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Walking as Pedagogy: Integrating Intentional Walking into the College Curriculum

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Introduction

For a variety of economic, ideological and quality of life reasons, so-called millennials (born between the early 1980s and 2000) are rejecting cars and choosing to live in walkable urban communities. This cultural shift is so pronounced among this cohort of young adults that they can justifiably be described as a 'walking generation' (Speck 2012: 19). The resurgence of walking is fueled by a 'great reset' in attitudes towards cars (Florida (3 June 2010)). Millennials, who now outnumber Baby Boomers as America's largest living population group, no longer buy into the mythology of the car as symbol of freedom, fashion and social status. Instead, they are attracted to the considerable financial savings and personal autonomy of not owning a car. Living without a car also embodies values and a conscious choice to be more sustainable, less consumerist, and to leave a smaller carbon footprint. Being freed from the car gives them agency and a sense of moral authority in a world plagued by global warming and fossil-fueled wars. When millennials think about where they want to live, many envision pedestrian-friendly communities with good public transportation that makes car ownership obsolete. Increasingly, walkability factors into the decision-making process about viable colleges. Prospective students consult online resources such as walkscore.com or do searches for campuses listed as the 'most walkable'. Colleges should capitalize on this generational shift by designing campuses that are safe, comfortable and convenient for walking and by more deliberately mobilizing walking within and beyond the curriculum.

As intentionally built environments, college campuses are well-positioned to make walking an integral part of their ethos and identity. In fact, when the U.S. Surgeon General issued his 2015 Step It Up! Call to Action to promote walking, he specifically identified colleges as one of the sectors to help implement community-based walking strategies. If walking is to become a public health priority in the fight against chronic disease, institutions of learning must lead the way. Campuses can do so by explicitly encouraging 'active living behaviors' and training students across the curriculum to 'recognize their role in promoting walking and walkable communities' (U.S. Dept of Health and Human Services (2015)). Some universities have already begun 'stepping up' their walking initiatives (Stevens (10 December 2015)). The University of Kentucky, for example, is collaborating with the *Walk[your city]* civic startup to install signs across campus that can be scanned by phone to determine walking distances in minutes to destinations. People often overestimate distances and find that walking is, in fact, quite doable. This project is exemplary as it signals an institutional commitment to walkability, cultivates awareness about personal walking attitudes and habits, and allows participants to be part of a larger national conversation on walking.

For many American students, the transition into a daily routine without a car and with a lot more walking marks a radical departure from their past experience. After all, unlike their European counterparts, most communities in the United States are still predominantly carcentric and, unlike their parents, few millennials will actually have grown up walking to school. More likely, they will have spent years being shuttled in cars to schools, play-dates and after-school programs. Thus, for the average incoming American student, college often marks the first sustained introduction to a lifestyle that involves more walking than ever before. These formative, typically car-free college years can and should play a significant role in initiating and shaping them as walkers. Colleges have an incentive to examine and promote this transformation more explicitly on campus. There are compelling health, public policy, financial and ethical reasons to do so, but also a resounding pedagogical rationale for walking as means to facilitate experiential learning that engages the whole student. Walking can have a profound impact on student lives and their academic performance: it orients and connects them to their new community, bolsters creative thinking and intellectual productivity, balances their emotional lives, and provides an accessible form of exercise. This chapter examines data from science and the humanities on the mental, emotional, and physical impact of walking and proposes pedagogical applications to enhance student learning and wellness.

The Student as Walker

Freshmen must get used to many things: from living in the dorms to meeting the demands of college courses and finding their own social niche. They have to learn to manage the exhilarating, sometimes overwhelming, freedom of living without parents and navigating their way through the challenges of stress, anxiety and homesickness. The first year is a time of exploration and experimentation, adaptation and transformation. Students have the opportunity to discover their intellectual aspirations and to forge a more mature identity. This new identity takes shape against the backdrop of a lifestyle change that may not be readily apparent to them unless, of course, they already came to campus as self-aware walkers. For many, becoming a student coincides with becoming a daily walker out of necessity. The 'student as walker' holds true on both literal and figurative levels. On one hand, walking is usually the primary mode of transportation in a student's campus-centric routine, a way to transition between the dorm, classroom and extra-curricular locations. For many, this will be the extent of their walking experience. Even so, these small daily walks add up. Pedometers and apps can help translate cumulative steps into tangible numbers to teach students how much they are actually doing.

Perhaps more interestingly, walking can be seen as a metaphor for change and dynamism: just as the walker is on the move, not stuck to one place or perspective, so too, the student is in a particularly fluid time of life when, ideally, old patterns are broken, ideas are approached anew and self-identity undergoes transformation. College is meant to challenge and stimulate the student's mind with new ideas. Analogously, walking gets us away from our desks to changing scenery, unplanned encounters and surprising thoughts that engage the mind. The nexus of physical and mental activation is supported by medical research that warns against the hazards of prolonged sitting and recommends that, at the very least, we get up every half hour and walk. Organ damage, muscle degeneration, obesity, back pain and depression are all measurable consequences of excessive sitting. There is also a long lineage of thinkers who write about the dangers of inactivity in a less medically quantifiable way. Nietzsche advised that we sit as little as possible because *Sitzfleisch* (the ability to sit still), perhaps deemed virtuous in the traditional classroom, produces static, predictable and formulaic thinking. All 'true great thoughts,' he aphorized, are ergangen (conceived while walking) (Nietzsche 1954: 947). His coinage lends itself to a more layered interpretation than the translation suggests: thoughts have to be walked, enacted, and endured in order to become something of value. This generative power of walking is a recurrent theme in the canon of walking literature: Montaigne describes his thoughts as falling asleep if he seats them and that his legs need to be moving for his spirit to move. Likewise, Thoreau observes how his thoughts begin to flow the moment his legs start moving. Physical movement and mental activity are complimentary, and walking, in particular, fosters the very kind of original, inquisitive and creative thinking that is the hallmark of a college education.

Getting Oriented

Often a student's first visit to a new university will involve a walking tour of the campus. Walking the terrain is the best way to get spatially oriented, to figure out how to coordinate time and distance with a tight schedule, and to discover special places off the beaten track. In small seminars, one might ask freshmen to design a thematically-oriented walking tour (e.g. Quiet Places to Study' or 'Greenspaces and Gardens') with the goal of cultivating navigational skills and encouraging exploration of the campus and beyond. This icebreaking activity fosters a sense of community and belonging for walking 'establishes intimate contact with place' (Amato 2004: 276). As urbanists such as William Whyte and Jane Jacobs have long observed, pedestrian street life is integral to making a place great. Likewise, students walking across campus create the social space between buildings. Admittedly, most of the time, students walk goal-oriented with their eyes or ears tuned into their smartphones instead of the surrounding environment. But walking, more than any other form of movement, invites occasional dwelling, observing and partaking. The slow pace of walking encourages a sociability that is less likely while biking, driving or jogging. Thus, on one level, walking provides a means for students to ground themselves and to feel invested in their new home, both physically and socially: 'The walker makes and becomes the city he or she walks' (Amato 2004: 273).

Mental Health and Wellness

American colleges are reporting record numbers of mental health problems among students including depression, anxiety, eating and sleep disorders. A combination of individual and societal factors may explain this crisis: economic uncertainty, greater financial and academic pressures to succeed, overprotective parenting, generational narcissism, existential confusion, technology addiction and information overload, flaws in the education and health care systems, over-medicalization and over-diagnosis, environmental toxins. One thing is certain: there are now 'greater levels of stress and psychopathology than any time in the nation's history' (Henriques 2014a). The first year of college, in particular, can take a significant toll on students as they get acclimated to academic and social pressures that are exacerbated by lapses in sleep, nutrition and exercise. The impacts are physical, as the proverbial, though exaggerated, 'freshman 15' indicates, and psychological. Most alarming, of course, is the prevalence and severity of depression, anxiety and suicidal thoughts. While walking should not replace the work of mental health practitioners in crisis situations, it can help on the level of preventative care. Many people with mental illness have found that walking helps them manage their inner anguish.

Kierkegaard, who described himself as someone afflicted with a 'suffering bordering on madness', believed in the therapeutic value of walking. He regularly walked the streets of Copenhagen to stoke his creativity, but also to prevent his depression from descending into the paralysis and hopelessness of despair. In a letter to his eighteen-year-old niece, Kierkegaard urged her to do the same: 'Above all, do not lose your desire to walk: every day I walk myself into a state of well-being and away from every illness... Health and salvation can only be found in motion' (Kierkegaard 1847: 6). Similarly, British historian George Macaulay Trevelyan spoke of the close connection of mind and body, and how the legs he called his 'two doctors' helped maintain a healthy balance when he became melancholic: 'When body and mind are out of gear ... I know that I have only to call in my doctors and I shall be well again' (Trevelyan 1928: 19).

The literature extolling the many health benefits of walking often cites the ancient wisdom of Hippocrates, that 'walking is man's best medicine'. Recent empirical findings in (neuro)physiology validate the curative properties of walking with variables relative to duration, intensity and frequency: it clears the body of stress hormones, boosts endorphins, strengthens the immune system, increases energy, elevates mood and promotes restful sleep. It burns fat, helps in weight reduction and controlling appetite. The flow of oxygen to the brain heightens mental alertness, concentration and memory. Walking enhances connectivity of brain circuits and boosts performance on cognitive tasks. Brisk walking is on par with running for lowering the risk of high blood pressure, high cholesterol, diabetes, heart disease and some cancers. Activity recommendations are age-dependent, but for adults to be in good health, the Center for Disease Control advises 30 minutes a day of 'moderate intensity' exercise five times a week (C3 Collaborating for Health 2012: 9 and 31-

34). Barring physical disability or other barriers to walking (such as safety, pollution, traffic, weather, lack of paths and walkable places), walking allows for physical activity without having to think much about it. This kind of 'natural exercise' that is woven into the fabric of everyday life is a habit worth cultivating. In his study of the best health practices in the so-called 'blue zones' of the world, Dan Buettner notes that 'longevity all-stars ... engage in regular, low-intensity physical activity, often as part of a daily work routine' (Buettner 2008: 220). In other words, special gear, gym memberships and intense physical exertion are not needed to maintain effective and sustainable wellness habits. Walking is an accessible, low-cost and effective form of exercise. As such, colleges should explicitly encourage and support it as basic preventive care for mental and physical health.

Academic Skills

The cognitive benefits of walking support the college mandate of teaching students how to think critically, analytically and creatively. The connection between walking, thinking and teaching is not new: many of the ancient philosophers, famously reimagined and memorialized in Raphael's painting *The School of* Athens, walked while teaching. Socrates, the 'street-corner philosopher', was known to walk through Athens engaging in informal conversations that 'planted the seeds from which his philosophical schools were to grow' (Wycherly 1961: 161). The image of the wandering philosopher was so commonplace that when Crantor, a follower of Plato, was out simply taking a walk, people gathered around him assuming he would hold a discussion. After morning lessons in the Lyceum, Aristotle strolled the grounds, walking along the colonnades (*peripatoi*) and into the groves while lecturing to students. His followers later founded the so-called Peripatetic school which some have, perhaps mistakenly, linked to the philosopher's walking habit, instead of the colonnaded locale. By contrast, the Stoics sat on porches (*stoa*), from where their founder, Zeno, lectured.

Centuries later, Thoreau envisioned an experiential, personal and transformative educational practice that alternated classroom learning with regular walks in nature, bringing an appreciation for discovery, the unexpected and 'the wild'. When he and his brother opened a private boy's school in Concord, weekly exploratory walks into the woods were an important part of the curriculum. During these walks, Thoreau was his most effective and authentic. He could be the kind of teacher he felt was most productive, 'a fellow student with the pupil...who should learn of, as well as with him' (Wycherly 1961: 60). These walks are what former students remember the best. It is said that students learned more in a month there than they did in a year at other local schools. For Thoreau, a 'liberal' education must engage the student in experiences that create active, inquisitive minds. It must live up to its name to be 'worthy of freeman' and not merely serve as training in servility (Ryan 1969: 56). This emancipatory view of education echoes Thoreau's description of walking as a means to 'shake of the village'—work, routine, convention—to become a free man (Thoreau 1862: 78).

The German expression *Gedankengang* (train of thought, reasoning) beautifully captures the connection between thinking and walking. In its typical usage, the word refers to the actual process or sequencing of thoughts, both of which involve a number of Gedankenschritte (steps in a thought process). The literal translation is far more suggestive: 'thought walkway' or 'the pace/gait of thought(s)' draw a link between thinking, movement and space. Walking shapes our thoughts into ideas. Interestingly, the word *spazierengehen* (to take a walk) also contains within its Latin root *spatium* (space) the notion of spatial expansion. Thoughts need the space afforded by walking to grow, or as Virginia Woolf so elegantly put it: 'I like to have space to spread my mind out' (Woolf 1925: 107). Experimental psychologists have begun measuring the impact of walking on our thought processes, observing a reciprocal relationship between mind and body. The pace of our steps influences the pace of our thoughts, so by adjusting the speed of our walk we can change the rhythm of our thoughts. There is also a direct connection or 'bodily and cognitive feedback loop' between the way we walk and our mood. Our emotions are embodied: 'emotional states affect somato-visceral and motoric systems ... [and] bodily states have effects on how emotional information is processed' (Michalak 2009: 580). Walking in an upright position, with long strides and at a vigorous pace boosts the energy level and lowers depression and fatigue. The inverse also holds: walking in a shuffling and slouched manner with short strides is associated with lack of vigor and sadness. In fact, one study found that 'changing the walking style of depressed people might help de-escalate pathological vicious circles between bodily and emotional processes that maintain depression' (Michalak 2015: 125).

Walking as embodiment of thought resonates in descriptions of walking as the 'ambulation of the mind' (Ehrlich), 'thinking made concrete' (Solnit) and the 'externalization of an interior seeking' (Ammons). Rousseau's *Reveries of the Solitary Walker* provides a literary illustration of this interplay between the concrete and the abstract. Walking allows him to let go and his thoughts to become animate: his mind '*wanders* quite freely' and his ideas 'follow their own course unhindered and untroubled' (Rousseau 1782: 11). Rousseau decides to concretize the ambulation of his mind in the form of essays, which are, in turn, as unstructured, associative, and digressive as walking thoughts themselves. The wisdoms culled from his walks, too, bear the imprint of walking: 'Everything on earth is in a state of constant flux' (Rousseau 1782: 55) and 'without movement life is lethargy' (Rousseau 1782: 56). Rousseau claims that we are most likely to attain peace and contentment when there is 'neither total calm nor too much agitation, but a steady and moderate movement with neither jolts nor pauses' (Rousseau 1782: 56). Indeed, the regular pace of our footsteps calms and stabilizes the 'oscillatory system' (Crovitz 1970: 36) that is our mind. When we get into a sustained walking groove, the pace of our thinking starts matching up with our steps. This attunement of mind and body allows the mind to calm down, to absorb information, to process and store it into long-term memory. These are the ideal prerequisites to deep, sustainable learning and quite the opposite of distracted multitasking.

In addition to facilitating the assimilation of information, walking is useful as an analytical tool to break a problem down into its component parts. It may even provide the actual solution: *solvitur ambulando* (the problem is solved by walking), as Greek philosopher Diogenes claimed in response to Zeno's paradox that motion is impossible. The simple act of getting up and walking away, rather than reasoning, resolved the debate. The phrase can also be taken literally: instead of proverbially sleeping on a problem, one must walk it through or through it. Solving a problem requires mental agility and the ability to approach an issue from different angles, in other words, movement and space. Physical movement generates mental movement: the vitality of walking, changing external stimuli, unplanned and unexpected encounters discourage circular or stagnant thinking. Walking may not necessarily involve movement towards a set goal, but it is movement in and across a space. Solnit evocatively collapses the physical and mental into a mindscape through which we walk: 'A passage through a landscape echoes the passage through a series of thoughts... The

mind is a landscape of sorts and walking is one way to traverse it' (Solnit 2000: 6). The metaphor may be extended to describe a problem as a difficult terrain to cross and problem-solving as a 'mapping' out of the best route to take (Nezu 2007: 229). As we wind our way through a problem, the different components become points along the path that are connected through our walking. The ancients developed a powerful mnemonic device that involved creating a mental map and placing images to be remembered at locations on it. Likewise, one might associate different parts of an argument with different topographical features, thereby reconstructing the thought process by retracing steps across a landscape.

Finally, walking has been shown to considerably promote creative thinking and the generation of new ideas. After filling up with information and letting it incubate, students need to transform the pieces of received knowledge into something new. This crucial phase of illumination occurs when the mind is given the opportunity to make different kinds of connections. Walking is an excellent facilitator of original, innovative thinking because the physical act of left-right steps simulates the integration of the two halves of the brain, the logical and the intuitive. The rhythmic alternation of steps can put the walker into a relaxed, but fully aware alpha state that is conducive to creative thinking. A 2014 study found that walking significantly boosts creativity: 'After people walked, their subsequent seated creativity was much higher than those who had not walked' (Oppezzo and Schwartz 2014: 1144). The study pinpointed divergent thinking, i.e. the ability to generate many possible solutions to a problem, as the cognitive process most positively affected by walking. By contrast, walking does not promote convergent thinking, i.e. the ability to come up with single, correct answers. In other words, walking has a selectively beneficial effect on creativity and may be most useful for the initial phase of brainstorming ideas. The implementation of walking would be most strategic as a technique to generate ideas, to contemplate different approaches to an issue, and to overcome writer's block. In Thinkertoys: A Handbook of Creative-Thinking Techniques, aimed at business professionals, creativity expert Michael Michalko presents an application of such divergent or analogical thinking: in his 'thought walk', participants walk around the grounds, looking for objects that relate metaphorically to a particular subject or problem at hand. Returning from the walk, they discuss how these metaphors provide new ways of thinking about or solving the problem (Michalko 2006: 357). Coming up with metaphors is analogous to the shifting of perspective that is a trademark of creative thinking

Integrating Walking into the College Curriculum

Throughout the corporate world, walking meetings have caught on as a useful strategy for companies to encourage physical and mental wellness among employees and as a way to foster creative ideas, collaboration and discussion. President Obama, Facebook co-founder Mark Zuckerberg, Twitter co-founder Jack Dorsey and the company LinkedIn are some of the more well-known practitioners of 'Walk and Talks'. In her TED talk about this phenomenon, CEO Nilofer Merchant notes that 'getting out of the box leads to out-of-the-box thinking,' so that instead of thinking about a problem as an either-or dilemma, we can reframe it to consider both solutions as possible or true (Merchant). Walking increases talkativeness, supports the flow of conversation, and walking side-by-side, in particular, allows for more openness and comfort than face-to-face conversations. An academic advisor at Virginia Tech who uses 'peripatetic advising' to great effect, observes that eye contact can inhibit students when they talk about uncomfortable topics and that the walking terrain can fill in for awkward gaps in conversation (McIntyre 2011). Walking office hours may thus be a useful alternative when students come to discuss academic or personal matters.

Walking is, of course, not always practical when students need access to computers, whiteboards, desks, etc., but there are a number of curricular applications that would enhance the learning experience. In the flipped classroom, students are less reliant on frontal instruction and traditional amenities and are presumably ready to discuss and implement the new material. Small walking groups could help brainstorm ideas, break up habituated seating arrangements, change the scenery and energy level, and shift attention away from the instructor. The 'gallery walk' discussion technique, in which students walk to rotating stations to engage with different problems or activities, offers a contained application of walking within the classroom. Getting out of the classroom and going for a walk can be very freeing and productive for writing. As part of a First Year Seminar entitled 'The Art of Walking' (taught at the University of Michigan's Residential College Fall 2013 and Fall 2015), students regularly spent 20 class-time minutes walking outside and then sitting down afterwards to free-write with or without a prompt. The profound impact of walking on their state of mind was evident in these representative responses: 'As I walk, I think about the tranquility in the cool air that consoles me. I no longer have an endless to-do

list running circles in my brain. Instead, I am aware of my surrounding. I feel the soft ground as I take each step. Walking gives me the comfort of home. It reminds me of the security of my family and hometown. I feel warm because I have left our never-resting world and I have allowed myself to be free; to explore my mind'. For this student, walking heightens awareness and creates the stable emotional and mental conditions to allow her to attend to her thoughts. Another student commented on the reciprocal connection between walking and writing, using the transition from body to pen as a launchpad to think about the relationship between image and text in poetry: 'Sitting still inside the body, with the pen moving across the paper like feet across the earth, consider the visual quality of words— Mallarmé'. One student demonstrates how walking heightens our lateral thinking: 'I tried to notice how I felt and thought while walking. My thoughts moved more easily from one subject to another, leading me to the analogy of water. I began thinking of physics and how it applied to my thought process, specifically hydrodynamics. I thought about the mind as a pipe and whether there is a limit to how much or how fast I can think'. Kernels of analytical and creative ideas that could, if necessary, be expanded into theses lie in these spontaneously written, anonymously submitted post-walk responses. They reflect a freeing of the mind that is crucial to any intellectual project.

In light of the many benefits of walking for mental and physical health, academic skills and creativity, it makes sense that colleges actively promote walking. The 'Art of Walking' seminar students came up with the following ideas after taking a partner walk to brainstorm ideas on incentivizing campus walking: grab attention by citing health statistics, create a punch-card reward program for miles walked in exchange for campus currency or vouchers, launch recreational walking clubs, hold competitions between colleges for the most steps walked, organize more cause-related walk-a-thons, design slogans or icons to brand walking as a lifestyle choice, make colleges more pedestrian-friendly, podcast lectures for students to listen to while walking, design curricular activities that require students to walk around their campus community. Students were surprised to discover how such a seemingly ordinary, self-evident activity as walking had relevance across the curriculum. They proposed lecture series and course clusters that highlight the relevance of walking in disciplines from literature, art and philosophy to urban planning, anthropology and medicine. Walking is an inherently cross-disciplinary topic: it 'trespasses through everybody else's field ... and doesn't stop in any of them on its long route ... If a field of

expertise can be imagined as a real field ... yielding a specific crop—then the subject of walking resembles walking itself in its lack of confines' (Solnit 2000: 4). This description might sum up the goal of the freshman year in a liberal arts curriculum: to yield students who are active and curious about learning, and who are not yet confined to one discipline.

Conclusion: Walking as Counter-strategy and Critique

Every year since 1998, the Beloit College's *Mindset* List (themindsetlist.com) has been tracking cultural milestones that have shaped the attitudes of each generation of incoming First Year students. Ubiquitous technology predominates again in this year's list for the class of 2019 (born in 1997): Google has always existed for them, they treat Wi-Fi as an entitlement, texting and tweeting are the medium of casual conversation, parents have switched from encouraging internet use to begging them to get off it, teachers have to remind them to use sources beyond the internet for research papers, texting while walking through a crowd allows them to avoid eye-contact with passers-by. While the list does not explicitly focus on walking, it does imply that the communication, experience and intellectual exploration of this freshman generation are facilitated by technology rather than actual physical means. While technology is unavoidable and certainly a great asset to education, it should not completely supplant hands-on experience and face-to-face encounters. Our teaching and learning should reflect the fact that the body and the mind are connected; that neglecting one over the other will ultimately lead to an imbalanced whole. The resurgent interest in experiential learning signals a desire for more actively engaged educational practices.

As technology becomes more ubiquitous, there is a growing cultural backlash and awareness that electronic gadgets often distract us from having real experiences and making genuine personal connections. A provocative article in *The Atlantic* pointed to the paradox of social media creating more network connectivity, but also more loneliness (Marche 2012). The amount of information and the speed at which it comes to us can also be overwhelming and alienating. Carl Honoré observes a cultural shift away from the 'cult of speed' (Honoré 2004: 3) towards a more decelerated lifestyle, first epitomized by the 'Slow Food' movement and now spreading to other fields such as schooling and parenting. Walking is part of this trend to slow down, to be more mindful and connected, to better align our modern lives with the slower pace of our thoughts and emotions. Walking culture has long been a reaction against speed and the alienating effects of industrialization and mass society. It continues to function as a counterpoint to the status quo: 'Walking has assumed a powerful symbolic role as a means of protest and develops an enhanced potential to evoke alternative worlds and experiences (Amato 2004: 18). As such, it serves as a compelling model and vehicle for students to assert their own position as active, aware and engaged participants in this world— and to step toward it.

I would like to thank the students in my 'The Art of Walking' First Year Seminars for allowing me to test out the curricular application of walking and to witness first-hand its impact on their thinking, writing and general well-being. I would also like to dedicate this essay to my friend Sue Finley (1953-2015) with whom I shared many walks.

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