Happiness and Sustainability Together at Last! Sustainable Happiness

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Abstract

Sustainable happiness is "happiness that contributes to individual, community and/or global well-being without exploiting other people, the environment or future generations" (O'Brien, 2010a, n.p.). It underscores the interrelationship between human flourishing and ecological resilience. At the national and international levels, sustainable happiness has considerable relevance to the United Nations' resolution on happiness and well-being (United Nations, 2011). Applications of sustainable happiness are discussed, with implications for fostering healthy, sustainable lifestyles and communities.

The active debate about how to transform education to meet 21st-century learning needs ranges from suggestions that will merely tweak existing models through modernization, to calls for reimagining the role of education. As educators consider the future of education and the various visions that are promoted—such as 21st-century learning, Health Promoting Schools programs, social and emotional learning, and entrepreneurship education—the concept of sustainable happiness can contribute to the development of a unified vision that fosters well-being for all, forever (Hopkins, 2013). The sustainable happiness pre-service teacher education course described in this paper gives a glimpse of the benefits of doing so. The paper argues that sustainable happiness represents the evolution in happiness that is needed to set the world on a more sustainable trajectory. This makes sustainable happiness indispensable for new visions of education in the 21st century.

Keywords: sustainable happiness; well-being; sustainability; education; 21st-century learning

Précis

Le bonheur durable est « un bonheur qui contribue au bien-être individuel, communautaire ou mondial sans passer par l'exploitation d'autrui, de l'environnement ou des générations futures. » (Auteur 2010). Il met en évidence l'interdépendance entre l'épanouissement personnel et la résilience écologique. Des applications du bonheur durable font l'objet de discussions à l'égard des répercussions de la promotion des modes de vie et des activités sains et durables, comme la marche. Les résultats d'une étude pancanadienne indiquent que les enfants qui se rendent à l'école à pieds sont plus heureux durant leur marche que les étudiants qui y sont conduits. À l'échelle internationale, le bonheur durable est surtout associé à l'éducation et la résolution des Nations Unies sur le bonheur et le bien-être (Organisation des Nations Unies 2011). I know a "couple" that are ideally suited to one another but, until recently, were barely aware of each other's existence. Bringing them together in a long-term relationship could benefit all life on the planet, now and into the future. Happiness, meet sustainability; sustainability, meet happiness.

Once you start looking for it, the evidence that happiness and sustainability belong together is compelling. Research associates happiness with positive health benefits (Davidson, Mostofsky, & Whang, 2010; Seligman, 2002; Steptoe, Wardle, & Marmot, 2005; Veenhoven, 2008); lower inclination toward materialistic values (Brown & Kasser, 2005); active transportation to work (Turcotte, 2006); nature-relatedness (Nisbit, Zelenski, & Murphy, 2011); green exercise (Barton & Pretty, 2010); and children's experiences on their trip to school (O'Brien & Gilbert, 2010; O'Brien, Ramanathan, Gilbert, & Orsini, 2009; Ramanathan, O'Brien, Faulkner, & Stone, in press). All of this suggests that the path to happiness may also be consistent with sustainable lifestyles (O'Brien, 2005, 2010a).

As a sustainability educator, I have to confess my bias. I am constantly on the lookout for fresh perspectives that will give us the edge over the socializing influence of mass media that portray happiness as arising from material consumption. From happy shampoos to happy pet food, commercial products are being associated with happiness. Coca Cola's "happiness truck" and Cadbury's campaign to capture the sounds of joy in New Zealand are just two examples.

Over a decade ago, Seligman's (2002) introduction of *authentic* happiness and positive psychology ignited my imagination because it was laden with implications for sustainability, though the interconnections were not explicitly articulated. After several years of monitoring happiness research, I became convinced that environmental education and sustainability efforts would be enhanced by incorporating lessons from happiness studies. "Doom and gloom" messages have not succeeded in shifting our unsustainable trajectory (Kelsey & O'Brien, 2011). For some people, the magnitude of ecological disasters may have even led them to "tune out" environmental messages, and for children, a terrible dread about the future may have been instilled. A preservice teacher recently wrote to me:

What I remember most about environmental awareness projects in any grade is that I did not enjoy them. Hearing about the deterioration of our ozone layer, the enormous piles of garbage in landfills, the endangered wildlife and any other terrifying theory that we were presented with since elementary . . . I can still feel the anxiety rush over my body as a teacher would bring up the topic of environmental problems. (Student comment in sustainable happiness course, 2013)

Yet, we face significant challenges with sustainability education. Twenty years ago, Chapter 36 of *Agenda 21* (United Nations, 1993) outlined a plan of action regarding education and sustainable development. Progress in Education for Sustainable Development (ESD) has been very slow. In a survey of current practice, a UNESCO report questioned whether education is contributing more to the problems or the solutions.

At current levels of unsustainable practice and over consumption it could be concluded that education is part of the problem. If education is the solution then it requires a deeper critique and a broader vision for the future. Thus, whole systems redesign needs to be considered to challenge existing frameworks and shift our thinking beyond current practice and toward a sustainable future. (2005, p. 59)

In a world where climate change (Intergovernmental Panel on Climate Change [IPCC], 2007) is leading climate scientists to investigate both mitigation measures *and* adaptation measures, a world of poverty, social injustice, and extensive conflict, how could a focus on happiness be anything less than a diversion from the hard issues of sustainability? Those who see happiness research as trivial might ask how positive psychology could contribute to solutions. One response is that happiness is at the very core of who we are and what we do; however, in a consumer society where consumption and happiness are often merged, individuals confuse the "path to the 'good life' as the 'goods life'" (Kasser, 2006, p. 200). Far from being inconsequential, our unbridled pursuit of happiness is often at the expense of other people and the natural environment. Furthermore, happiness research, which includes positive psychology, has developed sufficient evidence about its relevance to individual and collective well-being that there are wide-spread recommendations to bring happiness and well-being to the forefront of national policy development (Canadian Institute of Wellbeing, 2009; Hämäläinan, 2013; Helli-well, Layard, & Sachs, 2012; Stiglitz, Sen, & Fitoussi, 2009).

Happiness studies prompted me to wonder whether sustainability efforts might engage people more successfully by initiating discussions about happiness, and gradually forging links to healthier, more sustainable lifestyles. These ideas led to the development of a new concept, *sustainable happiness* (O'Brien, 2005), with a definition that underscores the interrelationships between happiness, well-being, and sustainability: Sustainable happiness is "happiness that contributes to individual, community and/or global well-being without exploiting other people, the environment or future generations" (O'Brien, 2010a, n.p.).

In our globalized society, actions in one location can have repercussions for distant ecosystems and people. Some impacts are immediate and short-term, while others have enduring effects. Thus, further benefits of combining happiness with sustainability include emphasizing our mutual interdependence, and generating discussion regarding the potential for substantial contributions to sustainability efforts through research from happiness studies. The intention is not to gloss over or avoid environmental deterioration but rather to build connections across disciplines as well as provide new understanding about pathways that lead to sustainability and well-being.

The following example illustrates one way to distinguish between happiness and sustainable happiness. Consider the momentary pleasure of drinking a cup of coffee. Benefits of being mindful of our sensory experience have been discussed by Brown and Kasser (2005) and Kabat-Zinn (2005). It's calming to relax and be fully present, enjoying the aroma, the warmth of the cup, the sounds around us, and the company we are with. However, we don't exist in isolation. Viewed through the lens of sustainable happiness, this momentary pleasure can be placed in a wider context. We can reflect on who or what our life "touches" through that coffee. If we are drinking fair-trade or direct coffee, that means that coffee producers have been compensated justly, and the coffee was grown with regard for the environment. The coffee cup may be reusable or instead destined for a landfill. The positive emotions are indeed important and contribute to happiness and well-being, but it is also important to reflect on whether the positive emotions derived from the coffee have come at the expense of other people or the natural environment. Building on this example, it is evident that considering the conditions under which our clothes are manufactured, how far our food is transported, and even how we travel and relate to one another can represent daily opportunities to contribute to, or detract from, individual, community, and global well-being.

In my experience, sustainable happiness can be used to foster sustainable behaviour. In fact, our natural desire for happiness becomes the entry point for discovering that our well-being is inextricably associated with the well-being of others and the natural environment. This concept can also dispute a common misconception that living sustainably will lower our quality of life. Brown and Kasser (2005) suggest that "as long as environmentally responsible behaviour is framed in self-sacrificial terms, individuals will be faced with tough choices about how to act" (p. 349), because such behaviour is assumed to detract from happiness. Sustainable happiness invites opportunities to enhance our quality of life *and* contribute to individual, community, and global well-being.

Sustainable Happiness and Education

Just as individuals do not exist in isolation, neither do teachers and education systems; they are not disconnected from the massive sustainability issues that impinge on human and environmental health and well-being. Nor are we immune to the impact that a consumer culture may have on our understanding of happiness and sustainability. One recommendation to remedy the lack of understanding about sustainability is to infuse Education for Sustainable Development (ESD) into teacher education (UNESCO, 2005). A more recent recommendation from the UNESCO Chair for Reorienting Teacher Education for ESD is to bring well-being into the mix (Hopkins, 2013). The sustainable happiness course that has been offered at Cape Breton University (Nova Scotia, Canada) online and face-to-face since 2009 aligns with both of these recommendations.

Cape Breton University offers an undergraduate course on sustainable happiness that is cross-listed with education and communication. The education students are enrolled in a Bachelor of Education program. As an elective for communication students, it attracts students from every discipline. Most education students range in age from 21 to 25, although there are generally several mature students in the progam as well. Class size has varied from 18 to 50 students. The face-to-face course involves weekly three-hour classes for 12 weeks.

Weekly classes and out-of-class activities prompt students to examine relationships between their daily life and the impact (positive or negative) on themselves, other people, and the natural environment. Some of these activities include conducting a happiness interview, completing a Sustainable Happiness Footprint Chart (see Figure 1), reflecting on genuine wealth, reducing consumption of non-renewable resources, drawing an "interdependence map," expressing gratitude, exploring "happiness literacy," developing lesson plans, and completing a sustainable happiness project. The following sections describe these activities in further detail.

Happiness Interviews

Prior to delving into the happiness and sustainability literature, students are first required to interview the happiest person they know (Foster & Hicks, 1999). I do not define happiness or characterize how a happy person may behave. My intention is for students to determine their own view of happiness and how this is manifested in someone who strikes them as a happy person. Eventually, they compare their interview results with evidence from happiness research. In the spring course of 2011, 50 students conducted interviews with people ranging from five to 78 years of age. Students commented on the wisdom gleaned from their interview experience. One of the overarching themes was that the "happy" people who were interviewed had made conscious choices about their happiness and well-being, often overcoming adversity.

In line with gratitude research, interviewees described their appreciation for "genuine wealth" (Anielski, 2007), commenting on how deeply they appreciate the people in their life and relish simple pleasures. Consistent with the findings of Foster and Hicks (1999), there were many examples of generosity—volunteering, enjoying being of service, celebrating successes of loved ones, and intentionally striving to make others happy.

Sustainable Happiness Footprint Chart

Using the Sustainable Happiness Footprint Chart (see Figure 1), students monitor their behaviour and emotional experience for one day and then reflect on what impact their activities had for themselves personally, other people, and the natural environment. They are also prompted to consider what opportunities exist for making different choices, and what options they have for improving their own well-being, the well-being of their community, and the well-being of the natural environment. This assignment helps to demonstrate that some of their activities may bring a fleeting experience of pleasure for themselves, but may have adverse consequences for others. It also becomes evident that some actions that contribute to their own well-being (e.g., reducing consumption of fast foods) may have further benefits, such as reducing waste. Additionally, the assignment lays the groundwork for them to recognize themselves as choice makers who can actively contribute to sustainable happiness.



Tíme	Activity	Feeling	How it affects Me	How ít affects other people	Affects on the envíronment
8:00	breakfast, coffee, toast, cereal	rushed, distracted, thinking about day	didn't taste the food, healthy meal, better to have whole wheat bread	fair trade coffee, good for coffee workers; bread from farmers' market, good for local producers	fair trade coffee good for env; local bread, not trans- ported far; cereal, highly processed, transported long distance
8:40	carpooled to class/work	enjoyed talking with friends	less expensive; less stress than driving alone; feel good about it	better for air quality; better if I could cycle or walk	better than driving alone; my best option for where I live

Figure 1: Sustainable Happiness Footprint Chart (sample).

The instructions for the chart are as follows: "Choose one day this week to create your own log of activities. Fill in as much detail as you can. The chart on this page gives you a sample of what you might write. You may complete more than one day if you wish. Remember to answer this question as well: What have I learned about opportunities to improve my own well-being, the well-being of others, or the well-being of the natural environment?"

Genuine Wealth

The topic of genuine wealth (Anielski, 2007) guides students to explore the non-material wealth that comes from various sources, such as relationships, the beauty of their natural environment, trusting neighbours, and meaningful engagement with their studies. Students identify their own genuine wealth, and opportunities to increase and/or sustain it. A poignant entry in one student's genuine wealth list was "the ability to love and be loved." Another student expressed her thoughts as follows:

I must admit that I have lain in bed a few Sunday mornings wondering what life would be like if I won the 6/49 [lottery]! . . . I think that "day dream" would play out differently now. My measure of true happiness is ensuring I sustain solid relationships with my husband and children and maintain my health. Material items have been displaced further down the list. (Student comment after completing genuine wealth activity, 2009)

Shifting Consumption

The shifting-consumption assignment provides a list of options:

This week,

- a. Reduce your consumption of non-renewable resources.
- b. Make one day a "Buy Nothing Day."
- c. Shift your consumption of non-renewable resources toward renewable resources.
- d. Take a "Techno-Fast" (Louv, 2012) and turn off your electronic devices for a period of time that is appropriate for you.

The "Buy Nothing Day," as the name suggests, involves a commitment to buy nothing for at least one day. Students who select this option for their assignment often recount that they expect it to be easy and then discover how frequently they engage in unconscious consumption. For some, it's a welcome opportunity to discover where they might also save some money:

I never put any thought into the idea of how often I bought stuff before. I quickly realized I buy something almost every day. I spend at least two dollars every day whether it's groceries, gas, a snack on the go, or a tea. I was disappointed at the thought of it. I am fuelling the manufacturers' goal for consumers to consume, consume, and consume some more. So I felt a "buy nothing day" was in order. So on Monday, I packed my lunch for the day and left all sources of money at home and went on my way to not spend a cent. I was successful and spent nothing on Monday and Tuesday. Now that I am conscious of the buy-nothing notion, I will carry the message with me and I will do my best to avoid buying things unnecessarily. (Student comment after completing Buy Nothing Day activity, 2011)

Another student discovered that he could save more than \$200 per month by paying greater attention to his consumption.

In recent years, the option to shift consumption through a "techno-fast" (Louv, 2012) has proven to be an interesting opportunity for students to reflect on how technology has the potential to consume their time and attention. The techno-fast involves shutting off electronic devices for whatever length of time is feasible (and safe). This student turned off her cell phone for a day:

I feel as though this "techno fast" that I took has really opened my eyes to how rude it can be and how much I am missing while I sit with my eyes pressed to my cell phone. On Friday, I found that I was calmer. I wasn't checking my phone constantly to see what was happening or what I was missing, and after getting over the fact that I wasn't going to use my cell phone all day, I liked that! Having a cell phone is great for calling someone you need in a hurry . . . but it definitely should not be like another limb on your body, and it absolutely should not interfere with your relationships with others and your experiences with the world in front of you. (Student comment after completing Techno-Fast activity, 2013)

Interdependence Map

An Interdependence Map is used to chart the web of interconnections between the student, other people, their natural environment, the resources they use, as well as historical and cultural events that have shaped who they are today. To visualize how an interdependence map is constructed, consider all the factors that influenced the existence of a piece of paper. If the paper was made from wood pulp, the map would include natural resources (i.e., trees, the sun, wind, soil, and water); inventions that affected our use of paper (e.g., the printing press); machines that were created to harvest trees, transport logs, and convert the wood into paper; energy sources for the various processes; water and chemicals at the paper mill; paper packaging resources; and even the human resources along all the stages of creating the paper and transporting it to the place where it is purchased. The interdependence map for paper is quite basic in comparison to the complex webs that students have created. Their maps include ancestors, family, friends; resources for shelter, transportation, and food; energy sources for electricity and heat; and even sources for clothing. The assignment helps them to realize that their life continously touches and is touched by others both near and far away. Changing just one thing in that map can have far-reaching results. The video at http://sustainablehappiness.ca/university demonstrates the construction of an interdependence map.

Gratitude and Appreciation

For years, I have read that gratitude and appreciation are associated with positive well-being (Lyubomirsky, 2007; Watkins, 2004). Frankly, I was skeptical. However, my students have convinced me otherwise. Many of them have stated that writing a gratitude letter is the best assignment they have ever had. Our sustainable happiness gratitude activity aims to appeal to diverse learning styles, so students are given the option to express gratitude through a letter, a journal, or an artistic form such as poetry, visual arts, or songwriting. Students who choose to compose a gratitude letter generally deliver it in person, often resulting in joyful tears from a parent, grandparent, partner, sibling, or best friend. One student brought flowers to his aunt when he delivered his gratitude letter, thanking her for supporting him through the loss of his mother. Here is the experience of another student:

The whole experience for me felt very good. It made me realize that saying thank you is something that I do not do near enough. After writing the letter to my mother I realized that there are many other people that I should write a similar letter to, or thank in person. The activity also made me think about how often I have daily opportunities to show people gratitude and how I should take advantage of these opportunities. I realized that saying thank you not only makes the people you thank feel good but it also makes you feel good. ... I think that this is a great activity that could be done with students of any age range. (Student comment on gratitude letter, 2013)

Happiness Literacy

One unit of the sustainable happiness course explores the social and cultural influences on our views of happiness. We consider who or what teaches us about happiness, and what we are learning. Students analyze a television commercial, magazine advertisement, or popular song that portrays happiness, to determine the overt and underlying messages about what brings happiness.

Traditionally, formal education has not explicitly incorporated happiness into curriculum documents, so much of our understanding comes through informal education-parents, friends, life experiences, and the mass media. While conducting a weekend leadership workshop with 60 high school youths, I asked them to discuss who or what influenced their understanding of happiness and whether those influences have changed as they progressed from childhood to young adulthood. They responded that their parents, toys, and the children's television show *Sesame Street* (to some extent) were the primary influences as children, but as teenagers, their peers and the media had taken on stronger roles. One youth lamented, "But it's harder now. It's more complicated." From the nonverbal communication of the group, it was evident that there was strong resonance with this statement, so we spent 20 minutes on an activity called "natural highs." A natural high can be anything that uplifts you, brings delight, a smile, a feeling of connection and contentment—simply and naturally. I have gathered hundreds of examples of natural highs through sustainable happiness workshops and presentations: the first snowfall, watching your child sleep, the smell of freshly cut grass, the cold side of a pillow, the sound of rain on a tin roof, high fives, picking berries, and so on. One parent said, "Making eye contact with my son. It doesn't happen very often because he's autistic." Another intriguing natural high was "having a forest bath," which meant walking into a forest and immersing yourself in the sensual experience of being completely present.

At the youth workshop, I invited the students to list at least 10 of their natural highs on a piece of paper and then share one or two with a partner. To my great delight, when I asked if anyone wanted to tell the whole group about their natural highs, I was greeted with a waving sea of hands. One after another, they shouted out their natural highs. There were giggles, smiles, laughter, and clear feelings of buoyancy in the room. I pointed out to them that in a very short span of time, we had generated 600 natural highs—that is, 600 uncomplicated ways to experience positive emotions! Incidentally, natural highs are also a healthy counterpoint to drug-induced highs, and this activity could be used in health education.

Sustainable Happiness Project

In the sustainable happiness university course, each student is required to complete a sustainable happiness project that contributes to personal well-being, community well-being, and/or global well-being. Projects have ranged from reducing the use of plastic water bottles by utilizing a reusable water bottle (the student calculated that her personal savings would amount to more than \$800 per year); shifting to sustainable modes of transportation such as walking, cycling, transit, and carpooling; neighbourhood clean-ups; initiating workplace recycling; and individual wellness plans. One student gathered her daughters and girlfriends to pick up garbage, and they called themselves "Girls Against Garbage," or GAG. Another student created a wind turbine from recycled materials and then gave it to a friend. Typically, students have identified something that they want to investigate further or a lifestyle choice that they want to try out. An Aboriginal student initiated an after-school program to teach Mi'kmaq to young children. Yet another student described her sustainable happiness project as follows:

For my Sustainable Happiness project, I decided to not only make an attempt to reduce my fast food intake to create a healthier life for myself, but also do something to give back to the community in some way. So, what I decided to do was create a challenge for myself. Every time I felt that I wanted to indulge in fast food, I instead would purchase non-perishable food items to be donated to local food banks through food drives . . . I didn't realize how I would feel after this project. Not only did I feel good and more energized from the lack of fast food in my system, I also felt great when I was giving my donation to the food drive. (Student comment on her sustainable happiness project, 2013)

Implications for Education

The active debate about how to transform education to meet 21st-century learning needs ranges from suggestions that will merely tweak existing models through modernization, to calls for reimagining the role of education. Traditional education is criticized for being outdated, stuck in patterns that were suitable for the industrial age (Hargreaves & Shirley, 2012; Robinson, 2009, 2011), too slow to embrace the digital literacy that is vital for

student success (C21 Canada, 2012; Khan, 2012), or stifling for creativity and innovation (Robinson, 2011). The time-sensitive imperative to shift toward sustainability education makes these discussions even more pressing. While we have yet to arrive at a unified go-forward vision, we would be wise to pay attention to the new direction of Finland, one of the world's education leaders (Organisation for Economic Co-operation and Development [OECD], 2011; Sahlberg, 2010). Finland is currently rewriting its elementary and secondary curriculum to embrace Education for Sustainable Development (ESD), with the focus on sustainable well-being (Hopkins, 2013). The sustainable happiness course described in this paper gives a glimpse of the benefits of doing so.

The sustainable happiness university course exemplifies transformational learning. Students' feedback suggests that they feel motivated to leave a legacy of sustainable happiness because they have become aware that their well-being is intermingled with the well-being of other people and the natural environment. These sentiments and behaviours have also been shown to persist beyond the course. A survey was sent to students one year following the completion of the 2009 online course. Sixteen of the 32 students responded, and they indicated that sustainable behaviours had not only been maintained, but had increased in the following year. Although it is possible that the students who were most committed to sustainability issues were the ones who responded, positive and sustained behavioural shifts by half the students taking an online course is compelling and suggests that further investigation is warranted.

A fascinating outcome of the sustainable happiness course is that many students elect to engage in healthy lifestyles, even though the course content does not focus a great deal on conventional health information. This holds promise for health promotion education.

For my sustainable happiness project, I chose to contribute to my own individual well-being through a long-term sustainable happiness project. I chose to work on my own individual well-being because until I feel like I am living a healthy lifestyle, I cannot try to teach other people how to live a healthy lifestyle . . . this is a great sustainable happiness project for anyone to do to increase their quality of life. A lot of people do not realize by just making a small change in their diet, exercise, and sleep that it can have a big impact on their well-being. (Student comment after completing sustainable happiness project, 2011)

One of the most compelling and gratifying aspects of teaching this course is that most students voice the realization that an individual's actions *can* and *do* make a difference. When they enter the course, they don't initially see themselves as choice makers and change makers for sustainable happiness and well-being. The readings and cumulative impact of the activities help them to discover that an individual's happiness footprint is not just relevant to how one person thrives but also relevant to how our planet thrives. As pre-service teachers, these are vital lessons for them to bring to their new profession.

Sustainable Happiness, Health, Well-Being

Positive psychology and happiness studies are making their way into education discussions and resources, leading to the introduction of programs that work with character strengths and virtues (Boniwell & Ryan, 2012; O'Grady, 2013; Seligman, 2011), and new terms such as "positive education" (Morrison & Peterson, 2010; Seligman, 2011) and "positive schools" (Joint Consortium for School Health [JCSH], 2008; Morrison & Peterson, 2010). Seligman—who, as mentioned above, coined the term "authentic happiness"—now promotes flourishing (Seligman, 2011). However, these authors rarely identify connections between happiness, well-being, and sustainability. Furthermore, if flourishing and positive education do not place happiness in the wider context of sustainability, they won't offset prevalent media messages—messages that pair happiness with hyperconsumption. Thus, positive education may have diminished impact on individual well-being and also miss critical opportunities to nurture the development of global citizens who are happy—sustainably.

In the fall of 2010, a new curriculum resource, the *Sustainable Happiness and Health Education: Teachers Guide* (O'Brien, 2010b), was introduced. The guide links sustainable happiness with the health education curriculum outcomes from kindergarten to Grade 6 for every Canadian province. Integrating sustainable happiness with health education supports comprehensive school health initiatives (Joint Consortium for School Health [JCSH], 2011), positive education, and sustainability education principles. There is also an international version of the guide for educators outside Canada. This education resource complements the previously noted pathbreaking developments in Finland (Hopkins, 2013).

Applying Sustainable Happiness Beyond the Classroom

School Travel Planning

As the concept of sustainable happiness is introduced to and embraced by various fields, organizations, and institutions, it is astonishing to note the range of applications. A pan-Canadian project to promote active travel (walking and cycling) on the school journey has incorporated sustainable happiness into its School Travel Planning (STP) program and documents (www.saferoutestoschool.ca/sustainable-happiness). Children's expression of positive emotions about their active travel to school is an ideal example of sustainable happiness. One Grade 4 student, who had never heard of sustainable happiness, drew a picture that eloquently captures the concept: "Walking to school makes a happy Earth, which makes happy faces" (see Figure 2).



Figure 2: Grade 4 student's depiction of benefits of walking to school.

(Source: The "Active and Safe Routes to School: Manitoba Clean Air Day Poster Design Competition 2009," Green Action Centre, Manitoba)

The national project "Children's Mobility, Health and Happiness: A Canadian School Travel Planning Model," aimed to foster physical and emotional well-being, and was supported financially by the Coalitions Linking Action and Science for Prevention initiative of the Canadian Partnership Against Cancer and the Public Health Agency of Canada. STP includes preliminary baseline data collection, and meetings with all relevant stakeholders who influence, or have an interest in, school travel. Typically, the key stakeholders include the school administrator, parent representatives, municipal staff, policing agencies, and public health representatives. The baseline data assist the STP committee in addressing barriers to active travel and opportunities to encourage safe and active trips. This has involved addressing speed limits in the school vicinity, improving signage, removing visual obstructions that make it difficult to see children, enhancing road markings, and so on. One rural school determined that an existing rails-to-trails scenic path could be used by many students to get to school if a small connector trail was constructed between the trail and school. The school and community raised the necessary funds and have created an opportunity for students to experience the happiness and wonder of the forest on the journey to and from school.

This national project, led by Green Communities Canada, was an ambitious one that involved organizations in every Canadian province and territory, as well as two universities (Cape Breton University and the University of Toronto). More than 5,000 baseline family surveys provided data on travel modes, barriers to active travel, and sustainable happiness. Parents who completed the survey at the outset of the School Travel Planning program were asked whether they travel to school with their child and, if they do, to indicate what emotions they experienced. The survey also asked the child to identify the emotions that they experienced on the trip to and from school. Baseline results show that nearly twice as many parents who walk their child to school feel happy (i.e., positive emotion), and half as many feel rushed (i.e., negative emotion), compared to parents who drive their child. Parents and children who walked or cycled on their journey to school chose positive emotions (e.g., happy, content, and relaxed) significantly more often than parents and children who travelled by passive modes like car, school bus, or carpool (Ramanathan et al., in press).

Clean Air Champions

The Canadian non-profit organization Clean Air Champions (CAC) has the mission to educate Canadians about the interconnections between air quality and physical activity (see www.cleanairchampions.ca). Working with athlete ambassadors from the national, Olympic and Paralympic teams, CAC has developed elementary and secondary school environmental education programs that feature athlete visits to schools. These "Clean Air Champions" share why clean air is important to their athletic training and performance. Youth in turn are inspired by the athletes' love of physical activity and given the opportunity to consider how they can contribute to a cleaner, healthier environment.

CAC has determined that sustainable well-being will become an integral part of its education programs. They also see direct applications of sustainable happiness for the adventure/endurance/outdoor community, because such athletes have an inherent connection to the natural environment and are highly sensitized to the interplay between their physical senses and the external landscape. In addition, athletes are often very attuned to what makes their heart sing. Those who excel also know that emotional and physical resilience are very much part of their performance. Kristina Groves (four-time Olympian and medalist in speed skating) provided the following comments on her experiences with sustainable happiness:

I think people generally get themselves into trouble when they equate happiness in their lives with feeling constant joy. Being human means we go through many ups and downs and the experience of living is intimately related to the emotions we feel when times are good or times are tough. The unrealistic expectation that we're supposed to feel endlessly joyful is impossible to live up to and leads to feeling inadequate or unfulfilled. Instead, I think of sustainable happiness as a philosophy towards life that embraces all of its experiences, good and bad, but is rooted in the pursuit of things that we find meaningful and rewarding. Being kind to each other and to the planet is paramount to achieving true sustainable happiness. (In Laframboise & Liepa, 2012)

Nursing Education

Sustainable happiness is finding its way into diverse programs and discussions at Cape Breton University (CBU). The nursing department is incorporating sustainable happiness into the nursing program, within its Health Promotion and Learning course. The nursing faculty have determined that sustainable happiness is a concept that will contribute to nursing students' individual well-being and should be applied to nursing practice as well. They view sustainable happiness as particularly relevant to understanding individual, community, and population health. Nursing faculty who are taking the lead on sustainable happiness teaching and research point to the fact that by 2022, Canada may have a shortage of nearly 66,000 nurses (Tomblin Murphy et al., 2009). Recommendations to address this potential shortage include

- 1. developing strategies to improve retention of registered nurses (RNs);
- 2. improving the health and well-being of RNs; and
- 3. improving the retention of nursing students (Tomblin Murphy et al., 2009).

CBU's nursing faculty believe that sustainable happiness may contribute to addressing the recommendations mentioned above—for instance, by improving the workplace environment. In a collaborative study with this faculty, we explored the benefits of incorporating sustainable happiness into the nursing program. This involved a half-day workshop for the entire nursing department (faculty and staff), a half-day workshop for first-year and fourth-year nursing students, and individual interviews with student participants (Bailey & Profit, 2013). Our study determined that it would be valuable to integrate the concept of sustainable happiness throughout the nursing program, so that there is a more significant impact than could be realized through a half-day workshop. Workshop discussions and interviews with nursing students and faculty confirmed that the concept of sustainable happiness could have a positive impact on at least three levels: personal happiness and well-being; learning how to apply sustainable happiness in their professional work environment; and potentially influencing more positive client outcomes, because nursing graduates will have a firmer understanding of the connections between human and environmental health and well-being, as well as of research from positive psychology. Furthermore, sustainable happiness offers a refreshing lens for encouraging healthy lifestyles and has been included in a nursing textbook chapter (Bailey, 2014).

Sustainable Happiness at the Policy Level

The concept of sustainable happiness has the potential to make substantial contributions to education and health, and to municipal and national policies. In July of 2011, the United Nations passed a resolution recommending that member states give greater attention to happiness and well-being in their economic and social development policies (United Nations, 2011). The UN resolution is consistent with globally agreed targets known as the Millenium Development Goals (MDGs) and encourages member states to consider using indicaters of success like Bhutan's "gross national happiness" (GNH) instead of relying on the narrowly defined "gross domestic product" (GDP). Importantly, this resolution provides an entry point for countries worldwide to ensure that their policies embrace the spirit of sustainable happiness. For example, countries can consider how policies may positively impact individual, community, and/or global well-being, how adverse impacts may be minimized, and how these politicial decisions will affect people beyond their borders, the environment, and future generations.

Building on the UN resolution, Bhutan's Prime Minister, Jigmi Y. Thinley, hosted a high-level meeting at the United Nations in New York on 2 April 2012 with 700 invited delegates, who were convened to discuss a new economic paradigm for realizing a world of sustainable well-being and happiness (Royal Government of Bhutan, 2012). At that time, Thinley (2012) wrote about the need for a new economic paradigm that links sustainability and happiness. "Sustainability is the essential basis and precondition of such a sane economic system. An economy exists not for mere survival but to provide the enabling conditions for human happiness and the well-being of all life forms" (p. 64). Exploration of sustainable happiness in political arenas is ideal for strategies that strive to integrate sustainability, happiness, and well-being. It is particularly well aligned with the recommendation of the Finnish national research body Sitra that Finland should adopt a "well-being oriented national vision," which would set it at the forefront of endeavours for sustainable development and well-being (Hämäläinan, 2013). The Sitra report identifies the need to shift from a welfare policy focus towards well-being oriented policies. It notes that countries that are committed to meeting sustainability challenges, coupled with a focus on well-being, will reap the benefits of being the forerunners.

Instead of trying to export the existing welfare services, a well-being oriented national vision would focus on the development of a superior understanding of the

changing well-being needs of individuals and communities. This understanding could be used to create improved and more sustainable products, services, policies, institutions, and living environments. This human-centric approach would create a new high value-added advantage for Finland in the rapidly changing international division of labour.

This paper has argued that Finland should aim to become a forerunner in sustainable well-being. This role does not only mean a quick adaptation of the Finnish society to the environmental and socio-economic challenges of the world. It also means taking a more proactive international role in developing and adopting the multinational solutions required for sustainable well-being. With a forerunner's reputation and insights, Finland can gain a strong international position that facilitates its success in the new sustainable paradigm. (Hämäläinan, 2013, p. 30)

In view of Finland's leadership in education, it bears noting that the Sitra recommendations are influencing the current Finnish curriculum reform (Hopkins, 2013) that was previously mentioned. Canada is also recognized as one of the top-ranking countries for student academic achievement (OECD, 2013) and could readily demonstrate further leadership by advocating education transformation that embraces sustainability, happiness, and well-being. Discussions about education in the 21st century (C21 Canada, 2012) would be enriched by incorporating sustainable happiness, along with the diverse and worthwhile visions inherent in ESD, Health Promoting Schools (HPS) (Stewart-Brown, 2006), positive school health (Morrison & Peterson, 2010), as well as the essential contributions from experts in social and emotional learning (Collaborative for Academic, Social, and Emotional Learning [CASEL], 2008) and entrepreneurship education (European Union, 2013).

It could be argued that education systems that succeed at integrating the best elements of ESD, positive education, HPS, and sustainable happiness into a unified vision of education for the 21st century will have risen to the pressing challenge for education to contribute to sustainable societies. These will be the education sectors that recognize the need identified by UNESCO for a "whole systems redesign" that challenges "existing frameworks and shift our thinking beyond current practice and toward a sustainable future" (UNESCO, 2005, p. 57). Equally important, the education systems that remain calcified in conventional education, or that tweak existing systems solely to be "more competitive" will have missed the opportunity to contribute to individual and collective well-being.

The health sector is one that may be particularly receptive to adopting a "sustainable happiness lens" in policy development. The federal, provincial, and territorial health ministers of Canada annouced a framework for preventing childhood obesity that spotlights the interconnectedness of biological, behavioural, social, psychological, technological, environmental, economic, and cultural factors (Public Health Agency of Canada, 2011). The framework also appreciates that young Canadian citizens are embedded within communities and environments that are presently not conducive to healthy lifestyle choices or outcomes, and suggests three policy areas: supportive environments, early action, and nutritious foods. Resulting policies may be strengthed by considering how current pursuits of happiness by individuals, communities, and Canadian/global society have facilitated less healthy, unsustainable choices. For instance, desire and demand for large homes has contributed to the design of sprawling suburban neighbourhoods that limit opportunities for children's physical activity through active transportation to common locations like schools and recreation centres. Over-consumption of foods high in fat, sugar, and sodium among children may be in part from decades of consumer marketing that have coupled happiness with eating processed foods (e.g., McDonald's *Happy* Meals) (Melnick, 2011). Therefore, it may not be enough to create policies that focus on supportive environments and nutritious foods. Policies may also need to recognize happiness and decouple it from unsustainable choices, and promote decision-making at various levels that fosters collective pursuits of happiness in a more sustainable way. As noted earlier, health promotion measures could be augmented with sustainable happiness.

Consider, for example, the transformation that would result from municipalities co-operating with the health sector to implement policies and practice that contribute to happy, healthy, sustainable communities. It's a powerful combination that is advocated by a world-recognized leader, 8-80 Cities, a non-profit organization that has extensive expertise in creating municipalities that are healthy for all ages. Their philosophy is that "8-80 Cities are communities built for people. They reflect social equality in the public realm and promote sustainable happiness" (8–80 Cities, 2014).

In summary, worldwide a paradigm shift is afoot that integrates sustainability with happiness and well-being. Nevertheless, there is still considerable work to be done to determine how best to shift existing policies and practices that are mired in outdated views of economics and education. An essential task is to differentiate between popular views of happiness, which have been influenced by consumer cultures, and evidence-based research and practice that direct us toward sustainable happiness and well-being for all. Education clearly has a role to play in this process.

Conclusion

The union of sustainability, happiness, and well-being is inevitable, and sustainable happiness has the potential to create game-changing shifts in attitudes, policies, practices, and behaviours. Through explorations of sustainable happiness, individuals are choosing to be accountable for how they pursue happiness. They understand that their well-being is interconnected with other people's, both now and into the future, and that they have a relationship with the "other-than-human" inhabitants of this planet. Overall, it seems clear that we cannot flourish in isolation and that our flourishing cannot continue to be at the expense of other people or the natural environment. Further research could explore opportunities to utilize sustainable happiness so as to both encourage and maintain healthy and sustainable lifestyles. Case studies of sustainable communities could investigate the association between sustainable lifestyles and life satisfaction. This has been accomplished at the national level through the Happy Planet Index (HPI), which seeks to answer such questions as "Does happiness have to cost the earth?"-or, in other words, "Can we live long and happy lives within the resource capacity of the planet?"in essence, investigating sustainable happiness for all. Measures of experienced well-being, life expectancy, and the ecological footprint of each country are used to calculate the current HPI. The most recent HPI report (Abdallah, Michaelson, Shah, Stoll, & Marks, 2012) determined that Costa Rica is achieving the best balance out of 151 countries. In contrast, reports of the world's happiest cities do not discuss whether that happiness is associated with sustainable lifestyles and sustainable prosperity. Thus, further research to develop case studies of communities that exemplify sustainable happiness and well-being would influence better municipal policy and practice.

Sustainable happiness represents the evolution in happiness that is needed to set the world on a more sustainable trajectory. This makes sustainable happiness indispensable for new visions of education in the 21st century. One mechanism for incorporating sustainable happiness into education reform is to establish pre-service teacher education courses in the subject. To support this recommendation, Cape Breton University's sustainable happiness course syllabus is available at http://sustainablehappiness.ca/university. The *Sustainable Happiness and Health Education: Teachers Guide*, mentioned earlier, is a resource that can assist teachers to incorporate sustainable happiness into the classroom because the lessons are tied to health education outcomes. It is also available electronically at http://sustainablehappiness.ca/teachers. Furthermore, as educators consider the future of education and the various visions that are promoted—such as 21st century learning, Health Promoting Schools, social and emotional learning, and entrepreneurship education—the concept of sustainable happiness can contribute to the development of a unified vision that fosters well-being for all, forever (Hopkins, 2013).

References

- Abdallah S., Michaelson, J., Shah, S., Stoll, L., & Marks, N. (2012). The Happy Planet Index 2012: A Global Index of Sustainable Well-Being. London, UK: New Economics Foundation. Retrieved from www.happyplanetindex.org/assets/ happy-planet-index-report.pdf
- Anielski, M. (2007). *Economics of happiness: Building genuine wealth*. Gabriola Island, BC: New Society.
- Bailey, J. (2014). Young and middle adulthood. In B. Kozier, G. Erb, A. Berman, S.
 Snyder, M. Buck, L. Yiu, & L. Stamler (Eds.), *Fundamentals of Canadian nursing concepts, process, and practice,* 3rd Canadian ed (pp. 377–378). Toronto, ON: Pearson Canada.
- Bailey, J., & Profit, S. (2013, June). Integrating sustainable happiness into nursing education: Positive direction to obtain health for all. Workshop presented at the Society for Teaching and Learning in Higher Education Conference, Sydney, Canada.
- Barton, J., & Pretty, J. (2010). What is the best dose of nature and green exercise for improving mental health? A multi-study analysis. *Environmental Science & Technology*, 44, 3947–3955.
- Boniwell, I., & Ryan, L. (2012). *Personal well-being lessons for secondary schools*. New York, NY: McGraw-Hill.

- Brown, K., & Kasser, T. (2005). Are psychological and ecological well-being compatible? The role of values, mindfulness and lifestyle. *Social Indicators Research*, 74, 349–368.
- Canadian Institute of Wellbeing (CIW). (2009). How Are Canadians *Really* Doing? A closer Look at Select Groups. First Report of the Institute of Wellbeing. Retrieved from https://uwaterloo.ca/canadian-index-wellbeing/sites/ca.canadian-index-wellbeing/files/uploads/files/ACloserLookAtSelectGroups_FullReport.sflb_.pdf
- Collaborative for Academic, Social, and Emotional Learning (CASEL). (2008). Connecting social and emotional learning with mental health. www.acyi.org/sites/ default/files/Connecting%20Social%20and%20Emotional%20Learning%20 with%20Mental%20Health%20%28National%20Center%20for%20Mental%20 Health%20Promotion%20and%20Youth%20Violence%20Prevention%29.pdf
- C21 Canada. (2012). *Shifting minds: A 21st-century vision of public education for Canada*. Retrieved from www.c21canada.org/wp-content/uploads/2012/11/Shifting-Minds-Revised.pdf
- Davidson, K. W., Mostofsky, E., & Whang, W. (2010). Don't worry, be happy: Positive affect and reduced 10-year incident coronary heart disease: The Canadian Nova Scotia Health Survey. *European Heart Journal*, 9, 1065–1070.
- 8-80 Cities. (2014). Our philosophy. Retrieved from www.8-80cities.org/who-we-are
- European Union. (2013). *Entrepreneurship education: A guide for educators*. Entrepreneurship and Social Economy Unit, Directorate-General for Enterprise and Industry. Retrieved from http://ec.europa.eu/enterprise/policies/sme/ promoting-entrepreneurship/files/education/entredu-manual-fv_en.pdf
- Foster, R., & Hicks, G. (1999). How we choose to be happy. New York, NY: Perigree.
- Hämäläinan, T. (2013). *Towards a sustainable well-being society*. Helsinki, Finland: Sitra. Retrieved from www.sitra.fi/julkaisut/muut/Towards_a_Sustainable_Wellbeing_ Society.pdf
- Hargreaves, A., & Shirley, D. (2012). The global fourth way. Thousand Oaks, CA: Corwin.

- Helliwell, J., Layard, R., & Sachs, J. (Eds.). (2012). World happiness report. Commissioned for the United Nations Conference on Happiness, 2 April 2012. New York, NY: The Earth Institute, Columbia University.
- Hopkins, C. (2013). Educating for sustainability: An emerging purpose of education. *Kappa Delta Pi Record*, 49, 122–125.
- Intergovernmental Panel on Climate Change. (2007). *Climate change 2007: The physical science basis.* IPCC Secretariat. C.P.N. No. 2300. Retrieved from www.ipcc.ch/ ipccreports/ar4-wg1.htm
- Joint Consortium for School Health (JCSH). (2008). *Investigating positive psychology themes in school health*. Retrieved from www.jcsh-cces.ca/upload/PositivePsychologyinSchoolsApril2009.pdf
- Joint Consortium for School Health (JCSH). (2011). *Comprehensive school health framework*. Retrieved from www.jcsh-cces.ca/index.php/school-health/ why-is-school-health-important
- Kabat-Zinn, J. (2005). Coming to our senses: Healing ourselves and the world through mindfulness. New York, NY: Hyperion.
- Kasser, T. (2006). Materialism and its alternatives. In M. Csikszentmihalyi & I. Csikszentmihalyi (Eds.), *A life worth living: Contributions to positive psychology* (pp. 200–214). Toronto, Canada: Oxford University Press.
- Kelsey, E., & O'Brien, C. (2011). Sustainable happiness. Green Teacher, 93, 3-7.
- Khan, S. (2012). One world schoolhouse: Education reimagined. New York, NY: Hatchette.
- Laframboise, D., & Liepa, I. (2012). On the trail of sustainable happiness. *Breathe Magazine*, *6*(2), 38–39.
- Louv, R. (2012). Going on a techno-fast: Taking a break from the virtual world. *The New Nature Movement*. Retrieved from http://blog.childrenandnature.org/2012/08/15/ going-on-a-techno-fast-taking-a-break-from-the-electronic-world/
- Lyubomirsky, S. (2007). The how of happiness. New York, NY: Penguin.
- Melnick, M. (2011, July 26). How McDonald's plans to make Happy Meals healthier. *TIME Healthland*. Retrieved from http://healthland.time.com/2011/07/26/ how-mcdonalds-plans-to-make-happy-meals-healthier/

- Morrison, W., & Peterson, P. (2010). Schools as a setting for promoting positive mental health: Better practices and perspectives. Retrieved from www.jcsh-cces.ca/ upload/PMH%20July10%202011%20WebReady.pdf
- Nisbet, E., Zelenski, J., & Murphy, S. (2011). Happiness is in our nature: Exploring nature relatedness as a contributor to subjective well-being. *Journal of Happiness Studies*, *12*, 303–322.
- O'Brien, C. (2005, June). *Planning for sustainable happiness: Harmonizing our internal and external landscapes*. Paper prepared for the 2nd International Conference on Gross National Happiness, Antigonish, Canada. Retrieved from www.gpiatlantic. org/conference/papers/obrien.pdf
- O'Brien, C. (2010a). Sustainability, happiness and education. *Journal of Sustainability Education, 1.* Retrieved from www.jsedimensions.org/wordpress/content/2010/04/
- O'Brien, C. (2010b). *Sustainable happiness and health education: Teacher's guide*. http://sustainablehappiness.ca/teachers/
- O'Brien, C., & Gilbert, R. (2010). *Child and youth friendly land use and transport planning guidelines for Nova Scotia*. Centre for Sustainable Transportation. Retrieved from www.kidsonthemove.ca/uploads/Guidelines%20NS%20Apr30.pdf
- O'Brien, C., Ramanathan, S., Gilbert, R., & Orsini, A. (2009). *Youth and sustainable transportation: A review of the literature.* Centre for Sustainable Transportation. Retrieved from www.kidsonthemove.ca/uploads/Youth%20and%20Sustain-able%20Transportation,%20Review%20of%20the%20Literature.pdf
- O'Grady, P. (2013). *Positive psychology in the elementary school classroom*. New York, NY: Norton.
- Organisation for Economic Co-operation and Development (OECD). (2011). *PISA 2009 at a glance*. Paris, FR: OECD.
- Organisation for Economic Co-operation and Development (OECD). (2013). PISA 2012. What students know and can do: Student performance in mathematics, reading and science. Paris, FR: OECD.

- Public Health Agency of Canada. (2011). *Curbing childhood obesity: A federal, provincial and territorial framework for action to promote healthy weights*. Retrieved from www.phac-aspc.gc.ca/hp-ps/hl-mvs/framework-cadre/pdf/ccofw-eng.pdf
- Ramanathan, S., O'Brien, C., Faulkner, G., & Stone, M. (in press). Happiness in motion: Emotions, wellbeing and active school travel. *Journal of School Health*.
- Robinson, K. (2009). *The element: How finding your passion changes everything*. New York, NY: Viking.
- Robinson, K. (2011). Out of our minds: Learning to be creative. Chichester, UK: Capstone.
- Royal Government of Bhutan. (2012). *Defining a new economic paradigm: The report of the high-level meeting on wellbeing and happiness*. New York, NY: The Permanent Mission of the Kingdom of Bhutan to the United Nations. Thimphu, Bhutan: Office of the Prime Minister. Retrieved from http://sustainabledevelopment.un.org/content/ documents/617BhutanReport_WEB_F.pdf
- Sahlberg, P. (2010). Finnish lessons. New York, NY: Teachers College Press.
- Seligman, M. (2002). Authentic happiness. Toronto, ON: Free Press.
- Seligman, M. (2011). Flourish. Toronto, ON: Free Press.
- Steptoe, A., Wardle, J., & Marmot, M. (2005). Positive affect and health-related neuroendocrine, cardiovascular, and inflammatory process. *Proceedings of the National Academy of Sciences*, 102, 6508–6512.
- Stewart-Brown, S. (2006). What is the evidence on school health promotion in improving health or preventing disease and, specifically, what is the effectiveness of the health promoting schools approach? Health Evidence Network report. Copenhagen, DK: WHO Regional Office for Europe. Retrieved from www.euro.who.int/ document/e88185.pdf
- Stiglitz, J., Sen, A. K., & Fitoussi, J. P. (2009). Report of the Commission on the Measurement of Economic Performance and Social Progress. Paris. www.stiglitz-senfitoussi.fr/documents/rapport_anglais.pdf
- Thinley, J. Y. (2012). Sustainability and happiness: A development philosophy for Bhutan and the world. *Solutions*, *3*(3). Retrieved from www.thesolutionsjournal.com/ node/1121

- Tomblin Murphy, G., Birch, S., Alder, R., MacKenzie, A., Lethbridge, L., Little, L.,
 & Cook, A. (2009). *Tested solutions for eliminating Canada's registered nurse shortage*. Ottawa, ON: Canadian Nurses Association.
- Turcotte, M. (2006). Like commuting? Workers' perceptions of their daily commute. *Canadian Social Trends*. Retrieved from www2.canada.com/vancouversun/news/ extras/commuting.pdf
- UNESCO. (2005). *Guidelines and recommendations for reorienting teacher education to address sustainability*. Education for sustainable development in action. Technical paper No. 2. Retrieved from http://unesdoc.unesco.org/ images/0014/001433/143370E.pdf
- United Nations. (1993). Agenda 21: Earth Summit—The United Nations programme of action from Rio. Available from https://unp.un.org/details.aspx?entry=E93020&title=Agenda+21:+Earth+Summit+-+The+United+Nations+Programme+of+ Action+from+Rio
- United Nations. (2011). Happiness should have greater role in development policy: UN Member States. UN News Centre. Retrieved from www.un.org/apps/news/story. asp?NewsID=39084
- Veenhoven, R. (2008). Healthy happiness: Effects of happiness on physical health and the consequences for preventive health care. *Journal of Happiness Studies*, *9*, 449–469.
- Watkins, P. (2004). Gratitude and subjective well-being. In R. A. Emmons & M. E. McCullough (Eds.), *The psychology of gratitude* (pp. 167–192). New York, NY: Oxford University Press.