VOLUNTARY SIMPLICITY AND THE AMERICAN DREAM:

AN ANALYSIS OF ECOLOGICAL FOOTPRINT AND LIFESTYLE CHOICE

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ABSTRACT

The ecological footprint is a metric which measures the ecological impact of an individual or a nation in terms of the total amount of bioproductive acres required to maintain a lifestyle. Given the population of the world and the amount of bioproductive acres available, there is approximately 4.7 acres available per person. However, due to unequal access to and distribution of resources, some nations have a far greater impact than others. The United States leads the world with an average of 23.5 acres per person, more than five times the average available acreage. Much of this impact stems from the highly consumptive, unsustainable practices of this nation's middle-class, a phenomenon brought about by advertising agencies and corporations more than three decades ago. Some individuals recognize this fact and are attempting to reduce their own personal footprint. It is from these individuals, identified by academic researchers as "simple livers," or members of the "voluntary simplicity movement," that the middle-class can learn to reduce their impact and still lead joyful, productive lives.

INTRODUCTION

I have long been interested in simplicity. I cannot remember, even as a small child, being overly materialistic or wanting every single toy or game I came across in a store or saw featured in an advertisement. In my mind, two experiences in particular have profoundly influenced my view of simplicity and gravitation towards it in my own lifestyle practice: working for the Rocky Mountain Youth Corps and spending a semester abroad in Australia. Working for the Rocky Mountain Youth Corps (RMYC) in the summer of 2008, I came to realize to my delight how easy it was to live in a very simple way materially. I had two changes of clothes, a tent, and a sleeping bag, which, along with various camping supplies, I carried on my back. It probably only weighed about 30 pounds. It was all I had – and as I found – and all I needed.

Studying abroad in Australia during the spring of 2009 was a life-changing experience – changes perhaps I will be unable to perceive for years to come. It afforded me the unique opportunity to live in the outback for 5 days with an Aboriginal community, living in the old ways as they have done for tens of thousands of years. I was struck by the simplicity of their lifestyle and utter lack of material possessions. Wanting to best be free of distraction during the trip, I packed as light as possible – managing to fit everything into a single, generic black schoolbag which I found at a local (Perth) thrift store for 3 dollars and which fit neatly underneath the seat in front of me on the airplane .

Both of these experiences allowed me to come to the realization that it is indeed possible to live in a simple manner with far fewer possessions than one might think is possible without any feelings of hardship. After having done this myself, my natural curiosity took over, and I began to wonder. Are people currently living in this manner in the United States? How might the average middle-class American adopt similar lifestyle practices? Armed with these questions and my own personal experience, I began to do some research. I discovered Jim Merkel and the notion of the ecological footprint. I also found the voluntary simplicity movement. I was able to obtain data for the middle-class via United States Census Bureau. Given this information, I have been able to conclude the following.

The current North American way of life, which relies upon consumption, is unsustainable. Americans have the highest rate of rate of ecological impact, on global average by nation, in the world. However, some individuals recognize this fact and attempt to reduce their own impact through conscious and deliberate living choices. If the middle-class were to be informed of these practices and perhaps integrate some of them within their current lifestyle, the United States would reduce its ecological impact.

THE ECOLOGICAL FOOTPRINT

Jim Merkel was born in Glen Cove, Long Island, New York. He graduated from The State University of New York at Stony Brook. He was under the employ of the United States military as a weapons process engineer, essentially as an arms dealer.[1] It was as a result of the Exxon Valdez oil spill in 1989 that Merkel suddenly realized the impact oil had upon his lifestyle and vowed from then on to excise it entirely from his life – this was 20 years ago, and he still does not use it. Utilizing his training as an engineer, he sought to quantify the far-reaching ecological consequences of his lifestyle: his material success enabled him to easily afford all of the trappings consistent with – if not expected of - someone in his position; he had a fancy car and a 4-bedroom house, even though he lived alone.

Merkel settled upon the ecological footprint. The ecological footprint (EF) measures the amount of bioproductivity that an individual or nation uses in a given year."[2] It is calculated by multiplying the amount consumed of a given substance by a footprint factor, and summing the total of each item considered. The following is a list of all the items considered in the overall calculation of an individual's EF. The summation of the total is the aggregate EF for an individual.[3]

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[1] Jari Chevalier, "Interview With Jim Merkel," Jeri Chevalier, MPEG-Layer 3 File, 51:22, http://jari.podbean.com/mf/web/uwa5gv/LivingHero15--JimMerkel.mp3 (accessed 15 September 2009)

[2] Jim Merkel, *Radical Simplicity: Small Footprints On A Finite Earth* (British Columbia, Canada: New Society, 2003), 76.

[3] Jim Merkel, *Radical Simplicity*, 87-92.

Data Type	Equation
Food	(5.5) x q1 x q2
Shelter	((5.1) x (2.6/q3) x q4 x q5 x q6)))
Public Transit	(0.05) x q7
Car	(4.0) x q8 x q9 x q10
Air Travel	(0.3) x q11
Mobility	Sum of ((Public Transit + Car + Air Travel
Goods	Factor calculated from q12
Shelter + Mobility	Sum of ((Shelter + Public Transit + Car + Air Travel + Mobility
Goods and Services	Product of ((Goods Factor x Shelter x Mobility) x (0.9))

Using this metric, Merkel calculated that, in order to sustain the lifestyle of the average middle-class American, 24 bioproductive acres are required[4] Merkel figured by dividing the amount of bioproductive acres available on Earth by the current global population, 4.7 acres were available for each individual.[5] However, due to an unequal distribution of resources, some the lifestyles found in some nations consume far more than others. Americans lead the planet, consuming an average of 24 acres; Canadians are not far behind with 22 on average; Europeans weigh in about 12 acres; in Asia the figure rounds to 6 acres; in Africa, the average is about 3; nations such as Afghanistan only have about 1.5 acres available per person – this is due to extremely simply living; not by choice, but out of necessity as a result of dire poverty.[6]

However, it is important to note that within this footprint metric, Merkel is making five assumptions. First, he assumes that it is possible to track human resource use and waste production. Second, he assumes that most of resource use and waste production can be quantified. Third, he takes for granted the notion that that regional differences in climate and terrain are erased when scaled according to

[4] Jari Chevalier, "Interview With Jim Merkel."

[5] Jari Chevalier, "Interview With Jim Merkel."

[6] Jari Chevalier, "Interview With Jim Merkel."

bioproductivity. Fourth, Merkel postulates that each acre, once standardized, can be summed and a total usage can be derived. Fifth and finally, Merkel makes the assumption that human demand can be compared equally with that of natural resource production. These assumptions must be allowed in order for this footprint metric to have any significance.

HISTORICAL BACKGROUND

In order to fully understand both of these lifestyle options – voluntary simplicity, and middle-class consumption, it is necessary to rely on history. The historical background will be provided for each, dating back to the last quarter of the nineteenth century until the present day. However, background will not be provided in full for one lifestyle, and then follow for the other lifestyle; rather, it will presented chronologically in a call-and-response fashion, as the voluntary simplicity movement and its practitioners was often in response to the rise in consumption found within the mainstream culture.

THE NINETEENTH CENTURY

The nineteenth century, particularly the period following the Civil War which would later become known as the Gilded Age, represents the beginnings of a shift from an agrarian lifestyle to one of mechanization.[7] Manufacturing, which had previously relied upon the use of small factories, run by individual owner-operators, was beginning to make the transition to large-scale operations, which increasingly depended upon heavy machinery and employed many unskilled laborers.[8] This period also marked the rise of the corporation, in which big businesses, controlled by a handful of individuals later to be called "robber barons" and "captains of industry," began to populate the landscape and would later come to dominate business operations within the United States.

It was the corporation that disseminated the myth of wealth, of how the good life could be owned by the commoner, that it was in fact bought and sold on the market. One of its most outspoken advocates

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[7] David E Shi, *The Simple Life: Plain Living And High Thinking In American Culture*, New York: Oxford University Press, 1985, 154.

[8] David E Shi, *The Simple Life*, 160.

was the head of U.S. Steel, Andrew Carnegie. Carnegie was the American dream incarnate. He arrived from Scotland as a young lad and was able to generate his wealth from nothing within his first generation of living within the United States. He understood the value of hard work, and also the value of a dollar. It was his industrious sprit and penchant for saving that enabled him to amass his wealth, not to mention his uncommon business acumen.

Though, not everyone chose to be swayed the illusions of grandeur proffered by the few who happened to possess the motivation and skills necessary to successfully manipulate business opportunities. The American transcendentalist movement, particularly Henry David Thoreau and Ralph Waldo Emerson, long spoke on the dangers of a life set upon the pursuit of wealth and the trappings of success. Thoreau was the quintessential renaissance man of his time, proficient in the works of literature and poetry, knowledgeable in music and the arts. But it is his stance of society and civilization, particularly his attitude towards commerce for which he is particularly well known. Thoreau sternly acknowledged in *Walden* that much of the work that men do is without consequence, and is wholly unnecessary; were it not to be done, the world would indeed not fall apart. He encourages men to awake from their slumber and lead lives of passion, rather than those encumbered by the demands of the civilization.[9]

THE ROARING TWENTIES

By the turn of the century, the gospel of wealth had hit the mainstream. Nowhere was this image of success more apparent for the average consumer than in the department store. In general, the department store thrived on the notion of novelty. In many cases, the interior of the stores were designed to reflect the styles of the upper-class, in an effort to make it appear that the middle-class shopper was somehow "buying up" and would be thought by others to be wealthy.[10] Even if you yourself are unable to

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[9] Henry David Thoreau. *Walden, or Life in the Woods*. New York: Library Classics of America, 1985.

[10] Jan Whitaker. *Service And Style: How The American Department Style Fashioned The Middle Class*, New York: St. Martin's Press, 2006, 43.

become successful, so went the line of thinking, perhaps dressing the part will at least project that image outward into the world.

However, this increase in business and emphasis on buying an image did not sit well with everyone. In fact, the superficiality of this process of image building led some to simply abandon the prospect all together in favor of a more authentic way of living. Two consummate examples are the Nearings and the Bolsoldis. Henry Nearing was a liberal, communist sympathizer who was disgusted with American politics and the consumptive lifestyle. He and his wife Helen opted out of the rat race by moving to a homestead in Vermont; later they would pick up and leave and begin again in Maine.[11] Ralph Bolsodi was an industrious individual who firmly believed in the value of hard work and sought to learn how to do everything the old way – forging human ingenuity in concert with the hands and the mind to create something that worked. He even went so far as to make his own clothes, including a bespoke suit.[12]

The Nearings and the Bolsodis were by and large the exception to the rule. Their success was due in large part to their boundless energy and willingness to succeed. Several times, Helen Nearing remarked that she nearly faltered, but it was never enough to send her back to the city, a lifestyle which she could no longer handle. The vast majority of idealists, however, wandered in and out of shattered communities founded on utopian visions, most of which collapsed when twenty-something societal dropouts reached the end of their trust funds from their parents or even more likely, realized that the industrious spirit and work ethic necessary to make this particular lifestyle work was simply too much to bear.[13]

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[11] David E Shi, *The Simple Life*, 254-257.

[12] David E Shi, *The Simple Life*, 226-227.

[13] David E Shi, *The Simple Life*, 258.

THE 1950'S AND THE TELEVISION

Following the Second World War, the American economy was on the rebound. It was during the quarter century following the end of World War II that an onslaught of consumption was elaborately engineered by a team of psychologists, sociologists, advertisers, and corporate CEOs. Playing with market demand, they successfully re-engineered the way in which consumers view purchasing.[14]

Early during his term, President Dwight D. Eisenhower exhorted the masses to simply "buy anything."[15] Consumption, he believed, along with this team of scheming strategists, would be the catalyst that revved the engine of the economy and would consequently result in a period of unbridled wealth and prosperity. Once the guilt of purchasing, of parting with money was assuaged, people were enticed to buy more by the notions of planned obsolescence. In particular, strategists relied upon three different marketing techniques; obsolescence of function; obsolescence of quality; obsolescence of desirability.[16]

Of all the consumer products to enter the market during this period, it was perhaps the television which had the most far-reaching and longest-lasting impact. The brainchild of Philo T. Farnsworth in 1930, the television quickly became the most popular medium to receive news and entertainment alike within the home. Advertising agencies soon realized this machine's potential as they were able to transmit information about their products via electric impulses and into the living rooms of potential consumers across the nation.

A GENERATION OF HIPPIES

At the instruction of Timothy Leary, an entire generation was admonished to "turn off, tune in, and drop out." Many saw the impediment of consumerism in the home via the color television as a negative. Increases in the price of gasoline as well as the cost of buying a home spurred many to react

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[14] *Ibid*.

[15] David E Shi, *The Simple Life*, 250.

[16] Vance Packard, *The Waste Makers* (New York: David McKay Company, 1960), 55.

towards a simpler way of life that would cost less and be free of material trappings.[17] However, the vast majority of these suburbanites were ill advised and ill prepared for what lay ahead. They happened to have money and job skills from working out in the world, but little of this was transferable on the wooded plots of land on which they often found themselves. Carpentry, gardening, and general handiwork were in often in short supply. Blinded by the romantic notions of popular culture found in the folk music of John Denver and the instructional manual magazine, Mother Earth News, most of those who went back to the land were in for a rude awakening as to how difficult the transition would be. Clearing the land and building a house did not come easy, nor did growing a garden large enough to feed a family. More problematic for many was the resistance to traditional capitalist economics and the inability to find work which paid enough to avoid falling quickly into debt.

THE ERA OF REAGAN

After the somewhat tumultuous presidency of Jimmy Carter, Americans were once again eager for a president who would continue the economic growth and consumerist boom experienced in the 1950s. They found this notion embodied in the former actor Ronald Reagan. His economic policies were by and large centered upon achieving prolific economic growth, which was achieved through the mechanisms of controlled government spending, an increase in tax cuts across the board (for all income brackets) and an emphasis on deregulation in regards to big businesses and corporations. These policies ultimately resulted in an increase in national wealth and standard of living.[18]

However, this increase in standard of living made it difficult for middle-class families to maintain such status. Members of the professional middle-class, for instance, bemoan they apparent inability to make ends meet on an income that surpasses $100,000. Even though this income places individuals within the top five percent of annual per capita income in the United States (as of 1989), the cost of living – fueled largely by cultural expectations and perceived lifestyles (which often include private education

[17] Eleanor Agnew, *Back From The Land: How Young Americans Went to nature In The 1970s, and Why They Came Back*, Chicago, Ivan R. Dee, 2004, 7.

[18] Robert M. Collins, *More: The Politics of Economic* Growth, London: Oxford University Press, 2000, 196-197.

for the children, and sufficient retirement accounts for both parents, each of whom is engaged in a professional career) – makes $100,000 seem like a paltry sum indeed.[19]

THE NOVEAU RICHE AND THE DOT-COM BUBBLE

This unprecedented economic growth continued into the 1990s, fueled by the rise of the Internet and digital technology; and with it, rising cultural expectations on lifestyles as well. Those who were able to capitalize upon this new technology entering the market, were able to make a fortune; and those were not able, often wish they had. It was during this period that the United States saw a rise in a new breed of consumer: the middle-class millionaire – those individuals whose annual income rests somewhere one and ten million dollars. While technically not "middle-class," these individuals serve a significant purpose in this context: they represent the goal of the middle-class family - to have access to the lifestyle of these individuals. Whether it includes the ability to drive a fancy sports car or reside in a mansion on the beach, or simply be able to travel anywhere in the world at a moment's notice, these individuals are seen in the public consciousness as the pinnacle of success.

Though, as might be expected, not all families or individuals were swayed by the material success of others. In particular, self-identity was not necessarily tied to a certain numerical value printed on a bank statement or to a favorite pair of chinos hanging in the closet. Instead, for some individuals, identity was borne out of meaning and purposeful work, highlighted by creativity and innovation, and a fulfillment of self-created expectation and not those established by society at large.

THE FIVE PHYSICAL NEEDS

Ran Prieur, an avid blogger who writes on topics ranging from politics and the economy to ecology and technology to the rise and fall of civilizations ancient and modern, and everything in between, characterizes himself as voluntary poor and preemptively retired, eking out his existence on a

[19] Barbara Ehrenreich, *Fear of Falling: The Inner Life Of The Middle Class*, New York: Pantheon, 1989, 244-245.

mere $2500 to $3000 per year.[20] Although he has written upwards of a dozen essays to date, his work from 2004 entitled, "How to Drop Out" is the most germane to this topic of ecological footprint and individual lifestyle choice. The essay reflects on Prieur's personal experiences leading a lifestyle for the better part of a decade (as of the writing) in what he terms the "low-budget universe," a situation in which one relies on creative means (often as a result of the lack of money to afford a more conventional (read: middle-class) lifestyle) to sustain one's basic physical needs. Prieur identifies five essential physical needs which must be satisfied in order for an individual to continue to lead a productive existence: food, water, clothing, shelter, and fuel.[21] However, for the purposes of this analysis, transportation will also be included as it stands to reason that some mode of transport is essential to conducting affairs both business and personal within daily life in the United States.

THE LIFESTYLES OF THE VOLUNTARY SIMPLE

Prior to 1982, very limited research existed which sought to explain and quantify the lifestyles of those who Americans who seemed to be resistant to the notion of conspicuous consumption. Duane Elgin, who at the time was a Senior Research Scientist at Stanford University, developed a national survey in order to understand the pulse of the nation in regards to ecological living.[22] The culmination of his efforts was Voluntary Simplicity: Toward A Way Of Life That Is Outwardly Simple, Inwardly Rich. A decade later, Linda Breen Pierce, a former attorney, proposed a similar survey which became known as the Pierce Simplicity Study, in 1995.[23]

Indeed both of these surveys serve as useful references if trying to understand the motivation behind why people pursue a simpler lifestyle, but they say nothing on whether these lifestyle choices are

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[20] Under The Radar. "Ran Prieur – Civilisation was a Mistake." Under The Radar. MPEG-Layer 3 File, 1:20:35. http://www.radio4all.net/index.php/18456

[21] Ran Prieur. "How to Drop Out." 2004. http://ranprieur.com/essays/dropout.html

[22] Duane Elgin, *Voluntary Simplicity: Toward A Way Of Life That Is Outwardly Simple, Inwardly Rich*, New York: William Morrow, 1982.

[23] Linda Breen Pierce, *Choosing Simplicity: Real People Finding Peace And Fulfillment In A Complex World*, Seattle: Gallagher, 2000.

in fact simpler, easier, and/or more ecologically sustainable. Thus, using the anecdotal evidence provided within these two sources, as well as various vignettes and monographs written by self-professed "simple livers," as well as the calculations for ecological footprint as outlined by Jim Merkel, I will quantify the ecological impact of the lifestyles lived by these individuals.

Individuals were chosen on the basis of two criteria: first, does this person self-identify as someone who lives simply? Second, can the lifestyle led by this individual be quantified – does it fit the criteria as outlined in the questionnaire in Radical Simplicity: Small Footprints on a Finite Earth by Jim Merkel? After surveying several dozen individuals via monographs and vignettes, six were eventually chosen to be tested. No preference was given in regards to race, age, religion, or geographic location. In all cases, individuals drew attention to certain characteristics they deemed personally significant to their lifestyle. While these individuals may represent a cross-section of American society given the diversity of background – age, gender, geographic location – the relatively small size of the sample makes it difficult to draw far-reaching conclusions. However, coupled with anecdotal evidence from other sources, it will provide a more accurate picture, and make a stronger argument for the case of the simple lifestyle. The results are displayed in the following table:

Ecological Footprint Calculation Results for Simple Livers											
Name	Location	Food	Shelter	Public Transit	Car	Air Travel	Mobility	Goods	Shelter + Mobility	Goods and Services	Total EF
Champney	Rural	3.17	0.99	0	0.37	0	0.37	1	1.73	1.56	6.09
Epling	Rural	3.17	0.4	0	0.37	0	0.37	1	0.77	0.74	4.68
Nelson	Urban	2.24	0.99	0	0.37	0	0.37	1	0.74	0.67	4.27
Coleman	Urban	1.99	3.7	0.15	0	0	0.15	1	2.29	2.06	7.9
Hennessy	Urban	4.42	2.12	0	0	0	1.91	1	2.12	1	9.45
Kindas	Rural	1.75	1.74	0	0.37	0	0.37	1	2.48	2.23	6.09
											6.4133

GEOGRAPHIC LOCATION

Of the six, three reside in what might be considered a rural area, and three reside in what would be referred to as an urban area. These designations were self-identified, and often would change the way in which an individual would live a lifestyle.

TRANSPORTATION

Public transit is the primary example in this case. Only Jessica Coleman, a 22 year old married woman from Portland, Oregon utilized public transit at all. She and her husband, Ian, live downtown, and are within walking distance of a bus stop. In order to get to where they needed to be, they would frequently ride their bicycles or walk, and on sometimes use public transit – which is one explanation as to why that figure is relatively low.[24] Four out of these six individuals relied upon a private vehicle for transit, and all were used within the same frequency range – the mileage as indicated by Merkel's questionnaire would be 10-100 miles, considered on a weekly basis. This figure, however, does not discriminate for type of vehicle. However, the two following questions are concerned with fuel economy (in miles per gallon) – but which is not reported by these individuals – as well as occupancy – whether or not individuals drive alone, or with others – also not reported. Thus, both of these figures were guesstimated based upon given information found within the anecdotes. None of the participants engaged in any air travel at all. This is not surprising given the amount of money it would cost to purchase a ticket, as well as the nature of the lifestyles lead by these individuals. One individual – Champney – indicated that he and his family do in fact travel, but these out-of-state camping trips were made possible by the use of a station wagon, and thus did not require an airplane.[25]

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[24] Linda Breen Pierce, *Choosing Simplicity: Real People Finding Peace And Fulfillment In A Complex World*. Seattle: Gallagher, 2000, 179-180.

[25] Dorothy N. Andersen, *Downwardly Mobile For Conscience Sake: Ten Autobiographical Sketches: Each A Personal Search For Justice, Peace And Eco-sanity*. Eugene, Oregon: Tom Paine Institute, 1995, 33-34.

FOOD

The ethical questions surrounding food that seem to drive simple livers are "What am I eating?" "Where is my food coming from?" "What are the hidden costs associated with my food purchases?" Concerning food, Merkel's footprint quiz asks two questions. The first relates to diet, namely the proportion of it which centers around animal-based products – defined as meat and dairy. Ecological impact increases as the frequency of consumption of animal-based products increases. Thus, those who eat a vegan diet have the lowest footprint in regards to this question, whereas those who consume animal-based products in nearly every meal have the highest. Among this survey group, diet choices ranged widely. The second question considers the amount of food miles for a given product – or, how far in distance did the product travel before it arrived at the dinner table.[26]

For Kathy Epling, food is of the utmost importance for her family. She strives to provide a balanced, healthy diet that is exclusively vegetarian. In order to save money as well as live consistently with her values of environmental conservation, food is mostly purchased from the local co-op, an hour's drive away. The majority of the food is staple ingredients purchased in bulk quantities – grains, beans, flour, vegetables, and the like. In this way, Ms. Epling is able to support the local economy and save on excess plastic and other packaging for the food as well as reduce the number of miles the food has travelled before it reaches her family's dinner table. Yet, she still laments the amount of plastic packaging which finds its way into her home – most of which happens to be found on bread, tortillas, and cheeses that she sometimes purchases.[27]

Matthew Hennessy has the largest food footprint of these individuals by far – 4.42 acres – and is by and large a product of his rather erratic diet. Lacking conventional cooking mechanisms save for a single hot plate; he subsists mostly on canned foods such as tuna, beanie weenies, and vegetables. He is able to supplement with fresh vegetables when available and snacks on cookies and candy bars when

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[26] Merkel, *Radical Simplicity*, 88.
[27] Andersen, *Downwardly Mobile for Consciousness Sake*, 39.

possible. Given his lack of access to a kitchen and very low income – which measures at $3,500 annually – Mr. Hennessey's dietary selection is understandable.

SHELTER

For this group, individual shelters varied in both size and structure. The shelter footprint as defined in Merkel's questionnaire considers four aspects in particular. How many people does this particular structure accommodate? What is the physical size of this structure in terms of square feet? To what class of structure does this shelter generally belong – free-standing, multi-storey apartment, or green-design residence (unfortunately this term is not further defined, though it would seem to suggest that it refers to a structure which has incorporated energy-saving measures into its physical building plan). The four question expands upon this notion, and asks whether energy-saving measures are incorporated into this home – while it can refer to the physical building, in this case it also refers to the conservation measures practiced by these individuals.

Of these six individuals, four reside in free-standing buildings, and two reside within apartment units. Within the apartments, it is unclear (due to lack of information) whether energy efficient measures are currently practiced. In regards to the free-standing housing structures, Nelson relies exclusively on wood for heat and thus does not have a thermostat; Epling relies on wood as well. For Epling, though, it is perhaps the size of her structure that makes a larger impact – her rustic cabin measures a scant 12' x 20' and is set on 20 wooded acres. Also, she does not utilize electricity and opts to do without indoor plumbing – waste elimination is conducted within a nearby outhouse.[28]

FUEL

In this survey, fuel is not addressed individually. Though, it is certainly considered within the daily decision-making within the lives of these individuals – be it concern for the price of gasoline to fill the pick-up truck, or the price of gas to heat a home, or the price of a cord of wood to heat a stove for warmth and cooking. Juanita Nelson, one of the individuals in this survey, relies exclusively on cords of

[28] Andersen, *Downwardly Mobile for Consciousness Sake,* 38.

wood to both heat her home and cook her food.[29] Epling as well relies upon the heat transferred from her modest wooden cook stove.

IMPACT OF FOOTPRINT

From this data, the range of individual ecological footprint is 4.27 acres to 9.45 acres. The average is 6.41 acres. Compared to the United States average of 24 acres per person, as identified by Merkel, these individuals are living, on average, on one-quarter of the amount of bioproductive acres as the average American. This figure is close to the goal of 6 acres per person that Jim Merkel has suggested for people living in North America. This is still higher than the 4.7 acres available per person on a global scale, but is far closer to the ideal than 24 acres. However, this figure of 4.7 acres accounts only for human beings at special level at carrying capacity – meaning that 100 percent of the Earth's resources are directed towards sustaining human beings. If one were to wish to include the rest of the animal kingdom, humans would need to consumer considerably less resources – say only 75 percent – which would reduce the global average of available bioproductive acres per person to 3 acres.[30]

The three most significant impacts upon footprint size, at least as evidenced within this questionnaire, are food, shelter and mobility, and goods and services (a term which, broadly defined, refers to all of the goods and services purchased or required to sustain an individual lifestyle).

MIDDLE-CLASS AMERICA

The creation of middle-class America, as witnessed by the historical evidence provided, is the consequence of a confluence of forces. The details concerning lifestyle choices and consumptive habits are not as richly defined with anecdotal evidence as is the case with the voluntary simplicity movement, but instead are seen clearly through the statistical record. Thus, bearing in mind the five physical needs as defined by Prieur and the lifestyle calculation of EF as utilized by Merkel, the statistics from the United

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[29] Andersen, *Downwardly Mobile for Consciousness Sake*, 71.
[30] Merkel, *Radical Simplicity*, 54-55.

States Census Bureau will depict the current lifestyle choices and consumptive habits that characterize middle-class America.

GEOGRAPHIC LOCATION

During the ten year period between the 1990 Census and the 2000 Census, the population of the United States increased by some 22 million people, or 11.62 percent to more than 281 million.[31] Unfortunately, population figures are not yet available for the 2010 Census.

INCOME

In 2007, the average per capita income in the United States was $27,834. In 2008, that number decreased by 3.1 percent to $26,964. For households, the figure was considerably higher. In 2007, the average was recorded at $52,163. A year later that figure declined by 3.6 percent to $50,303. Interestingly, the Western region of the United States had the highest income per household; the Northeast was second; the Midwest third; and the South fourth on a regional comparison. Those who work within metropolitan statistical areas (MSAs), which by definition include principal cities as well as outlying suburbs, had a higher per household income than those within principal cities, as well as those who reside outside of MSAs, i.e. rural areas. Not surprisingly, men consistent earn more than women on average.

HOUSING CHARACTERISTICS

To more accurately assess the notion of middle-class, reported figures will be in the range for the middle 50 percent of given statistics. In terms of the number of rooms contained within a house, the middle 50 percent contains 4 rooms at the first quartile and 7 rooms at the third quartile. In terms of number of bedrooms, the houses of the middle 50 percent contain either 2 or 3. Finished or completed bathrooms – that is to say bathrooms that contain sink, shower, and toilet – number between 1 and 2. In 2008, "the average single-family house completed had 2,519 square feet, 764 more square feet than in

[31] U.S. Bureau of the Census, Census 2000, Table DP-1. Profile of General Demographic Characteristics: 2000.

1978."[32] However, the range for the middle 50 percent, not including single detached and manufactured/mobile homes, is between 1,000 and 2,499 square feet. Mobile homes inclusive, the median drops to 1,769 square feet. Interestingly, the median lot size is only 0.35 acre. Not including 1-unit structures, lot size varies from less than an eighth of an acre to upwards of 1 acre. Unfortunately, this data is not cross-referenced with regional preference, and thus, there is no clear way to identify whether the relatively small lot size is due to high prices for land, or simply that there is not enough space to accommodate larger lots.

FUEL

Heating equipment and plumbing sources for these housing structures mirrors the national trend. The majority of homes are heated via warm-air furnace; secondary preferences seem to be heat via steam or some variation of a hot water system; tertiary preferences seem to be via an electric pump system. In regards to plumbing, the vast majority of homes are equipped with full facilities, which means flush toilet, running water for the sink, and hot piped water for the shower.

TRANSPORTATION

This survey did not investigate consumer automobile preferences, but rather recorded preferred commuter options among individuals. The most recent statistics available regarding commuting is from the 2000 Census. Commuters were asked how they arrived to work most often in the previous week. They were also asked with how many other people did they commute – this option was only for private transportation, as public transit was considered separately. Thirdly, consumers were asked to estimate the average time of the daily commute. The results indicate, out of more than 128 million responses, that 87.9 percent relied upon transportation via a car, truck, or van. Of that 87.9 percent, 112 million people, 75.7 percent, or 97 million people, commuted in that car, truck, or van alone. Only 4.7 percent utilized public transportation. Surprisingly, 2.9 percent, or 3.75 million people identified as commuting to work

[32] U.S. Census Bureau, Highlights of Annual Characteristics of New Housing. http://www.census.gov/const/www/highanncharac2008.html (accessed 12 December 2009)

via walking. The remainder of the population relied on other means – motorcycle, bicycle, or some other unidentified means – or worked from home.

FOOD

Expenditures on food will be presented from statistics gathered by the Bureau of Labor Statistics. In the past calendar year, since October 2008, total expenditures on food and beverages have declined by 0.3 percent. Spending on food at home has declined by 2.8 percent, whereas spending on food away from home has increased by 2.2 percent. Expenditures for both dairy (8.2 percent) and fruits and vegetables (5.6 percent) have also declined. Though, expenditures for sugar and sweets have increased by 3.3 percent. It is significant to note that there is not necessarily a casual relationship between the decrease in spending on dairy and fruit and vegetables and the increase in spending on sugar and sweets; this data merely suggests that there is a possible correlation among these three figures.

CONSUMER SPENDING

The most recently available data on consumer spending (October 2009), indicates that consumers are not as hesitant to spend money as they were only a year ago. The Department Store Inventory Price Indexes, as taken from the Bureau of Labor Statistics, measures the percent change in spending for a given month with spending in the same category for both six-month and yearly intervals. Spending on piece goods, for instance, has increased 23.6 percent in the interval from October 2008 until October 2009. Expenditures on women's and girls' accessories saw a similar increase during the same interval. Interestingly, spending on radio and television saw a marked decrease of 12.3 percent during the last twelve month period (beginning October 2008). Not surprisingly, spending on domestic and draperies decreased 4 percent in the past year – perhaps as consumers view redecorating as a non-essential task, and thus less money is being spent in that category. Likewise, spending on furniture and bedding is down as well, by 5 percent. Overall, department store expenditures have increased since October 2008 by 0.6 percent, and 0.5 percent from April 2009.

ECOLOGICAL IMPACT

Ecological impact of the middle-class will be considered on the basis of Jim Merkel's footprint quiz. In regards to the five physical needs as outlined and identified by Prieur, given the data that I have obtained for the middle-class, it is only possible to quantify this for shelter. The median size for housing structure for the middle-class is given at 1,769 square feet. However, the range for the middle 50 percent, not including single detached and manufactured/mobile homes, is between 1,000 and 2,499 square feet.

If we assume that the average middle-class family has two children, plus the parents for a total of four people living in the residence; that the range of housing structure falls within the data collected by the US Census Bureau; that the structures considered are only free-standing houses and not apartment complexes or specifically a green design residence (which would not be the case for all but the newest of homes, which in all likelihood would not be purchased by the average consumer); and fourthly assume that energy conservation practices are not utilized within the home (for all homes built about twenty or twenty-five years ago, most of today's measures found in new homes were not present then, or utilized by very many people), then the average footprint for shelter would be 5.1 x (2.6/4) x (1.2) or (2.2) x (1) x (1) = 3.978 acres, or 7.923 acres. This means that the range for shelter footprint for the average middle-class family of four is between 4 and 8 acres.

Attempting to quantify the other figures requires more assumptions, some of which are implicit within the collected data. In regards to food, it is probably safe to say that the average family is not strictly vegan or even vegetarian. Thus, if the family were to consume meat often (defined by Merkel as once or twice per week, which seems reasonable enough) and were to generally eat food that is not grown locally all the time – compromise and say that half of the food is processed and packaged, and the other half is obtained from local sources when possible and available, the food footprint would be 5.5 x 0.86 x 0.90 = 4.257 acres.

Transportation is difficult to quantify as it depends so much on where one lives and where one works. It is likely that if an individual did not reside in an immediate metropolitan area (NY-NJ-CT-PA;

IL-IN-WI; San Francisco-San Jose, CA) or within the commuter line for public transit, commuting to work would be primarily by private automobile. Thus, we must account for both when offering a picture of the middle-class. In the first scenario, we assume that individual A from New Jersey commutes to work via public transit, but owns a vehicle, which is used primarily on the weekends. We also assume this car is reasonably efficient, as it is not brand new, and thus is maintains a fuel economy of 15-25 miles per gallon. We also assume that most of these car trips are taken either solo or with one other individual. In the second scenario, we assume that individual B from Iowa does not have access to reliable public transportation and thus relies exclusively on a private automobile. We can also reasonably assume that this vehicle is not more efficient than the individual from New Jersey, and thus also has a fuel economy in the same range: 15-25 miles per gallon. We assume as well that most trips are made either by the solo individual or with an additional person.

Thus, based on these specifications, the first individual would maintain a public transportation footprint of 0.05 x 8.47 = 0.424 acres, and a car footprint of 4.0 x 0.12 x 0.98 x 1 = 0.47 acres, for a total of 0.894 acres. The second individual, however, would maintain a public transportation footprint of 0 as there is no reliable access to public transit, but maintain a car footprint of 4.0 x 1.91 x 0.98 x 1 = 7.49 acres, for a total footprint of 7.49 acres, which is more than 8 times the individual from New Jersey. Bear in mind these figures do not account for air travel. If the commuter from New Jersey would in a business that required frequent air travel, the transport footprint would be higher, and perhaps match the individual from Iowa; however, if the commuter from Iowa also spent time flying, the transport footprint would be even higher.

Factoring in waste production also plays a role in one's ecological footprint. It seems reasonable to assume that these middle-class individuals generate on average at least as much as their neighbors. If we assume this similar level of waste production by an individual family that lives in a small, 1000 square foot house in New Jersey built 25 years ago that does not incorporate energy efficient measures, and who regularly purchases and eats meat through the week, but does not usually fly on airplanes, the total

ecological footprint would be (4.257) + (3.978) + ((0.8944) + (5.1894) = 14.3188 acres. If we assume this similar level of waste production by an individual family that lives in a larger, 2500 square foot house in Iowa built 25 years ago that also does not incorporate energy efficient measures, and who regularly purchases and eats meat throughout the week, but who might fly 2 cross-country trips per year, the total ecological footprint would be (4.257) + (7.923) + ((0) + (7.49) + (1.5) = 9.43) + ((1) x ((7.923) + (0) + (7.49) + (1.5)) x (0.9)) = 15.2217) = 27.4017 acres. As is evident, there is quite a range in lifestyles, and these represent perhaps the extreme examples, with millions of Americans' ecological footprints falling somewhere between 14 and 27 acres.

LESSONS FROM THE RECESSION

Economists seem to be in agreement that the current recession is the most severe that the United States has seen since the stock market crash of 1929. Such readily available statistics as the national unemployment rate and the consumer price index (CPI) might serve as a bellwether to gauge the health of a nation's economy, but alone do little to explain how the lifestyles individual Americans, particularly those of middle and lower socioeconomic classes, have changed as a result.

As of December 12, 2009, the national unemployment rate registered at an even 10 percent for the month of November, dropping 0.2 percentage points from 10.2 percent for October 2009. It is the first decrease in this figure in more than a year and a half, since the rate dropped 0.1 percentage points from March to 5.0 percent in April of 2008.[33]

The most recent detailed report of the Consumer Price Index (CPI) for October 2009 reveals an overall average decrease in expenditures in the last twelve months for urban consumers, ending with October 2009 by 0.2 percentage points. In light of the five physical needs as outlined by Prieur – shelter, food, water, clothing, and fuel - each of these categories has also experienced a decrease over the course of the past calendar year. Total expenditures on housing have decreased 0.4 percentage points, which

[33] "Labor Force Statistics from the Current Population Survey." United States Bureau of Labor Statistics. Data extracted December 12, 2009.

includes rent, fuel, and utilities. However, taken separately, rent has increased 1.2 percentage points; utilities when combined with fuels has decreased by 6.0 percentage points; taken alone, fuels decreased 23.5 percentage points. Expenditures for clothing, referred to as apparel within this index, have increased 1.4 percentage points. In the past calendar year, expenditures on water – which is combined with sewage and collection services in this index – have increased 5.8 percentage points. Aggregate expenditures on food have decrease 0.6 percentage points in the past twelve months.

All of these figures as reported by the Bureau of Labor Statistics are unadjusted and thus do not account for changes in price due to seasonal variability. Therefore, this does not necessarily reflect an increase in expenditures per household, but wmay partially be the result of an increase in the national unemployment rate within the past twelve months.

POSSIBILITIES FOR THE FUTURE

Given the historical record as well as the current examples of individuals living both lifestyles, what, of significance, can be gained for future development? Specifically, what lessons might those from middle-class America learn from those leading a simpler lifestyle? As is evident from the ecological footprint analysis of the middle-class, the three biggest factors in determining an individual's or household's (single family under one roof) ecological footprint, are housing, transportation, and food.

In regards to housing, pursuing more energy efficient measures in the home – replacing appliances such as refrigerators, dishwashers, clothing washers and dryers with their more efficient Energy Star cousins may have an impact upon one's footprint in the short-term. However, the long-term, and perhaps more difficult, solution to decreasing one's shelter footprint is to reside in a smaller house – more than any other single factor in the home, the size of one's dwelling determines the amount of resources required to maintain it. Though, there is no magic number in regards to how big one's shelter should be, Merkel's suggested footprint for North Americans totals 6 acres, which would mean, based on calculations of the Census Data for housing structures, that housing structures should not exceed 1000 square feet, which is considered small by average standards. Part of this process is physically down to a

smaller place, but the other adjustment, which might require a psychological shift – is becoming used to having less space.

Concerning transportation, the short-term reduction in one's footprint is to drive less – combine errands to different places on the same trip to save gas as well as wear and tear on the vehicle. The longer-term goal in footprint reduction would be to purchase a vehicle with a higher fuel economy (better miles per gallon ratio), but also to drive it less – as driving more miles in a few efficient car may actually negate any gains made in ecological footprint. Better still – and probably the best solution for reducing footprint – is to live in an area where there is viable means to commute to work and/or school without requiring a car; unfortunately, at the moment, there are only a handful of metropolitan areas in the United States which cater to this segment of the population.

In terms of food, the short-term solution is to become more aware of where the food is produced and how it is processed, packaged, and shipped. The longer-term solution is to acquire more knowledge about nutrition and only purchase bulk ingredients – (at least as few prepared foods as is possible) and produce meals from scratch in one's own kitchen. However, for many families this is not always possible given the lack of time to prepare healthy and nutritious foods. But again, it is still possible to eat well without spending too much time or money, but this will probably require some sacrifice – sacrificing those foods to which you may have become accustomed and generally broadening your notion of the food horizon – the kinds and types of foods available for consumption, many of which are not necessarily produced in a factory or wrapped in plastic.

Undoubtedly, the most difficult part of this journey towards a simpler lifestyle is the beginning. Where and how does one begin? This may seem daunting at first, but it need not be. Begin first, with whatever is possible – whether that be by outfitting the light fixtures within one's home with more efficient compact fluorescent bulbs, or by figuring a different route to work that will save on time and gasoline. This step in the process will be different for each individual. The main thing is that one begins,

and bears in mind that this is the first step in a long process that will take time and diligence to accomplish.

Appendix One

Ecological Footprint Quiz

influence politics and negotiate our way through tax laws or legal difficulties. Money buys services, security, and healthcare. When money can buy such influence, the fundamental ideal of democracy — that all voices have equal value and effect — becomes an unachievable myth.

QUICK FOOTPRINT QUIZ

Redefining Progress has created a quiz to quickly assess your impact. With these twelve questions, a reasonable estimate is reached. For an online, international version of this quiz, with other country and language selections and a dynamic interface, visit <www.myfootprint.org> For more information on the Ecological Footprint, visit <www.redefiningprogress.org>. You can also get a pencil and paper and take the quiz right here.

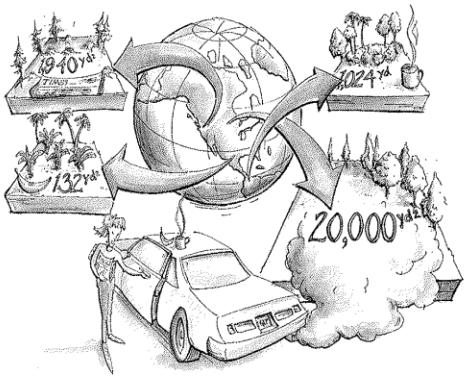

Figure 6.6: Ecological footprinting goes behind the scenes — just what does it take to make newspaper, grow a banana, brew a cup of coffee, operate an automobile?

Figure 6-7
ECOLOGICAL FOOTPRINT QUIZ

Calculate your Ecological Footprint
Ever wondered how much "nature" your lifestyle requires? You're about to find out. This is a very basic quiz to calculate a quick and relatively accurate Ecological Footprint for an individual living in the US. The Ecological Footprint Quiz estimates how much productive land and water area you take up for the resources you consume and the waste you generate. After answering 12 easy questions you'll be able to compare your Ecological Footprint to what other people use and to what is available on the planet.

Please answer as honestly and accurately as possible.

Instructions
Circle your response, and the number in each column that corresponds to your answer.
Enter the circled number from each column into the SUBTOTAL boxes below each column. Calculate the footprint for each section by multiplying your numbers as shown. Enter the subtotals from each section under "QUIZ RESULTS." Add up your subtotals to get your total footprint.

Caution
This quiz may surprise you, shock you, or make you think. Please remain calm … but not too calm!

FOOD
Q1. Animal-based Food
A plant-based diet generally requires less land, energy, and other resources. As with all food, the size of the footprint largely depends on how it's grown. Look for "free range" animal products that have been produced by local, small-scale organic or sustainable farmers.

How often do you eat animal-based foods? (Beef, pork, chicken, fish, eggs, dairy products.)

Never (vegan) ..... a. 0.46
Infrequently (no meat or eggs/dairy a few times a week) .. b. 0.59
Occasionally (no meat or occasional meat, eggs/dairy daily c. 0.73
Often (meat once or twice a week) ..... d. 0.86
Very often (meat daily) ..... e. 1
Almost always (meat and egg/dairy in almost all meals) .. f. 1.14

Q2. Locally Grown Food
A significant portion of the energy involved in the food system is spent on transporting food from harvest to market, and for processing, packaging and storage. Growing food yourself or purchasing locally grown, in-season, unprocessed food can greatly reduce the need to expend energy in food production. Shopping at farmers' markets or buying directly from farmers is the best way to ensure that you are purchasing locally grown food, and to minimize your food footprint.

How much of the food that you eat is processed, packaged and not locally grown (from more than 200 miles away)?

Most of the food I eat is processed, packaged
and from far away ..... a. 1.10
Three quarters ..... b. 1
Half ..... c. 0.90
One quarter ..... d. 0.79
Very little. Most food I eat is unprocessed,
unpackaged and locally grown ..... e. 0.69

Subtotal (1) — food footprint:
5.5 x Q1 x Q2 = _____ acres
Example: 5.5 x 0.86 x 1 = 4.7 acres

SHELTER (Simplified, for full version see <www.myfootprint.org>)
Q3. How many people live in your household? (Used to calculate your share of living space.)
1 person ..... a. 1
2 people ..... b. 2
3 people ..... c. 3
4 people ..... d. 4
5 people ..... e. 5
6 people ..... f. 6
7 or more people ..... g. 7

Q4. House or apartment size
The average living space for a US household is around 1,500 square feet.
What is the size of your home?
2,500 square feet or larger ..... a. 2.9
1,900 – 2,500 square feet ..... b. 2.2
1,500 – 1,900 square feet ..... c. 1.7
1,000 – 1,500 square feet ..... d. 1.2
500 – 1,000 square feet ..... e. 0.7
500 square feet or smaller ..... f. 0.2

Q5. Which housing type best describes your home?
Free standing house ..... a. 1
Multi-story apartment building ..... b. 0.8
Green-design residence ..... c. 0.5

Q6. Do you use energy conservation and efficiency measures throughout your home?
No ..... a. 1
Yes ..... b. 0.75

Subtotal (2) — shelter footprint:
5.1 x (2.6/Q3) x Q4 x Q5 x Q6 = _____ acres
Example: 5.1 x (2.6/2) x 1.2 x 1 x 0.75 = 6.0 acres

TRANSPORTATION

Q7. Public Transportation

On average, how far do you travel on public transportation each week?

200 miles or more	a. 17.29
75-200 miles	b. 8.47
25-75 miles	c. 3.09
1-25 miles	d. 0.89
0 miles	e. 0

Subtotal (3) — public transit footprint:
0.05 x Q7 = _____acres
Example: 0.05 x 3.09 = 0.2 acres

Q8. Car

The average car-driving American travels about 14,000 vehicle miles per year, or 270 miles per week.

On average, how far do you go by car each week (as a driver or passenger)? If your answer is "0-10 miles" for Q8, enter "0" in the subtotal box and skip Q9 and Q10.

400 miles or more	a. 1.91
300-400 miles	b. 1.43
200-300 miles	c. 1
100-200 miles	d. 0.55
10-100 miles	e. 0.12
0-10 miles	f. 0

Q9. How many miles per gallon does your car get?

If you don't own a car, estimate the average fuel efficiency of the cars you ride in.

More than 50 miles per gallon	a. 0.31
35-50 miles per gallon	b. 0.46
25-35 miles per gallon	c. 0.65
15-25 miles per gallon	d. 0.98
Fewer than 15 miles per gallon	e. 1.54

Q10. How often do you drive a car with someone else, rather than alone?

Almost never	a. 1.5
Occasionally (about 25%)	b. 1
Often (about 50%)	c. 0.75
Very Often (about 75%)	d. 0.6
Almost always	e. 0.5

Subtotal (4) car footprint:
4.0 x Q8 x Q9 x Q10 = _____acres
Example: 4.0 x 0.55 x 0.98 x 1 = 2.2 acres

Q11. Air travel

Every year, Americans fly an average of 4.7 hours per person on commercial airlines. This is roughly equivalent to one round trip flight between Washington, DC and Chicago each year.

Approximately how many hours do you spend flying each year?

100 hours (approx. 1 coast-to-coast US roundtrip each month)	a. 20
25 hours (approx. 2-3 coast-to-coast US roundtrips each year)	b. 5
10 hours (approx. 1 coast-to-coast US roundtrip per year)	c. 2
3 hours	d. 0.6
Never fly	e. 0

Subtotal (5) air travel footprint:
0.3 x Q11 = _____acres
Example: 0.3 x 5 = 1.5 acres

GOODS

Q12. Compared to people in your neighborhood, how much waste do you generate?

Much less	a. 0.75
About the same	b. 1
Much more	c. 1.25

QUIZ RESULTS:

(1) Food Footprint ____acres ..... Enter from Subtotal (1)

(2) Shelter Footprint ____acres ..... Enter from Subtotal (2)

(3) Public Transit Footprint ____acres .. Enter from Subtotal (3)

(4) Car Footprint ____acres ..... Enter from Subtotal (4)

(5) Air Travel Footprint ____acres ..... Enter from Subtotal (5)

(6) Mobility Footprint ____acres ..... Add (3) through (5)

(7) Goods Factor ____ ..... Enter from Question 12

(8) Shelter + Mobility ____ ..... Add (2) + (6)

(9) Goods and Services ____ acres ..... Multiply (7) x (8) x 0.9

Your Total Footprint = ____acres ..... Add (1) + (2) + (6) + (9)

Example:

(1) Food Footprint	4.7 acres
(2) Shelter Footprint	6.0 acres
(3) Public Transit Footprint	0.2 acres
(4) Car Footprint	2.2 acres
(5) Air Travel Footprint	1.5 acres
(6) Mobility Footprint	3.9 acres
(7) Goods Factor	1
(8) Shelter + Mobility	9.9
(9) Goods and Services	8.9 acres
Your Total Footprint =	**24 acres**

In comparison:
The average US Ecological Footprint is 24 acres per person

Your footprint measures ____% of an average US Footprint.

Formula = (Your footprint/24) x 100

Worldwide, there exists 4.7 biologically productive acres per person.

Therefore, if everyone lived like you, we would need ____ planets.
Formula = Your Footprint / 4.7

US Footprint Averages (acres/person)

Food Footprint:	5.5
Shelter:	5.1
Mobility Footprint:	4.3
Public Transit:	0.1
Motorbike:	0.01
Car:	4.0
Air Travel:	0.3
Goods & Services Footprint:	8.6
Average Total Footprint:	23.5

To arrive at your food footprint, the quiz sums up arable land, pasture, sea space, and land areas to sequester CO_2 from the energy expended to grow, process and transport the items. Your choices in the food arena make a sizable difference depending upon your diet. If you purchase only organic food, your impact will shrink further still.

Your goods and services footprints are determined based upon the size of your food, shelter, and mobility footprints. This result considers average lifestyles, and estimates your use of appliances, clothing, electronics, sports equipment, toys, computers, communications equipment, household furnishings, and cleaning products.

The quiz includes services like water, sewage, garbage, telecommunications, education, healthcare, financial services, entertainment,

Appendix Two

Data Obtained via Public Documentation

The data obtained from the U.S. Census Bureau and the U.S. Bureau of Labor Statistics was too long to be formatted for this paper. The titles are listed below and may be obtained for further information. Visit http://www.census.gov/ for information regarding the Census. Visit http://www.bls.gov/ for all information concerning current labor information including consumer spending and unemployment rate.

U.S. Census Bureau:

Height and Condition of Building – All Housing Units
Size of Unit and Lot – All Housing Units
Selected Equipment and Plumbing – All Housing Units
Fuels – All Housing Units
Income and Earnings Summary Measures by Selected Characteristics: 2007 and 2008
Means of Transportation to Work: 1990 and 2000
Selected Metropolitan Areas by Means of Transportation to Work: 2000

U.S. Bureau of Labor Statistics:

Labor Force Statistics from the Current Population Survey
Department Store Inventory Price Indexes – Oct. 2009
Consumer Price Index for All Urban Consumers (CPI-U): U.S. city average, by expenditure category and commodity and service group
Percent changes in CPI for All Urban Consumers (CPI-U): U.S. city average

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