People are fed by the food industry, which pays no attention to health, and are treated by the health industry, which pays no attention to food.

– Wendell Berry, from *Sex, Economy, Freedom & Community: Eight Essays*

3. Degrees of Soundness: Community Vitality and Health
Back in 1986, when the National Round Table on the Environment and the Economy was being created, one of the co-authors of this book was among those assembled in Ottawa as they mapped out the scope of the agency’s efforts. In those early stages, serious thought was given to trying to strengthen the connections made between the environment and human health, before it was decided that it would be too contentious to threaten the medical establishment with this linkage. This would prove to be a major planning mistake. To select just one among many, many examples of why: we are now, in 2014, seeing growing evidence of the impacts of pesticides and chemicals on human health and cancer rates. Their use may also be incurring another ‘silent spring’ as shown by the recent findings on the prevalence of neonicotinoid pesticides in bee-attractive plants commonly purchased by home gardeners. There is simply no denying the connection.

The task of creating a widely agreed-upon definition of health might on the surface appear to be quite simple. In fact, it has been the subject of much debate, over many, many years. The roots of the word, the Old English hoelth, was used to infer a general soundness of the body. The World Health Organization (WHO)’s current definition calls health “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity” – considerably more involved.

In an article published in the *British Medical Journal*, epidemiology researcher Rodolfo Saracci argues that the WHO definition extends too far and is too similar to the definition of happiness. He quotes Sigmund Freud’s reaction to quitting smoking cigars: “I learned that health was to be had at a certain cost… Thus I am now better than I was, but not happier”. Saracci goes on to describe four main consequences of the WHO definition. First, any disturbance to happiness may be seen as a health problem. Second, because the search for happiness is boundless, so also becomes the quest for health. Third, the result is a prescriptive definition of happiness. Fourth, the resulting attempt to secure health through happiness will undermine the effectiveness of efforts to achieve justice and equity in health by consuming limited resources.

His distinction between health and happiness would seem to imply that there isn’t a strong relationship between health and community vitality – we disagree. In the field of psychology, vitality, like happiness, is a peak experience, and that peak experience can occur in the presence of or absence of health – pain and happiness are not mutually exclusive, but pain will likely dampen or curtail happiness. Given
the growing pile of evidence showing highly connected social and ecological sys-
tems\(^48\) and co-evolving human and natural systems,\(^49\) it does appear as if our health
and the vitality of the communities in which we live are becoming more and more
entwined.

What is the current attitude toward health and where, roughly, does
it (or could it) join paths with community vitality? Western medicine’s clinical ap-
proach to health has evolved into a narrow, medically oriented practice, which has
been termed the “disease model” of health.\(^50\) The disease model looks at health
through the aperture of the degree of impairment, whereas a health model consid-
ers levels of vitality.\(^51\) While superficially the two approaches look something like
an optimist-pessimist dichotomy, the implications for health practice are more pro-
found. The disease model centres on diagnosis and treatment, whereas the health
model makes room for environmental and physical dimensions, empowerment
and lifestyle.\(^52\) The disease model relies on physical interventions on the individual
person, whereas the health model acknowledges that choices and decisions take
place within a broader environmental, psychological, cultural and social context.
Like the study of community vitality, this broader understanding of health has a
collective vision and in this way also differs from the WHO definition, which fo-
cuses on the individual. As we will see, discussion of health using a community lens
quickly involves a very different set of considerations from the more technocratic
considerations associated with the disease model.

Within the field of study called community health, this broader
definition of health we are after is captured under the work of health promotion.
It starts with autonomy. Health promotion places greater emphasis on persons,
groups and organizations as active agents in shaping health practices and policies
to optimize both individual wellness and collective well-being.\(^53\)

Behaviour is generally understood to be determined by motivation. A brief review
of what psychologists call social determination theory (SDT) reveals an understand-
ing of autonomy as an interesting linkage between vitality and a broad definition
of health. The theory describes two types of motivation:

Autonomous motivation comprises both intrinsic motivation and the
types of extrinsic motivation in which people have identified with an ac-
tivity’s value and ideally will have integrated it into their sense of self.
When people are autonomously motivated, they experience volition, or
a self-endorsement of their actions. Controlled motivation, in contrast,
consists of both external regulation, in which one’s behavior is a function of external contingencies of reward or punishment, and introjected regulation, in which the regulation of action has been partially internalized and is energized by factors such as an approval motive, avoidance of shame, contingent self-esteem, and ego-involvements. When people are controlled, they experience pressure to think, feel, or behave in particular ways. Both autonomous and controlled motivation energize and direct behavior, and they stand in contrast to amotivation, which refers to a lack of intention and motivation.54

Important links have been made between agency and sustainable community development, extending more recently to community vitality.55 In social determination theory, vitality is defined as the energy that is available to self, “the energy that is exhilarating and empowering, that allows people to act more autonomously and persist more at important activities”.56 Thus social determination theory could be understood to link to vitality and autonomy as well.

SDT links autonomy to health but via the idea of different types of aspirations. Aspirations, or long-term goals, have been divided into two categories, intrinsic and extrinsic. Intrinsic aspirations include affiliation, creativity and personal development. These improve health outcomes (again, broadly defined); extrinsic goals such as wealth, fame and attractiveness have a negative impact with “lower life satisfaction, self-esteem, and self-actualization; higher depression and anxiety; poorer relationship quality; less cooperative behavior; and greater prejudice and social-dominant attitudes”.57 Extrinsic goals are pursued more strongly when the basic psychological needs of competence, relatedness and autonomy are restricted or denied. Consequently, according to Vanseenkiste et al., the expression of goals in a society, whether they are extrinsic or intrinsic, reflects the degree of autonomy in that society.58

In summary, health, broadly defined, places an emphasis on behaviour. Behaviour is, according to social determination theory, determined by motivation. Motivation enhances vitality if it is autonomous; if it is controlled vitality declines. Autonomy also enhances intrinsic aspirations that promote health, under this broader definition.

Another important part of the community health picture is the built environment. A sense of autonomy can easily be stymied when, for example, a community’s services are spread out over considerable distance. In a paper titled A framework for prevention: changing health-damaging to health-generating life patterns, health policy leader Nancy Milio describes strategies to improve autonomy or healthful behaviour:
Behavior patterns of populations are a result of habitual selection from limited choices, and these habits of choice are related to: (a) actual and perceived options available; (b) beliefs and expectations developed and refined over time by socialization, formal learning, and immediate experience.59

One of the most practical illustrations of this proposition is, of course, community form, or the built environment. But while community form has a significant impact on health, in the absence of clear policy to improve the situation, there tends to be little appreciation by developers for this critical linkage. Our governments’ analyses of the determinants of health must reach beyond the examining room and into the neighbourhoods where our health services are (or are not) situated.

Research has identified a statistical correlation between community form and health. A study of more than ten thousand residents of Atlanta, Georgia, found the following: a positive correlation between urban form’s influence on physical activity and emissions; every additional thirty minutes spent in a car was associated with a 3% increase in the odds of being obese; and living in mixed-use neighbourhoods, nearby shops and services, is the best urban form predictor of reduced obesity rates.60 Ewing et al. also found that compact development is directly correlated with lower rates of obesity and hypertension.61

In short: compact development enhances health by promoting physical activity, which in turn translates into improved health outcomes. In his evaluation of the benefits of public transportation on health, Todd Litman cites the WHO in describing the impacts of regular physical activity:

...fifty percent reduction in the risk of developing coronary heart disease (similar to not smoking), fifty percent reduction in the risk of developing adult diabetes, fifty percent reduction in the risk of becoming obese, thirty percent reduction in the risk of developing hypertension, and a decline in blood pressure in people with hypertension (a similar effect to drugs), reduced osteoporosis and relief of symptoms of depression and anxiety.62

Precisely which characteristics of compact development result in enhanced health outcomes is difficult to pinpoint, and the research indicates that in fact a combination of urban design factors may have an effect greater than the sum of the parts. The U.S. Environmental Protection Agency has made an attempt to bring this data together into a single number with its Metropolitan Sprawl Index. It combines gross and net residential density, jobs per square mile, land use mix (ratio of jobs to residents), street network density, sidewalk coverage and route directness63 to
evaluate the impact of a combination of factors. For each percent increase in the index, walking trips increased by just under 1% and transit trips by just under 2%. What we do know for sure is that proximity is key when determining levels of physical activity. Almost 50% of residents within ten minutes walking distance of common destinations achieve recommended exercise targets, compared to less than 30% in sprawling, auto-dependent communities. The National Personal Transportation Survey of Americans, one of the most comprehensive surveys of travel behaviour in the world, estimates that for daily trips 70% of people will walk 500 feet, 40% will work 1,000 feet and 10% will walk half a mile.

Compact development can also determine the feasibility of public transit systems, which in turn influence physical activity. For example, the majority of public transportation users exercise the recommended daily amount of twenty-two minutes simply in the process of walking to and from transit stops. People may be willing to walk more than a kilometre to transit, although a considerable drop-off occurs beyond three-quarters of a kilometre. And in terms of population density required to support public transit, Forsyth et al. found that four units per gross hectare is the minimum for hourly transit service; seven units per hectare is a more conservative threshold.

Green space can also play a role in enhancing health outcomes, but the effects are even more difficult to define or quantify. Forsyth et al. defines park accessibility as any dwelling within four hundred metres of a neighbourhood park or open space. One study in Scotland found that residents in neighbourhoods with ample green space were three times more likely to be physically active and 40% less likely to be overweight than those in neighbourhoods with limited green space. Another study found that seniors living in neighbourhoods with walkable green spaces nearby lived longer on average.

Not all green spaces contribute the same benefits. A study conducted at the University of Sheffield found that the more biologically diverse the green space, the higher its psychological value. One key measure was the ability of green space to foster reflection, which in this study referred to the participants’ reported ability to clear their heads, gain perspective on life and think more easily about personal matters. Generally the richer, more ecologically complex green spaces provided more restorative benefits than did simpler areas with just trees and grass. The data we have so far suggests that much more research needs to be done on the relationships between health, community vitality, and access to natural information.

Increasing autonomy and agency to individuals in their day-to-day choices is necessarily linked to far greater community engagement in the design and re-design
Let’s shift now into looking at some of the socioeconomic considerations of health as it features in our picture of community vitality. To recap, autonomous motivation enables people to take control of their life circumstances, particularly their lifestyle choices, and in turn enhance health outcomes. Communities can support autonomy by creating the conditions that encourage and support participation in shaping the community physically and by providing diversity in both space and transportation choices.

Input from a diverse range of people provides opportunities to discuss different issues, identify new perspectives and promote a sharing of knowledge and understanding. In addition to enhancing community vitality, Iain Butterworth argues, meaningful public participation is valuable to “(i) uphold the notion of participatory democracy, (ii) to the effectiveness of the planning process and the quality of planning outcomes, (iii) to improve the quality of, and validate, political decision making”.

Inclusive participation in health planning ensures local needs are met and the local community has some ownership and accountability over the process; it also generally promotes health through participation. Planning for public health can bring about engagement and participation because it sparks dialogue and enhances knowledge and literacy about safety and well-being, issues that resonate broadly with every human being.

The concept of health-promoting systems recognizes that people’s health (narrowly defined) and well-being reflects their socioeconomic status and, by extension, where they can live. One study in Australia demonstrated that neighbourhoods with the lowest levels of income and professionals, and more rental housing, migrants, unemployed and unskilled workers, were correlated with higher rates of violence, heart disease, morbidity and cancer. Another study cites evidence that health is lower in communities that are dependent on one industry in decline. This has implications for single-economy resource communities everywhere and for the corporate social responsibilities of the private sector.

The Public Health Agency of Canada found that 25% fewer Canadians rate their health as very good or excellent in the lowest income bracket versus the highest income bracket and that there is a correlation between unemployment and mental health problems. While there may be other factors at play, from the perspective of
social determination theory, poverty, and particularly extreme poverty, may limit intrinsic aspirations when basic psychological needs of competence, being connected and personal agency – that is, the will or intent to act – are restricted or denied.

Butterworth argues that most major cities are increasing density in their neighbourhoods to provide housing for their growing job markets, but that much of this housing is unaffordable to low-paid service workers. For example, the City of Vancouver’s Eco-Density Charter adopted the principles of compact development to reduce driving distances and encourage walking and cycling. In actuality, as a Canadian Centre for Policy Alternatives study argues, high living costs are pushing families and service workers outside the city, causing longer vehicle commutes and necessitating more rigorous recruiting processes to fill city jobs. And, as is becoming evident in many cities, gentrification has paradoxical effects: the very diversity that originally attracts people to a neighbourhood often decreases as property prices increase.

We’ve focused our discussion of community vitality and health primarily on the built environment and transportation choices, but there are many more factors to keep in mind, including the quality of the air, land and water, the use of pesticides, the number of chemicals in the environment and so forth.

Before we conclude this chapter, let’s take a more in-depth look at one of the most talked-about health concerns in the world today: cancer. Recent statistics illustrate that approximately two in five Canadians will develop cancer in their lifetime and that on average one-quarter of Canadians will die of cancer. In 2013, it was estimated that 75,500 Canadians would die of cancer and 187,600 would develop it. More than half of new cancer cases are predicted to be lung, breast, colorectal or prostate cancer. The global rate of overall cancer deaths is expected to rise dramatically over the next 20 years, increasing to 22 million new diagnoses and 13 million deaths per year. Currently, lung cancer is the leading cause of cancer death, with more cancer deaths among Canadians than breast, colorectal or prostate cancer combined. Cancer prevention and risk reduction can occur by eliminating tobacco use (as tobacco is responsible for nearly one-quarter of cancer deaths worldwide), reducing alcohol consumption, maintaining a healthy body weight through exercise and healthy eating, reducing sun exposure and reducing exposure to environmental pollution and radiation.

Current studies highlight that chemicals can trigger cancer in a variety of ways, including disrupting hormones, damaging DNA, and inflaming tissues. Research to date suggests that there is a possible connection between pesticides and
human cancers, such as non-Hodgkin lymphoma (especially among farmers), multiple myeloma, and prostate, kidney and lung cancers. Studies on pesticides and childhood cancer also show a possible link with leukemia, brain tumours and non-Hodgkin lymphoma. Unfortunately most of the population of Canada is exposed to different types of pesticides on a daily basis.

Clearly, these statistics – particularly what they reveal about exposure to environmental contaminants, as well as the current and coming demands on our health-care infrastructure – need to be part of any short-term and long-term planning for improved community vitality.

To sum up, a broader understanding and definition of health must include physical, psychological and social aspects that are inter-dependent on community form. To return to Freud’s distinction between health and happiness, we would argue that any broader, community-relevant definition of health should include these aspects as well. Adopting a broader framework for health entails quite different policy paths than the more narrow definition Western medicine has become accustomed to, but as evidence of the links between social and ecological systems mounts steadily with each news story (think: climate change), the immediate adoption of a more holistic framework seems absolutely imperative to the most basic future of our communities.