of this science.” Priestley thought scholarship in the humanities (history or philosophy) does not need patronage since they do not require the costly laboratory experiments of the natural sciences. Our governments have hearkened to Priestley's counsel. Roughly 70% of Natural Sciences and Engineering Research Council (NSERC) proposals are funded by the Canadian government while only about 30% of Social Sciences and Humanities Research Council (SSHRC) proposals are funded. Moreover, in Ontario, provincial strategic grants are provided to those researchers who foster economic growth, job creation and the physical health of citizens. Provincial and federal governments fund the University of Guelph's project of inducing false pregnancies in cows to increase milk supply, despite the glut of milk on the world market.

The social sciences and humanities are disadvantaged not only in their subject matter but also in their methods. Research is not love of learning or mere

scholarship. Research in the humanities and social sciences are pressed into the mould of the applied sciences. SSHRC's strategic grants are given to interdisciplinary research teams investigating what are deemed to be useful topics, such as gerontology. The Nobel Laureate John Polanyi has complained that government as well as corporate granting agencies fund applied science more readily than pure science, research that has a more immediate payoff than science with no immediate technological application. In his study of patronage from the fourteenth to the eighteenth centuries, the economic historian Michel Mollat (1985, 280) supported Polanyi's advocacy of pure science by concluding that "les plus rentables ont été les investissements sinon désintéressés, du moins dépourvus de calcul préalable." Since one cannot predict the profitable inventions, one can't say for certain that research into false pregnancies in cows may not pay off some time down the road; all one can say for certain is that no government agency knows what goes into Monsanto's biotech products, any more than they know the secret ingredients of Coca-Cola. The scientists employed by Monsanto lack the freedom of a patron's gift; they are bound by a capitalist contract to cede the product of their intellectual labor to their employer. Alan McHughen (2000, 100-102), a strong proponent of genetically modified food, asked a local rabbi what to do with "a veggie burger containing soy beans with a pig gene...He emphasized that each Jew must confer with his or her own rabbi on this question." McHughen concluded that "vegetarians, Jews, Muslims and others, consume, perhaps unwittingly, genes homologous to those in pigs, beef, and other animals every day," but did not discuss the dilemmas arising from the use of human fetal cells to diminish the amount of fat in pork products. McHughen points to a bull market in the profession of ethicists, the camp followers of progressive technology.

Research, Scholarship and Teaching

Nothing is more commonly repeated in the academy than the claim that research and teaching belong together in a mutually supporting relationship, although Tom Pocklington and Allan Tupper's book, *No Place to Learn* (2002), has provided thoughtful grounds for questioning this claim. From my own experience, I found no connection between my teaching and my research; the variety of political philosophy courses I taught were unrelated to the scholarship on Plato, Machiavelli, Hobbes or Marx that I was doing while teaching. The specialized subjects on which I submitted articles and books were of little relevance to the general undergraduate and graduate courses I was teaching. What interests specialists in research journals would be unlikely to fire the

interest of undergraduates who require a grounding in the history of political philosophy and whose intelligence is illuminated by direct encounters with Plato's *Republic* or Hobbes's *Leviathan*, rather than secondary sources with particular axes to grind. Only since I retired and no longer feel that I have to earn my salary have I indulged in merging research and teaching in courses on the Enlightenment, which are probably less interesting to students because my specialized interests, first in the deconstruction of conscience in the Enlightenment and its reconstruction in the romantic reaction to Enlightenment, and second in the patronage of philosophy, deflect attention from other questions students are concerned with regarding the Enlightenment and its postmodern critics.

One might note that I said that, at an early stage of my career, I did not connect my teaching and my scholarship but, once retired, I merged teaching and research. Now what is the difference between scholarship and research? One could follow Joseph Priestley and say that scholarship does not require vast sums of money and research does. The money I received from the Canada Council and SSHRC in the 1960s and 1970s as a student and young faculty member were minute compared with the sums I received from SSHRC since the 1990s, much of it earmarked for research assistants. Research, as distinct from scholarship, tends to be a team project, and designed to stimulate further research projects.

To adopt a distinction made by Heidegger, love is present in scholarship but absent in research. Research must be objective – that is, based on a subject-object split where subjectivity is removed from the object of research. David Lodge's character, Morris Zapp, based on Stanley Fish, might be an exemplar of a researcher in the humanities; in *Changing Places* (Lodge 1975), Zapp has written twenty books on Jane Austen, whom he cannot abide. The medical researcher cannot love the animals on which she experiments; she has to be objective, to distance herself from the objects of her research. Scholarship is the love of learning; research is the desire to master some new field of inquiry. The love of learning and the teaching of great books are in danger of being pushed aside by the research university.

Students and young faculty in the 1960s started to call the Canadian Learned Societies "the Stupids" as if the converse of learned is stupid rather than ignorant. Intelligence and learning sometimes co-exist in individuals—but rarely. To (over)generalize from my experience of colleagues at the University of Toronto, scientists on the whole are more intelligent and less learned than social scientists

who in turn are in general less learned but more intelligent than colleagues in the humanities. In short, research is compatible with ignorance, and the love of learning with stupidity.

As our technological world imposes an engineering outlook on us all—an outlook in which we conceive our experience one-dimensionally in terms of problems—so the academic world has imposed a research orientation onto scholarship and teaching. For example, the perspective of the efficiency engineer reduces the world of work to problems of productivity, removing all the elements that made work meaningful to the worker: application of skill and intelligence, opportunity to socialize, and understanding of one's function in relation to the product produced and its purpose in society. Play subjected to technique becomes a contest, the sole purpose being to win at all costs. The doping scandals in both amateur and professional sports attest to the fact that the elements of fun and personal challenge have been taken out of games. Consumerism is the result of the technological reduction of work to productivity and spectatorism, the result of the technical reduction of sports to contests. The technological equation of the citizen with the consumer is buttressed by “conservative” reliance on the free market and “liberal” efforts to secure a value-free public sphere. But, as Albert Borgmann observed, “to extol the consumer is to deny the citizen. When consumers begin to act, the fundamental decisions have already been made” (1992, 114). By the time students react against large class sizes or the unsatisfactory character of the curriculum, the university has congealed as a knowledge or research factory. Students increasingly react against the mass factory production of their life skills by plagiarism (something virtually impossible in classes under thirty and very difficult to detect in classes of three hundred or more).

Is there any way to keep the love of learning alive in Canadian universities as they become more and more research factories for the corporations? Young faculty are too often hired on sessional contracts to replace older faculty with research grants, and with steady salaries. It is a deal too good for administrators to pass up—having courses taught for 25% of the pay given to tenured professors. Even if a majority of academics were to refuse to participate in the charade of interdisciplinary grants to on-going research teams, some academics would take part in giving and receiving grants, and they would be the most honored members of the faculty. That research is more respected than teaching in universities is not a surprise to anyone. But excellence in research (accorded to 90% of my colleagues by tenure and promotion committees, as distinct from the

10% accorded excellence in teaching) is not love of learning or even the joy of the hunt. Love of teaching and learning will continue in the research university but will be an uphill struggle.

Information and Knowledge

Michael Perelman (1998), Noam Chomsky (2002) and others have indicated how commerce impedes communication in our information age. Newspapers, television and the Internet are businesses that cater to their advertisers. Perelman pointed out that public relations practitioners outnumber reporters in the United States—150,000 to 130,000—and 38% of journalists get their stories from public relations sources. Editors at newspapers and television stations are routinely submitted to interference and sometimes censorship by their advertisers (1998, 17). Has the Internet provided an information commons, akin to the medieval view that knowledge cannot be privately owned, or has Google replaced God as the source of knowledge as a common good?

Don Tapscott and David Ticoll, in *The Naked Corporation* (2003), argue that Google, or our common access to information, will make business enterprise transparent to investors and the general public as consumers. For example, everyone can click on “coltan” and find out that this essential material for all cell phones in production around the world is produced only in the Democratic Republic of the Congo, and that the extraction of coltan has halved the population of gorillas and elephants in that nation in the last decade. Tapscott and Ticoll assume that consumers will care about gorillas as well as the convenience of cell phones, and consumer and investor transparency in our wired age will replace the need for corporate responsibility and government intervention. Aside from “innovations, market entry plans, proprietary business methods, pending mergers and acquisitions, and a host of other matters,” business enterprise will renounce the practices of Arthur Andersen, Enron, the Canadian Department of Public Works, etc., and enter a new age of publicity and transparency. In short, marketable knowledge will remain private, and while the cynic will say that the information commons is of no market price, Tapscott and Ticoll maintain that Google will ensure ethical standards in trade. If Tapscott and Ticoll are overly optimistic about the possibilities of Google ensuring fair industrial practices around the globe, they are right to point out that the Internet provides sources of information unfiltered by the demands of advertisers.

Yet we should not think of the Internet as a free lunch. Perhaps we should look to

the capitalist marketplace to regulate the information commons and think what could be done if every e-mail message sent and Internet use were charged 5 cents—cheaper than phone calls using the same lines. No more spam, sufficient funds to wire everyone to the global market, population decline with the literacy essential to being a human resource for capitalism. If libraries are a cheaper source of information than the Internet, maybe a few students will start reading books again to contextualize the information available in the wired world. New copying and downloading conventions from the web might serve as a model for third world drug companies to replicate patented drugs of Wellcome and Eli Lilly and might enable some local control over the subjects used in the experiments of the biotech industry. There is no free lunch—there are costs in producing and consuming knowledge—and we in the knowledge business must get used to it.

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