

## “It Doesn’t Have to Be This Way”

« Ça ne doit pas être nécessairement de cette façon »

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### Abstract

Clyde Hertzman’s sudden and untimely death was a terrible blow to those who knew him. It was also a major loss to health research and policy in Canada and well beyond. He was an outstanding public academic, at the top of his intellectual game. Here I attempt a highly selective and personal account of how he developed the conceptual framework that he called “the whole enchilada,” of the social context influencing both biological and behavioural development from earliest infancy. From these roots spring our life trajectories, evolving social gradients of more – or less – successful experience at each life stage. The international performance of a society reflects the sum of these trajectories. Canada could do much better, but not in Harperland.

### Résumé

Le décès soudain et prématué de Clyde Hertzman a été un grand choc pour ceux qui l’ont connu. C’est aussi une grande perte pour les politiques et la recherche en santé au Canada et ailleurs. C’était un remarquable érudit de la scène publique, au sommet de ses facultés intellectuelles. Je tente ici de brosser un portrait personnel de la façon dont il a créé ce cadre conceptuel qu’il nommait « l’enchilada complète » du contexte social, lequel influence le développement biologique et comportemental dès la petite enfance. De ces racines naissent nos trajectoires de vie, des gradients sociaux d’expériences plus ou moins réussies. Le rendement international d’une société est le reflet de la somme de ces trajectoires. Le Canada pourrait faire beaucoup mieux, mais pas dans le Harperland.

### “Great-Heart Is Gone”

Clyde Hertzman is dead. The news was shattering for many across Canada and well beyond. Some, not a few, wept. Myself, I swore. He leaves a huge hole in the hearts of those who knew him.

But Clyde’s death, just short of his sixtieth birthday and at the height of his powers as a public academic, is also a major blow to Canadian health research and policy.

In December 2012, Clyde was made an Officer of the Order of Canada. The appointment recognizes “the highest degree of merit, an outstanding level of talent and service, or an exceptional contribution to Canada and humanity.”

That sounds about right for Clyde. The motto of the Order is “*Desiderantes meliorem patriam*” or “They desire a better country,” which must be read as seeking to improve the lives of Canadians.

Clyde’s work was consistently focused on the evidence that “a better country” is possible, and on how to get there. But he was also an activist; he devoted enormous effort and energy to trying to move us towards that better country. He would, I know, have strongly approved the title of this essay. (I know because I lifted it from some of his writings; see below.)

### “In My Beginning Is My End”

Clyde is best known, nationally and internationally, for his work on and advocacy for early childhood development. The dominant theme might be summarized as “The child is father to the man” (suitably de-gendered) applied to a very broad concept of public health or, perhaps better, of well-being. Such public health writ large encompasses a wide range of interrelated dimensions of social functioning over the life course. The health of a population is expressed through levels of morbidity and mortality, and particularly the distribution of these across different subgroups. But these are also causally linked with such factors as education, income, employment and contacts with the criminal justice system. Each of these has a highly autocorrelated trajectory over the life course, with roots deep in the circumstances of early life.

These trajectories are quite sensitive to those early circumstances; there is much more going on than simply the prudent selection of grandparents. Since the performance of a society is the aggregate of the trajectories of its members, it follows that successful societies are those that take pains to nurture the early development of their members. Others, not so much.

So how did Clyde work his way to this concept of “the whole enchilada,” as he came to call it? In this column I want to offer a highly selective and personal interpretation of the sequence of ideas. Does such an account, which is not primarily about healthcare, belong in *Healthcare Policy*? I think so, for two reasons.

First, the emerging understanding of early childhood development, to which Clyde has contributed so much, has powerful implications for the determinants of health more narrowly defined. Can one then seriously argue that these have no implications for health

policy? (Sadly, the empirical answer is too often “yes.” But it ought not to be.) But second, much of Clyde’s earlier work, prior to the child development studies for which he is now most widely known, was “mainstream” health services research.

### **Aging and Healthcare: Inconvenient Truths and Convenient Falsehoods**

Clyde came to the University of British Columbia in 1985 as a specialist in occupational health – an “occ doc.” But he quickly became involved with researchers at the Centre for Health Services and Policy Research (CHSPR), in what one might call conventional health services research. He spent many hours hunched over a hot word-processor with Morris Barer and myself, analyzing patterns of hospital and healthcare use by the elderly. He had a genius for titles; such papers as “Flat on Your Back or Back to Your Flat?” and “The Long Good-Bye” came from that period. So did the “Barer Causogram,” explicating the eight different causal pathways through which healthcare could be linked with health (Barer et al. 1987).

We were among those who were then demonstrating, even 25 years ago, that demographic changes, and in particular the oncoming “boomers,” would not and could not in themselves render the Canadian healthcare system “unsustainable.” This finding, subsequently confirmed a number of times with other data, by ourselves and other research groups, has had remarkably little success in penetrating either the media or the world of political commentary. A convenient falsehood – in this case the “grey tsunami” – trumps the evidence. This is a theme that emerges in Clyde’s more recent work as well.

### **“Tell Me How a People Live”: The CIAR Population Health Program**

In 1987 the Canadian Institute for Advanced Research (CIAR) established a program in population health, and Clyde was one of the first people invited to join. He later became its director.

The research focus of this program was summarized by another member, Jonathan Lomas, as “Why are some people healthy and others not?” The answers, in modern high-income societies, clearly do not lie in differential exposure to material deprivation, or access to medical care. Rather, they reflect the powerful impact of the social environments in which people live and work.

What calls for explanation is not so much that individuals have different health experiences, but that these differences are so obviously patterned. Health is heterogenous: there are systematic, and large, variations in average mortality and morbidity among social groups. Of these, the most prominent is the social gradient, the fact that health is highly correlated with social position whether measured by income, or education, or other indicators of status. These gradients are found in all societies, but they are much more pronounced in some than in others. So what are the processes by which social position influences health, and what are the characteristics of different societies that enhance or mitigate the effects of those processes?

## Dr. Hertzman's Eastern Tour: Post-Soviet Europe

Clyde was a particularly active and stimulating participant in the collective work of the Population Health Program. But he also took on an international program of his own, when he was commissioned to survey the health status of the Eastern European countries that had just been liberated from Soviet control at the beginning of the 1990s. It was well known that the health status of those societies had been falling behind that in "the West" for at least 20 years – why?

The conventional answer was the physical environment – pollution. Industrialization in the Soviet era had proceeded with minimal concern for environmental contamination. The result was some appalling, and very unhealthy, regional messes.

Clyde's reports showed that, while this was indeed true, the unhealthy effects of localized pollution could not possibly account for the relatively poor health experience of entire nations. Something else, much more fundamental, was going on, perhaps linked to the crushing of public aspirations during and after the "Prague Spring."

Whatever the processes, the studies of Eastern Europe were very powerful evidence for the major impact of social context on health. People in those countries were not suffering from significant deprivation – there was food, shelter, medical care. These might not meet the quality standards of the West, but they were more than adequate for a healthy life. Moreover, the East–West mortality gap that had emerged after 1970 was not among those typically most vulnerable to deprivation or disease – the elderly, children – but among males above the age of fifteen. It was associated not with physical deprivation but with social disruption.

Clyde's Eastern European studies thus powerfully reinforced, from a completely different direction, the message of social gradients. Ill health is associated with social context. Social experiences become "biologically embedded" in the way in which the organism responds, whether physiologically or behaviourally, to stress, and these responses may be healthy or unhealthy. Clearly the social environment, social experience, "gets under the skin." But how?

## ...[T]he Very Beginning / A Very Good Place to Start

This question led Clyde to a particular focus on children, to becoming a leader of the "kiddies' group" within the Population Health Program. The logic was sound; there was increasing evidence of the much greater malleability, for good or ill, of the organism in the early years of life. Neurological research, in particular, was showing how the brain responds to experience by creating a more or less dense network of connections among some of the neurons (more is better) and de-activating others. These growing insights underlay the later creation of the Program in Experience-Based Brain and Biological Development (E triple-B D) within CIFAR, of which Clyde was also a member. The science behind a focus on early childhood development was strong when his interests moved in this direction; it grows ever stronger today.

But I think Clyde's focus on children, and on early childhood development, had other roots as well. He was always as interested in changing the world as in understanding it. But he

knew very well that all such efforts to make “a better country” would inevitably be opposed by powerful ideological and economic interests, suppressing inconvenient truths while maintaining a cover of convenient falsehoods. Clyde might well have considered that it would be politically and perhaps even emotionally more difficult to dismiss the health gradient in children. The various convenient falsehoods that support victim-blaming in the adult population are not as readily available. If kids lower in the social gradient are less healthy, it is not their fault. There is a strong moral case for measures to improve their lot and to try to smooth out some of the more egregious biases on the social playing-field.

Moreover, on a personal level Clyde genuinely cared about children – he liked kids. It is not a sentiment universal among male academics.

### Multiple Gradients, Unfolding Over Time

Once one begins to think seriously about the health gradient in children, however, it is hard to miss the fact that such gradients are strongly correlated with – one might say embedded in – a whole set of other social gradients. School performance is perhaps the most obvious and readily documented, but this is associated with drop-out rates and a cascade of subsequent advantage or disadvantage throughout adult life.

From these observations, Clyde worked out a broader conceptualization of a general social gradient that is expressed in different ways over the life course. There is a coherent trajectory through which advantage or disadvantage builds on the previous stage and projects into the next, although these might be observed in different ways at different stages of the life cycle.

Development in very early life may be biologically embedded in coping styles and stress responses. At school entry, the gradient shows up as differential readiness to learn that persists as better or worse school performance, and associated psychological effects – self-esteem or the lack of it, as an example. Moving into the teenage years, the gradient is found in rates of delinquency (boys) or teen pregnancy (girls). These factors then feed forward into unemployment and low-productivity employment, and welfare dependency. Finally, in later life the gradient emerges strongly in mortality differentials. But the story begins long before – very shortly after, or even before, birth.

This conceptual framework, “the whole enchilada” referred to above, was not simply developed in the ivory tower. In the process of gathering the underlying data, and developing some of the instruments that would track performance over time, Clyde was constantly talking with and listening to those who have close contact with children and youths, and with their problems. He was a principal organizer of the Human Early Learning Project (HELP) at UBC, which reaches out into the community. He found that these ideas resonated with school teachers, social workers – and the police. The concepts tested on aggregate data were thus also “ground-truthed” with those who had to deal, day-to-day, with the consequences of the social gradient trajectory.

## Winners and Losers: International Comparisons

But can these individual trajectories be modified? The international evidence says clearly: “yes.” Comparing data from a number of countries, Clyde observed that while all showed a social gradient in school performance, these gradients were much steeper in some than in others.

There was a fan-like pattern. Average performance levels at the top end of the social scale were quite similar across countries. But they fell away, with declining social position, much more rapidly in some countries than in others.

There are always going to be winners and losers; some life trajectories will soar and others crawl. But the proportion of losers varies markedly from one society to another, indicating that some societies provide environments more conducive to individual success. Others, as noted above, less so.

## No Bronze Medal for Canada

On this measure, Canada showed a rather mediocre performance compared to a number of other industrialized countries. And the differences matter. The performance gradient indicated that

over 25% of Canadians reach adulthood without the competences they need to cope in the modern economy. ...It does not have to be this way; international experience indicates that our 25% rate could be reduced to under 10%. (Evans et al. 2007; see also Maggi et al. 2010)

Canadians are thus carrying a large and unnecessary burden of “social overhead costs” from failure to invest adequately in our children, and particularly in their earliest development. Most of this burden is, of course, borne by the individuals themselves who are left behind, but much is also borne by the rest of us through welfare budgets, the criminal justice system (and crime itself) and, more generally, through the relatively low rates of growth in economic productivity, of which our economic elites constantly remind us.

The persistence of relatively high rates of unemployment alongside employers’ frequent complaints of shortages of skilled personnel may point to a need for more (and more appropriate) training programs. But they may also have their roots much farther back, in the early childhood development trajectory, where the “loser” first begins to fall, and be left, behind.

Nor are these 25% concentrated only at the bottom end of the social scale, a problem of “them.” While more concentrated lower down, those ill equipped to cope with a modern economy can be found across the social spectrum. Any programmatic response would therefore have to be universal as, indeed, such programs are in more successful countries.

## A Whole Lot of Science Since Lalonde: Biology Is Not Destiny

While extending his interests in child development well beyond health, and beyond Canada, Clyde was also following and interpreting developments in the biological sciences, and in

particular in neurobiology and genetics. Here the news is very interesting – science has moved a long way in the 40 years since *A New Perspective on the Health of Canadians* (Lalonde 1974) laid out its Four Fields framework for thinking about the determinants of health.

That document was a major step forward for its time, refocusing understanding of health – and therefore the proper concerns of health policy – much more broadly than just the provision of traditional healthcare (“sick care”). Not that the latter was or is unimportant, but the New Perspective emphasizes the significance of three additional “fields” – human biology, the physical environment and “lifestyle.”

At that time, however, human biology – and particularly the genetic endowment of each individual – was understood as a given background against which other factors and policies might play out. Today, advances in epigenetics have shown that while the genetic endowment itself is fixed at conception, the way in which these genes are expressed is not. That expression is influenced by the early experiences of the individual, and particularly the social context in which the child – or indeed any animal – is reared. Similarly, advances in neurobiology have demonstrated the importance of “neuroplasticity” and the ways in which the organization and function of brains and other neural structures develop in response to experience. This plasticity appears to persist throughout life, but is particularly marked in the earliest years. So biology is definitely not destiny. You may not be able to put in what God left out, but the early environment in particular can have a significant influence on whether what was put in is used well – or bungled.

So our understanding of the role of the social environment, and its interaction with the biological endowment, has greatly expanded since the New Perspective. Unfortunately, these advances in science have not wholly penetrated the general public and political discourse, much of which remains stuck in the frameworks of 40 years ago. Worse, the rather loose term “lifestyle” is all too frequently misinterpreted as referring to individual behavioural choices, rather than the original meaning as the conditions in which people live and work. The trivialization of lifestyle as individual choice is a convenient falsehood that completely ignores the fundamental significance of social context, biological embedding and the life course trajectory.

But no such sins, whether of commission or of omission, can be charged to Clyde Hertzman. No one was more dedicated, or energetic, in identifying, interpreting and communicating the emerging framework of understanding, and the supporting evidence. There was a very good reason why the Canadian Institutes of Health Research in 2010 named him Canada’s Health Researcher of the Year. So where do we go from here?

### The Power of Ideas – Right and Wrong

Clyde’s primary legacy is a well-thought-out set of connected ideas, and ideas can be powerful things. John Maynard Keynes wrote a classic “idealist” statement of their significance, in a passage well known to most economists:

The ideas of economists and political philosophers, both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed the world is ruled by little else. Practical men, who believe themselves to be quite exempt from any intellectual influences, are usually the slaves of some defunct economist.  
(Keynes 1961: 383)

But this ringing endorsement of the power of ideas is very much a two-edged sword. While on the one hand he emphasizes the power of ideas, on the other Keynes adds “both when they are right, and when they are wrong.” (He was writing in 1936.)

Worse, Keynes refers specifically to the ideas of “economists and political philosophers.” Clyde was neither. In a survey some years ago of Canadian federal and provincial civil servants, Lavis and colleagues (2003) found that the concepts of population health had penetrated quite broadly into the thinking of the line departments. Like Clyde’s studies of early childhood development, they resonated well with the experience of those on the “front lines” of public policy.

### Convenient Falsehoods Again: The Ideology of Economics

The great exceptions were those, principally economists, in ministries of finance and treasuries. Mainstream economists in government appear to be strongly armoured against new ideas in the professional ideology (which some are pleased to call “science”).

They have other strong ideas, painstakingly learned and deeply embedded, based on complex theories about the behaviour of autonomous individuals making optimizing choices. These leave little room for social context, and none for human development or the life cycle. Government economists, like their business sector counterparts, are largely unaware, if not actually dismissive, of the evidence that researchers such as Clyde have assembled. Yet, they predominate in the most powerful ministries.

Indeed, the present Prime Minister of Canada, Stephen Harper, seems to go even further. In his first year in power he declared forthrightly that “we don’t need the experts”; he was then referring specifically to those working on early childhood development and advocating for a national children’s agenda. (He may even have had Clyde in mind, which would be a back-handed compliment to the significance of Clyde’s work.) Immediately on taking power, Harper crushed hopes for a national daycare program that might have been the vehicle for mitigating our costly social gradients and advancing a national children’s agenda. He has followed through by gagging government scientists – and even archivists – and with the deliberate destruction of long-term public research programs and data sources. Last year, there were public demonstrations in Ottawa by scientists protesting “the death of evidence” (Fitzpatrick 2012).

Our current prime minister is clearly determined not merely to ignore inconvenient evidence, but to suppress and, where possible, destroy it. Perhaps he fears it. Perhaps he has reason. He may be aware that whatever ideas he does find congenial would not withstand confrontation with evidence, at least in anyone else's mind but his.

We are clearly observing, in Harperland, a demonstration of the power of ideas, although it is unclear what those ideas are, or where they came from. Perhaps, to go back to Keynes, he is "the [slave] of some defunct economist." From the University of Chicago?

So Clyde was not wrong, or naïve, to desire a better country. He, and others, have shown conclusively that "it does not have to be this way." But first, we may need a better federal government.

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