

SPICE

Student Perspectives on
Institutions, Choices and Ethics



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LETTER FROM THE EDITOR

I am proud to present to the students, faculty and staff of the Philosophy, Politics and Economics Program at Penn the fourth issue of the undergraduate journal *SPICE*. The four articles published in the Spring 2009 issue represent some of the best undergraduate work in topics that truly embody the multi-disciplinary nature of PPE.

This journal represents the efforts and support of many individuals. First, I would like to thank the student executive board for their dedication and hard work without which we would not have this publication. I would also like to thank the faculty and Dr. Sumantra Sen for their support and guidance during this process. The executive board reviewed many outstanding papers throughout the academic year, and we thank everyone who submitted their work for consideration. Finally, I would like to express my gratitude for Monica McVey, Rebecca Gabriel and the staff of Penn Publishing who provided much-appreciated help with the technical aspects of publication.

The staff and I hope that you will enjoy reading the articles in this issue of *SPICE*. It is our wish that this journal will encourage further discussion and research among our readers.

Sincerely,

Ellie Ivanova
Editor-in-Chief

The Dynamics of Self Control

Bret Wallace

Introduction

It has long been recognized that “to err is human”: people make mistakes.¹ While such a claim is inherently broad and ambiguous applying to elementary things such as mathematical calculations and spelling tests it is particularly applicable to conscious thinking and decision-making. Individuals recognize personal flaws on a daily basis, often with seemingly irrational consistency. One’s interactions are filled with phrases such as “I ate too much,” “I shouldn’t have picked at that scab,” or “I have such bad posture.” Indeed, one’s lack of self-confidence often confirms the popular expression that each person is his own biggest critic, belittling every shortcoming he can find.

In response to such individual fallacies, however, many are able to overcome them through hazy concepts such as “willpower” and “self-control.” People form better habits and learn from their perceived mistakes of the past. For instance, Benjamin Franklin, one of the most prominent founding fathers of the United States, based his life around perfecting what he deemed the thirteen essential virtues. Each week, Franklin would write down one of the virtues in a book and practice it for the week, evaluating himself at the end of the week before moving on to the next virtue and continually repeating the entire cycle for his entire life.² Given that many individuals seem to lack the ability to improve their habits and decisions on their own, they often resort to extraneous mental vehicles to aid their development. For example, many individuals undertake new years’ resolutions each January to benefit themselves by vowing to commit to a positive activity such as exercise or to swear off a negative interest such as overeating. Although everyone recognizes that the first of January is no different than the twenty-eighth of October, people are more successful at abiding by their resolutions within the “new year’s resolution” framework. Therefore, it is easy to see that when one cannot artificially create his own effective means to reaching his desired goal, one can be implemented for him.

While countless individuals have enhanced their decision-making abilities through their own devices, others have floundered in their attempts. They fail to maintain the necessary resolve and are overcome by their short-term desires at the expense of their long-term goals. Nonetheless, in spite of their continued choices, these individuals are cognizant of the benefits they desire; what they lack, however, is the ability to obtain and willingness to make sacrifices to actualize these benefits. This willingness to pay has been continually met by a willingness to accept in our market-based culture and has often generated what seem to be arbitrage profits. One frequently noted example of an arbitrage opportunity is Christmas Clubs. Parents who lack the self-restraint necessary to leave money aside in their bank accounts for Christmas presents can put the money into a separate account that earns a lower interest rate and prohibits any withdrawals until the beginning of December. The account holder’s indirect payment to the bank to have his own funds inaccessible for an agreed-upon duration is nonsensical without considering that he lacks the self-control to do so himself. Another financial example concerns the salary of teachers. Given that they only teach nine to ten months out of the year, teachers are typically offered the option of having their entire salary paid in nine equal payments over a nine-month period or twelve equal payments over a twelve-month period. Based on the notion of discounting, which says that money is more valuable the sooner it is to be received, the present value of the nine-

¹ Pope, Alexander. *An Essay on Criticism*. <http://www.quotationspage.com/quote/29593.html>.

² Public Broadcasting Service (PBS). “Benjamin Franklin: Self-Improvement.” Twin Cities Public Television 2002. http://www.pbs.org/benfranklin/l3_wit_self.html.

month payment plan is greater than the twelve-month plan. Nevertheless, the majority of teachers opt for the twelve-month plan, preferring year-round payments to help regulate their spending at the expense of foregone interest. For the entrepreneurial tycoon, this presents yet another business opportunity since there is a cooperative surplus inherent in the opportunity cost of choosing the twelve-month plan. Theoretically, one could serve as a third party who receives the teachers' salaries according to the nine-month plan and pays them out according to the twelve month plan. Since the excess of the nine-month plan's payments would be able to accumulate interest before being paid out, such a third party could offer higher payments during each of the twelve months than the twelve-month plan and still have money leftover for himself. Suffice it to say that these two examples demonstrate that society's lack of self-control has fostered the potential for profitable business ventures.

In light of this brief introduction, we are presented with a striking contrast between those who have the internal ability to improve their lives and those who do not. Upon closer inspection, one can see that those bestowed with self-control employ myriad strategies and tactics to overcome instances of temptation and impulsiveness. While these methodologies typically confer benefits, they can become so engrained as to inefficiently limit one's freedom of choice. Each of these considerations will be examined in turn.

The Notion of a Divided Self

In Adam Smith's *Wealth of Nations*, he expounds that efficient economic behavior is rationally motivated by self-interest. While many are aware of this philosophy, few know that in his *Theory of Moral Sentiments*, published seventeen years earlier, Smith claims that any behavior is determined by two internal perspectives which he called the "passions" and the "impartial spectator." According to Smith, the "passions" consists of short-term emotions, drives, and motivated feelings and is largely myopic. The "impartial spectator," on the other hand, constituted long-term goals and considerations.³ This two-self model is the underlying foundation behind the idea of self-control. Indeed, the notion of self-control is paradoxical without the view that there are two mutually exclusive interests competing to dictate one's behavior, one of which must be suppressed in favor of the other. As has been noted more recently, "the individual at any point in time is assumed to be both a farsighted planner and a myopic doer."⁴ Within this framework, the planner is patiently concerned with increasing lifetime utility while the doer impulsively seeks immediate gratification at all costs. This strikes an intuitive chord with most individuals. While we can often make prudent choices from a removed, dispassionate perspective, we nevertheless find ourselves frequently sacrificing our overarching goals in favor of temporary desires.⁵

The idea of a mentally-divided self has been supported by brain imaging technology. During the decision-making process, people appear to process gains and losses in different regions of the brain. This explains people might be surprisingly willing to forgo long-term benefits in order to gain short-term benefits. Further, decisions involving immediate hedonic pleasures have been noted to activate more emotional regions of the brain than decisions involving only delayed pleasures.⁶ Even without these empirical findings, the tendency to favor short-term benefits is must be explored further to better understand the inherent need for self-control.

³ Ashraf, Nava, Colin Camerer, and George Loewenstein. "Adam Smith, Behavioral Economist." *Journal of Economic Perspectives*, Volume 19, Number 3, Summer 2005. pg. 1.

⁴ Thaler, Richard and H. M. Shefrin. "An Economic Theory of Self-Control." *The Journal of Political Economy*, Vol. 89, No. 2, April 1981. pg. 392.

⁵ Hoch, Stephen and George Loewenstein. "Time-Inconsistent Preferences and Consumer Self-Control." *The Journal of Consumer Research*, Vol. 17, No. 4, March 1991. pg. 493.

⁶ Ashraf, Nava, Colin Camerer, and George Loewenstein. "Adam Smith, Behavioral Economist." *Journal of Economic Perspectives*, Volume 19, Number 3, Summer 2005. pgs. 3-4.

The Sources of Internal Conflict

At first glance, human decision-making seems to follow the heuristic that more is better. Given that, in theory, more choice would always leave a person at least as well off as before. In light of the two-self model, however, one can understand why there is substantial evidence showing that people make inefficient choices and thereby fail to consistently maximize expected utility. In fact, some have argued that the cognitive demands of abiding by such a theory are simply too great.⁷ With the empirical support that peoples' choices are often dictated by impulsive desires, scholars have offered three primary accounts for the sources of internal conflict.

Shifts in Reference Points and Deprivation

One of the primary explanations of internal conflict is the theory of shifting reference points. Most frequently applied to consumer behavior, many scholars have argued that an individual's increased proximity to a given product along one of a number of dimensions such as physical distance can induce an impulsive purchase. According to the theory, when a consumer becomes more attached to a given product in some manner, he partially adapts to the notion of owning or consuming the good. In the process, the consumer not only attaches positive utility to owning the product based on his existing desire, but also attaches negative utility to not purchasing the product.⁸ Thus, one's choice not to consume the good results in a sense of deprivation as well as foregone pleasure. Just as is true for physiological states such as hunger or thirst, deprivation is something we will expend energy to satisfy. To the extent that one perceives his deprivation as a persisting state, he will be motivated to purchase the product as quickly as possible so as to eliminate this need.⁹

This feeling of deprivation can be compounded when considering the value function set forth by prospect theory. As proposed by psychologists Daniel Kahneman and Amos Tversky, prospect theory holds that individuals regard losses as more serious than equivalent gains, implying a characteristic of loss aversion.¹⁰ Therefore, in the context of a reference point shift described above, prospect theory argues that one's incentive to purchase a product will be enhanced given that the failure to acquire it is viewed as a loss and this loss carries more weight than an equivalent gain. Thus, one's unwillingness to depart from a reference point can serve as a strong incentive for consumption. Studies have shown that failing to reinforce a response that has previously been reinforced, such as a shift in one's reference point, has greater incentive value than either reward or punishment.¹¹ Fully aware of this fact, many retailers employ a "bait and switch" maneuver to exploit such aversion to loss. In such a situation, customers are excited to prescribe to the notion of owning an out-of-stock product; as a result, they are induced to purchase a more expensive, substitute good in order to reinforce this excitement rather than suffer the loss of walking away empty-handed.

As was mentioned previously, there are many things that can cause a shift in one's reference point through an increase in the proximity of the good. The most recognizable dimension employed by retailers is physical proximity. Through the use of free samples, businesses attempt to increase one's

⁷ Bell, David. "Regret in The decision-making process under Uncertainty." *Operations Research*, Vol. 30, No. 5, Sep-Oct 1982. pg. 961.

⁸ Hoch, Stephen and George Loewenstein. "Time-Inconsistent Preferences and Consumer Self-Control." *The Journal of Consumer Research*, Vol. 17, No. 4, March 1991. pg. 494.

⁹ Hoch, Stephen and George Loewenstein. "Time-Inconsistent Preferences and Consumer Self-Control." *The Journal of Consumer Research*, Vol. 17, No. 4, March 1991. pg. 496.

¹⁰ Baron, Jonathan. *Thinking and Deciding*. Cambridge University Press, 2008. pg. 262.

¹¹ Hoch, Stephen and George Loewenstein. "Time-Inconsistent Preferences and Consumer Self-Control." *The Journal of Consumer Research*, Vol. 17, No. 4, March 1991. pg. 495.

feeling of deprivation, thereby making a purchase more likely and the alternative of waiting more difficult. Further, people are more likely to engage in an activity in the presence of others who are already doing so. This can help explain the peer pressure often experienced by young teenagers exposed to illicit drugs by their friends. Another frequently used dimension is temporal proximity. As will be elaborated upon later in the context of discounting, one's willingness to delay gratification in exchange for a larger reward decreases as consumption of the object becomes more imminent. Lastly, producers can increase consumer attachment to a good through social comparison. By nature, people tend to compare themselves with others who are slightly better off than they are, usually serving as a motivation to improve their relative positions. In the context of consumer purchasing decisions, individuals have a pressing need for what their more-fortunate peers already have, thereby reducing their willingness to delay consumption.¹²

Hyperbolic Discounting

In trying to utilize the power of self-control, the hardest phase is arguably the initial commitment to one's goal. It seems commonplace to repeatedly hear someone say that his diet starts on Monday, that the next drink will be his last, or that he just wants five more minutes of sleep. Often times it takes the beginning of a new year or an eye-opening visit to the doctor to help provide the initial impetus for people to effect change in their lives. Inherent in this problem appears to be a discount function that overweighs current benefits without giving proper credence to future costs. As previously discussed, we are subject to the manipulation of temporal proximity. Even if the effective cost is exactly the same, hollow benefits such as "No Down Payment" or "Nothing due for Twelve Months" entice customers to purchase things that they would not pay for upfront.¹³

The observation that individuals are disproportionately attracted to immediately available rewards has best been explained by George Ainslie's hyperbolic discounting. In a normative model, one should discount future rewards exponentially, causing them to decrease in present value at a fixed rate over time. As Ainslie hypothesizes, human beings discount future payoffs according to a hyperbolic function, thereby overvaluing smaller, sooner rewards relative to larger, later rewards.¹⁴ As a result, individuals often find themselves chasing immediate pleasures at the expense of their long-term welfare. Although one may know that it is in his best interest to give up smoking, the marginal benefit of each additional cigarette can continually trump his attempt to quit.

Fear of Regret

Few decisions in life are made with perfect certainty. On a daily basis, we choose restaurants, course schedules, and investment opportunities based on the best information available to us. Although our choices may appear maximize expected utility ex ante, we may fear that they will be inferior ex post. Knowledge of a better alternative creates a sense of loss and regret among human beings.¹⁵ Take, for example, someone who arrives at an airport well in advance of his time of departure. When making his way through the security checkpoint, the passenger will likely hesitate and momentarily deliberate about which line will move the fastest. In the end, even if he went to the line that was the shortest at the time

¹² Hoch, Stephen and George Loewenstein. "Time-Inconsistent Preferences and Consumer Self-Control." *The Journal of Consumer Research*, Vol. 17, No. 4, March 1991. pg. 497.

¹³ Strotz, R. H. "Myopia and Inconsistency in Dynamic Utility Maximization." *The Review of Economic Studies*, Vol. 23, No. 3, 1955-1956. pg. 177.

¹⁴ Ainslie, George and John Moneterosso. "Building Blocks of Self-Control: Increased Tolerance for Delay with Bundled Rewards." *Journal of the Experimental Analysis of Behavior*, Vol. 79, No. 1, Jan. 2003. pg. 37.

¹⁵ Bell, David. "Regret in Decision The decision-making process Making under Uncertainty." *Operations Research*, Vol. 30, No. 5, Sep-Oct 1982. pg. 961.

of his choosing, he will likely be irked if the woman behind him who chose a different line is able to get to her gate first, regardless of the fact that he has plenty of time to board his flight. This observation can also be explained by the loss aversion inherent in prospect theory. Specifically, people often recognize that the pain of a detriment can outweigh the pleasure of success and will choose to avoid situations with a potential for regret. Thus, this fear of remorse can translate into extreme risk aversion even in everyday actions.

Such fear of regret can help explain a seemingly contradictory choice with respect to the Allais paradox. In the Allais paradox, subjects are presented with two sets of choices that can be deduced to offer the exact same values in terms of expected utility. Intriguingly, many subjects reverse their preferred choice in favor of an option that offers a guarantee rather than a risk. While this reversal of preference for two equivalent choices violates the theory of expected utility, many note that it follows directly from the fear of regret. In the first choice What choice are we talking about—where is this example?, people will gravitate to choosing a large sum of money for sure to avoid the 1% chance that they could wind up with nothing, thereby imposing a huge sense of regret. In the second choice, however, both options are likely to deliver nothing so there is no overwhelming sense of regret should an individual walk away empty-handed.¹⁶ Overall, people are often biased towards an inefficient choice as a result of their fear of experiencing regret.

Overarching Strategies of Self-Control

Although some people are prone to engraining bad habits through continued satisfaction of temptation, many are able to overcome such myopia to their own benefit. Those who have recognized their own fallacies in decision-making are likely to attempt to develop self-control strategies designed to align their behavior with the precepts of utilitarianism. Fortunately for them, human beings can quite easily deceive themselves. Countless people set their watches and clocks a few minutes fast in order to ensure that they arrive at events punctually. These efforts to improve decision-making can be implemented with the goal of either directly reducing one's short-sighted desires or augmenting one's willpower to resist impulsivity, both of which are discussed below.

Reducing Desire

As was mentioned previously, impulsive desires stem from a shift in one's reference point brought about by an increase in proximity to a benefit. In order to combat this temporary sentiment, one can attempt to maintain a neutral reference point through avoidance, postponement and distraction, and substitution.

Avoidance - Most often, an individual is aware of the situations in which he is likely to experience an increase in desire for a previously rejected alternative. Although it may not be convenient, avoiding such situations will prevent a shift in one's reference point, thereby preventing any impulsive desire from materializing.¹⁷ Recognizing that they may be vulnerable to lose their resolve in the presence of beer, alcoholics will consciously avoid bars and parties to maintain their sobriety what about putting their name on a list? This is usually better example.

Postponement and Distraction - In order to avoid succumbing to transient desires, people often put off a choice until a future date. They choose not to make big purchases on their first trip to the store or to always consult their spouse, realizing that their seeming needs often fade when they are no longer

¹⁶ Bell, David. "Regret in Decision Making The decision-making process under Uncertainty." *Operations Research*, Vol. 30, No. 5, Sep-Oct 1982. pg. 962.

¹⁷ Hoch, Stephen and George Loewenstein. "Time-Inconsistent Preferences and Consumer Self-Control." *The Journal of Consumer Research*, Vol. 17, No. 4, March 1991. pg. 499.

physically proximate to a product.¹⁸ In addition, distraction helps reduce the frustration that can plague this period of waiting. In a study of children presented with marshmallows that they were told to wait before eating, it was found that cognitive distractions such as occupying oneself with peripheral stimuli helped increase one's ability to delay gratification.¹⁹

Substitution – Given one's excitement for a reward after a shift in his reference point, some find it effective to substitute a prudent, immediate reward for resisting a larger impulse. Dieters are known to subvert their cravings for decadent sweets with pieces of gum, mints, or healthy vegetables. While these alternatives are less preferred in the short-run, they provide sufficient satisfaction to overcome the deprivation associated with waiting.²⁰

Increasing Willpower

Rather than attempting to reduce impulsive desires, many people circumvent them altogether with strategies that augment willpower. With respect to the two-person model proposed earlier, willpower can be seen as the effort of the prudent planner to constrain the behavior of the myopic doer. While personal rules will be discussed in depth in the next section, individuals also augment willpower through the use of strategies such as bundling costs and benefits, pre-commitment, economic cost-assessment, time binding, and employing a higher authority.

Bundling of Costs and Benefits – As was noted earlier in the discussion of hyperbolic discounting, people can be driven to choose smaller, more immediate rewards at the expense of larger benefits in the future. In order to overcome this problem, many scholars have argued for the strategy of bundling costs and benefits, or imagining that today's decision will set a precedent for all similar future decisions.²¹ This mental exercise swings the power of the hyperbolic discount function in favor of committing to the future course that promises the greatest total reward. For example, if one views eating ice cream today as the first in an endless string of self-control violations that will undoubtedly lead to obesity, he will quickly decide not to indulge in his craving for a scoop of mint chocolate chip. By simplifying one's choice to abstinence or perpetual indulgence, one can subvert his myopic desires. Although it is, in a sense, irrational to artificially limit one's own choices, it can prove effective in enhancing decision-making.

Pre-commitment – Individuals employ many devices to impose constraints on or alter incentives for future behavior. This strategy is often typified by the following excerpt from Homer's *Odyssey* where Ulysses wishes to bind himself to the mast of his boat before passing by the island of the seductive Sirens: "bind me hard and fast, so that I cannot stir from the spot where you will stand me, ... and if I beg you to release me, you must tighten and add to my bonds."²² This pre-commitment subverts his desire for a particular reward.²³ While this philosophy is very effective, one must make sure not to commit to an overly rigid plan that is impossible to execute, but should rather choose the best plan among those which he is confident he can execute.²⁴

¹⁸ Hoch, Stephen and George Loewenstein. "Time-Inconsistent Preferences and Consumer Self-Control." *The Journal of Consumer Research*, Vol. 17, No. 4, March 1991. pg. 500.

¹⁹ Mischel, Harriet Nerlove and Walter Mischel. "The Development of Children's knowledge of Self-Control Strategies." *Child Development*, Vol. 54, No. 3, Jun. 1983. pg. 604.

²⁰ Hoch, Stephen and George Loewenstein. "Time-Inconsistent Preferences and Consumer Self-Control." *The Journal of Consumer Research*, Vol. 17, No. 4, March 1991. pg. 500.

²¹ Ainslie, George and John Moneterosso. "Building Blocks of Self-Control: Increased Tolerance for Delay with Bundled Rewards." *Journal of the Experimental Analysis of Behavior*, Vol. 79, No. 1, Jan. 2003. pg. 47.

²² Baron, Jonathan. *Thinking and Deciding*. Cambridge University Press, 2008. pg. 471.

²³ Hoch, Stephen and George Loewenstein. "Time-Inconsistent Preferences and Consumer Self-Control." *The Journal of Consumer Research*, Vol. 17, No. 4, March 1991. pg. 501.

²⁴ Strotz, R. H. "Myopia and Inconsistency in Dynamic Utility Maximization." *The Review of Economic Studies*, Vol. 23, No. 3, 1955-1956.

Economic Cost Assessment - If the costs are to be greater than the benefits of any action, most would not be tempted to carry out the action. But this seemingly simple calculation is part of primary pitfall in human decision-making. Often the first tactic considered by an individual, it frequently falls short. In the face of vivid, proximate desires, remote economic consequences are often rendered difficult to define.²⁵ Such lack of foresight in economic consequences has led to widespread financial despair, most recently from the “explosion” of adjustable rate mortgages in the housing market downturn.

Time Binding - Similar to distracting oneself, people find it helpful to focus on the intrinsic benefit of delaying gratification, an action embodied by the timeless aphorism, “patience is a virtue”. As Freud argued, this is essentially a use of the substitution strategy. Instead of satisfying one’s desire with a material reward, however, people are compensated by the psychic reward of patience.²⁶

Employing a Higher Authority - Unable to resist temptation on their own, some turn to a higher authority to help them achieve their goals. In practice, higher authorities can range from a peer group to a religious doctrine. In order to help ensure obedience, some religious systems prescribe fundamental values for followers to uphold. For example, the period of Lent in the Catholic Church requires followers to forego some material thing, a commitment to which they may never have had otherwise fully committed.

The Formation of Personal Rules

When the cost of persuasion is sufficiently high, an individual will likely construct personal rules in an attempt to achieve self-control. In many instances, popular rules of thumb, or heuristics, can effectively serve as means of curbing prevailing impulses. For example, struggling dieters can choose to avoid lavish restaurants and chronic gamblers can steer clear of the temptation embodied by Las Vegas.²⁷ While heuristics can help to overcome simple dilemmas, it is often necessary to establish rules that help to achieve goals or and satisfy preferences. As has been outlined by Thomas Schelling, one can formulate five distinct categories of rules to help ensure adherence to personal goals.

Primary Rules - In hoping to modify behavior and decision-making, one must begin by forming primary rules. First and foremost, these rules must be clear-cut. Not being able to distinguish between compliance and violation of a particular rule undermines the very purpose of its formation. This is why legal scholars stress the notion of “bright lines” to emphasize that there should be no ambiguity in rule formation. Specifically, these rules should be qualitative and discrete rather than quantitative and continuous. Moreover, one of the most effective rules allows for no exceptions, such as the rule that stresses to floss teeth every night rather than five times a week.

In addition to emphasizing the clarity of primary rules, many psychologists see value in writing such mandates down in a concrete fashion. In transcribing one’s rules, one is forced to attend carefully to the formulation of boundaries, exceptions, penalties, and rewards. If this suggestion is ignored, one invites the potential creation of exceptions in every circumstance in which the rule is designed to apply. Further, the ceremony and seriousness of having taken the time to write down concrete guidelines attaches an implicit moral authority in the form of physical words and thus makes violation more threatening to personal integrity.²⁸

pg. 173.

²⁵ Hoch, Stephen and George Loewenstein. “Time-Inconsistent Preferences and Consumer Self-Control.” *The Journal of Consumer Research*, Vol. 17, No. 4, March 1991. pg. 501.

²⁶ Hoch, Stephen and George Loewenstein. “Time-Inconsistent Preferences and Consumer Self-Control.” *The Journal of Consumer Research*, Vol. 17, No. 4, March 1991. pg. 502.

²⁷ Thaler, Richard and H. M. Shefrin. “An Economic Theory of Self-Control.” *The Journal of Political Economy*, Vol. 89, No. 2, April 1981. pg. 398.

²⁸ Schelling, 367.

Lastly, when primary rules concern actions rather than abstinence, one should create a piecemeal schedule rather than attempt to achieve the goal all at once. By simplifying the overall goal into a series of intermediate deadlines, one can significantly reduce the seriousness of the total task.²⁹ For example, although students are intimidated by the prospect of compiling a lengthy research paper, teachers frequently aid them in this process by decomposing the whole project into small stages such as choosing a topic, formulating a thesis, gathering sources, and writing one section at a time.

Supporting Rules - In situations where enforcement of personal rules may be problematic, it is necessary to supplement inadequate primary rules with supporting rules. Such supporting rules can be categorized as precautionary, reinforcing, disabling, or enabling.

Precautionary rules serve to keep one from violating primary rules, typically by being more restrictive in themselves. As can be seen in Judaism, certain mandates serve to “build a fence” around the sacred book of the Torah, preventing followers from breaking revered rules by restricting them from getting into a position to break them in the first place. Another example is when at a lake, parents will tell their young children simply not to go in the water as a means of keeping them from wading in too deeply.³⁰

If the command of one’s primary rule is perceived as difficult to follow in and of itself, one can utilize a reinforcing rule. Such reinforcing rules are easier to follow and typically stress performance over abstinence.³¹ For example, if a rule calls for getting up to run each morning, a reinforcing rule can be established to get out of bed when the alarm goes off. Although this supporting rule is not the primary rule itself, it can help ensure that the primary rule is followed. Once successfully out of bed, a person will find it much less disheartening to put on running shoes and head out the door.

Similar to precautionary rules, disabling rules fully preclude the possibility of violating a primary rule. Whereas the precautionary rule merely erects a barrier a safe distance away from the activity forbidden by the primary rule, the disabling rule would render the activity impossible.³² If one sought to avoid eating midnight snacks, one could establish a disabling rule to never keep anything to eat in the kitchen. Given that such measures are often drastic, one should impose them in advance while his alternative preferences are in control.

Lastly, in contrast to disabling rules, enabling rules help enforce the completion of one’s primary rule. By establishing measures that make an activity more enjoyable, such as always going to the gym with a friend, one can increase the likelihood of achieving a goal and maintain a positive incentive when initial excitement has subsided.³³

Rules that Govern the Exceptions - While adherence to personal rules is the ultimate goal, there are undoubtedly circumstances where exceptions are legitimate, even necessary. If a rule says to run three miles outside every morning, the subject should likely forego running for his own safety following an icy snowstorm. As with primary rules, rules governing exceptions should be objective, qualitative, discrete, and most importantly, determined in advance.³⁴ Establishing a boundary for exceptions at the outset helps to eliminate discretionary judgment that leads to the creation of exceptions in tempting circumstances. Indeed, many businesses fashion and advertise their products as these exceptions to personal rules, hoping to induce increased purchases. One can combat these attempts by instituting compensatory substitutes when unable to follow primary rules, such as requiring a set of pushups to be completed in lieu of running when it is below forty degrees outside.

Rules for Violations - By the same logic, rules for violations must be constructed alongside primary

²⁹ Ibid.

³⁰ Schelling, 368.

³¹ Schelling, 369.

³² Schelling, 370.

³³ Ibid.

³⁴ Schelling, 371.

rules to serve a dual purpose: precluding violation by implementing credible penalties and further ensuring that violation does not undermine the overarching goal. Human beings are likely to be tempted to abandon their prior resolve and deviate from personal goals, especially if there is no concrete consequence of such a deviation in sight. Practically speaking, however, this does not imply the need for extreme penalties. Violation may often be inevitable and one will want a sufficiently credible penalty so as to remain committed even after an initial transgression.³⁵ This same logic applies to rewards for good behavior. For example, it would likely be counterproductive to determine one's own reward for continued obedience, leading to excess indulgence.

Rules for Handling Breakdown - When a violation is committed for which no prior allowance was made, it threatens the collapse of the entire pursuit. Although this can be a powerful disincentive to prevent violation in the first place, it is nevertheless bound to occur for some. In such situations, it is helpful to remember to always regain confidence and treat partial progress as grounds for encouragement; such practices can reaffirm one's resolve to continue his pursuit of his goal.³⁶

The Benefits of Self-Control

Self-control can empower people to achieve their long-term goals. It can prevent the onset of an unfavorable static existence by helping people to make decisions that might change their mannerisms. To the extent that one is able to suppress the impulsiveness of the myopic doer in the two-self model in favor of the prudent planner, personal utility is likely to be augmented. Beyond the explicit benefits of fulfilling one's desires, there appear to be four implicit benefits from self-control.

Social Maturity - Being able to adopt cultural norms can be instrumental in the success and good-standing of an individual. While this naturally occurs in the course of one's development, some conform more rapidly than others. This enhanced progress can be related to self-control. As has been documented, the capacity to delay gratification is systematically related to indicators of cognitive competence and social maturity.³⁷ In other words, if an individual believes he can enhance his capacity for self-control, it will likely bestow external benefits upon him.

In looking at our society, this strikes an intuitive chord. Countless situations seem to prompt the aforementioned proverb "patience is a virtue": one such example is waiting for everyone to be seated before beginning dinner or leaving one's Christmas presents wrapped under the tree for the entire month of December. In addition, social customs often command people to resist immoral temptations such as adultery or shoplifting. Lastly, generally speaking, self-control can be instrumental in promoting a good work ethic. Rather than looking for an easy, quick, and inadequate solution to a complex problem, individuals with good self-control will demonstrate perseverance in pursuit of their goals. This persistence is arguably one of the most fundamental qualities of success in our society today.

Avoidance of Regret - Through strategies such as pre-commitment, people can help avoid the potential for regret. If an individual is convinced that an ex post superior alternative was not available in the first place, he will not feel any remorse. We see this in practice all the time. Many students study meticulously for every exam they take to ensure that they obtain a good grade. Following easier tests, many of these individuals realize that they spent a superfluous amount of time reviewing the material, but do not regret their decision because it stemmed from a personal rule of thumb.

Pleasure Management - On a daily basis, individuals are forced to sacrifice some pleasures in order to enhance the experience of others. Everyone engages in this behavior to a certain degree; for instance,

³⁵ Schelling, 372.

³⁶ Schelling, 373.

³⁷ Mischel, Harriet Nerlove and Walter Mischel. "The Development of Children's knowledge of Self-Control Strategies." *Child Development*, Vol. 54, No. 3, Jun. 1983. pg. 603.

some people avoid late afternoon snacks to make dinner that much more enjoyable.³⁸ This can also apply to people's finances. Although an individual may have enough discretionary income to afford a big-screen TV, he knows the money will be better utilized later as a down payment on his future home.

Conservation of Search Costs - Possessing superfluous choices is often an overwhelming position. The search costs of investigating every alternative are very high and are often outweighed by the marginal benefits between choices. Famously, Albert Einstein always wore the same outfit so that he wouldn't have to expend mental energy thinking about what to wear. Through such self-control, one can avoid the costly effort and nominal frustration of comparing a myriad of alternatives.

The Downside of Self-Control

Although self-control is, by and large, a good thing, it is not without its downside. Assuming people are able to establish rules of self-control, they may take on an authority higher than the one who created them, leaving them in place when they are no longer necessary. Thus, the benefits of self-control can arguably be opposed by several potential detriments.

Difficulty to Impose - As can be inferred from previous discussions, self-control can be difficult or costly to initiate and may prove to be of limited effectiveness. People are notorious for bending rules and inventing exceptions wherever they please. One of the most common rationales for purchasing a product is a feeling of entitlement. People convince themselves that they work hard and therefore deserve certain possessions. Compounded with the problem of social comparisons, the "everyone else has one" argument can have a powerful influence on an individual's purchase decisions. Further, with respect to the mental bundling of costs and benefits, previously grouped considerations can be easily unbundled, leading to the belief that "one won't hurt."

Engrained Rigidities - Self-control imposes rules regulating one's behavior. To the extent that one's rules become habits, they build rigidities into his decisions.³⁹ If an individual has overcome his need for a rule of self-control, such inflexibility can be inefficient. For example, displaying an extreme reluctance to consume carbohydrates after losing weight on a diet is not healthy. As Schelling noted, people in many situations would choose a different option "but for some nagging commitment that was motivated by values that at the moment have no claim or appeal."⁴⁰

These personal principles can be further reinforced through social interaction. In their commitment to a self-control rule, people often become very prideful of their causes, developing an internal complex and seeking social support. In the process, their internal resolve can be strengthened by relative comparisons to their peers. When the rule is no longer optimal, individuals are often too attached to their reputation that they feel they cannot abandon it. This problem can be exacerbated by competition. Two friends who start out supporting one another to lose weight may both be unwilling to be the first to show contentment, leading both to an unhealthy lifestyle.

Detrimental Fear of Regret - Just as a fear of regret can motivate positive abstinence, it can also condone negative activities. Take gambling for example. Most gamblers are fully cognizant that they are likely to lose money by betting. Their greater fear, however, is hearing that they would have won big at long odds when they decided not to bet. This helps explain how people can incorporate things such as playing their lucky lottery numbers into their everyday routines. They are willing to pay a small price to avoid the prospect that they would have won big when they didn't bet.⁴¹

³⁸ Hoch, Stephen and George Loewenstein. "Time-Inconsistent Preferences and Consumer Self-Control." *The Journal of Consumer Research*, Vol. 17, No. 4, March 1991. pg. 499.

³⁹ Thaler, Richard and H. M. Shefrin. "An Economic Theory of Self-Control." *The Journal of Political Economy*, Vol. 89, No. 2, April 1981. pg. 398.

⁴⁰ Schelling, Thomas. "Enforcing Rules on Oneself." *Journal of Law, Economics, and Organization*, Vol. 1, No. 2, Autumn 1985. pg. 364.

⁴¹ Bell, David. "Regret in Decision Making under Uncertainty." *Operations Research*, Vol. 30, No. 5, Sep-Oct 1982. pg. 971.

In addition, the fear of regret can lead to undesirable personal rules. In a famous example, Abraham Lincoln jumped out of his coach and lifted several young pigs out of a dangerous slough, claiming that he did it to avoid the regret he would have felt had he sat idly.⁴² While this motivation can often lead to beneficial consequences, it can be excessive and inefficient in certain circumstances.

Exploitation – If others are aware that a particular individual is good at self-control, they may exploit this fact to their advantage. For example, if one lender is particularly impatient while the other has the capacity to delay gratification, people in debt who know this will likely pay off the impatient lender first to his peer’s disadvantage. While this raises questions of normative fairness, it is largely an empirical truth. Mothers with multiple children will likely expend less effort trying to appease the child that is the most easygoing.

Annoyance – Human beings tend to be jealous creatures, envying the successes of others. For this reason, it has been observed that some people are annoyed at teetotalers, successful dieters, and habitual joggers.⁴³ While it may be unjust, many find that their success in overcoming a personal obstacle comes without the sincere support of their peers.

Implications for Paternalism

In the past decade, the United States has embraced the ideal of self-improvement. Bookstore shelves are lined with self-help books providing advice on one’s diet, exercise routines, and financial investments. The existence of such a market implies a large segment of customers in need of help achieving their goals or enhancing their lives, often through an imposed restriction of choice. Therefore, beneficial aids such as books, tapes, and peer groups are welcomed.

The imposition of this benefit from an external source logically extends to the idea of an organization’s paternalistic intervention in order to further the lives of its members. Historically, the majority of the world has been skeptical of even the slightest paternalism, looking to safeguard the liberty and freedom bestowed to individuals. In order to help understand why, it can be useful to leverage the two-self model underlying the notion of self-control. As discussed earlier, the two-self model explains an individual’s choices as being determined through a struggle between a short-sighted impulse and a long-term goal. While a calm, objective individual would typically favor his long-term goal, he may occasionally betray this rule of thumb in favor of an immediate reward. Intervention to make such a person refrain from myopic choices is usually recommended given that the alternative makes him better off. Such a recommendation, however, does not apply to paternalism because the two “selves” are no longer embodied in the same person, thus conflicting with the inherent human rule of thumb regarding distributive justice. As philosophers such as John Rawls have dully noted, even if a policy increases the total utility in society, many people object to reforms that make some citizens worse off.

This popular sentiment has had the effect of engraining seeming inefficiencies into society, most notably with respect to health care expenditures in the United States. Currently, the United States’ health care system spends an exorbitant amount of money on expensive procedures to help ailing individuals extend their lives by a relatively small amount of time.⁴⁴ Although this fact is heavily influenced by the moral hazard of the U.S. insurance system, it also stands in accordance with the theory of distributive justice. From an objective point of view, most would agree that this money could be better utilized in

⁴² Rachels, James. *The Elements of Moral Philosophy*. New York: McGraw Hill, 2003. pg. 76.

⁴³ Schelling, Thomas. “Self-Command in Practice, in Policy, and in a Theory of Rational Choice.” *The American Economic Review*, Vol. 74, No. 2, May 1984. pg. 5.

⁴⁴ Krugman, Paul and Robin Wells. “The Health Care Crisis and What to Do About It.” March 23, 2006. Online <http://www.nybooks.com/articles/18802>.

other ways. After all, in a more efficient system, more quality-adjusted life-years could be salvaged by treating younger patients in need with the same amount of money. Since this would have to come at the expense of prolonging the lives of aging individuals, however, it does not have widespread support. Abstractly, people are not willing to trade off the interests of two people to achieve a net benefit as they would be if these two “selves” were components of a single person’s self-interest. While one is allowed to pre-commit himself, he typically cannot do so on behalf of others.

Although people have historically opposed the notion of paternalism by the state, there are many situations where institutions are forced to make a choice that will affect others. For example, organizations are often required to designate a default arrangement that will prevail unless people affirmatively choose otherwise.⁴⁵ These choices can apply to things ranging from employee savings plans to the layout of food in a buffet line. While such choices are, by nature, paternalistic, they are necessary in such situations. Therefore, organizations can often bypass their concerns of being paternalistic when it cannot be avoided and focus on the better question of how to choose among paternalistic options.⁴⁶

Recognizing that paternalism is required in many circumstances, some scholars have advocated the notion of libertarian paternalism to implement optimal policy. While there are many approaches to selecting the “best” choice among a number of options, most involve some form of a cost-benefit analysis. After incorporating widespread self-control costs, it is often efficient to limit choices. People trying to resist the temptation of a piece of moist chocolate cake would prefer that it be placed all the way across the room; students looking to commit to a personal fitness program would prefer that it be incorporated into their class schedule; employees hoping to save for retirement would prefer to be automatically enrolled in a 401(k) plan.⁴⁷ Ultimately, when an organizational policy will unavoidably affect others, many people would prefer to have their choice constrained.

Beyond situations of inevitable paternalism, some scholars argue that paternalism is permissible when its benefits can be obtained without substantial inefficiency. This idea, known as asymmetric paternalism, states that paternalism should be invited if it bestows large benefits on those who make errors in judgment while imposing little or no harm upon those who are fully rational.⁴⁸ Such policies have the intention of offering a Pareto-improvement to society, benefiting impulsive decision-makers while leaving coherent individuals no worse off. Where implementation costs are low, one can already see cases of asymmetric paternalism today. For example, many states have imposed cooling-off periods of three to seven days for certain purchases to avoid high-pressure sales tactics.⁴⁹ This policy helps those who would impulsively buy a good and imposes only a nominal detriment upon more rational consumers in having to wait a few days to make their purchase. While some may argue that this benefit to short-sighted consumers comes at the expense of retailers, it can be posited that correcting these errors in judgment enhances economic efficiency to the benefit of both parties involved.⁵⁰ Such a conjecture is obviously unproven, but the possibility that a Pareto-improvement may be achieved through asymmetric paternalism merits further investigation.

Given that a high level of government involvement has been consistently denounced throughout the past century, it is still unclear if society can take positive strides in overcoming its fear of paternalism. In addition to the relevant costs and benefits of reform to be considered, one must not neglect the

⁴⁵ Thaler, Richard and Cass Sunstein. “Libertarian Paternalism.” *AEA Papers and Proceedings*, May 2003. pg. 179.

⁴⁶ Thaler, Richard and Cass Sunstein. “Libertarian Paternalism.” *AEA Papers and Proceedings*, May 2003. pg. 175.

⁴⁷ Thaler, Richard and Cass Sunstein. “Libertarian Paternalism.” *AEA Papers and Proceedings*, May 2003. pg. 177.

⁴⁸ Camerer, Colin et al. “Regulation for Conservatives: Behavioral Economics and the Case for ‘Asymmetric Paternalism.’” *University of Pennsylvania Law Review*, Vol. 151, No. 1211. pg. 1212.

⁴⁹ Hoch, Stephen and George Loewenstein. “Time-Inconsistent Preferences and Consumer Self-Control.” *The Journal of Consumer Research*, Vol. 17, No. 4, March 1991. pg. 500.

⁵⁰ Camerer, Colin et al. “Regulation for Conservatives: Behavioral Economics and the Case for ‘Asymmetric Paternalism.’” *University of Pennsylvania Law Review*, Vol. 151, No. 1211. pg. 1220.

ramifications a current policy change would have on future decisions.⁵¹ Many substantiate their fear of paternalism on the notion of a “slippery slope,” believing that any such policies are bound to multiply until their profundity has resulted in an undesirable state of the world. Meanwhile, others believe that this concern is severely unfounded and that foresight can prevent any unwanted proliferation of paternalism in society. Overall, one can be optimistic that future research will elucidate the potential effects of any institutional reform to help settle this ongoing debate.

Conclusion

As has been extensively explored, individuals often harbor internal struggles between short-term desires and long-term goals. Within such a battle, self-control can have substantial benefits such as overcoming impulsive preferences and avoiding potential regret. Why then do we not see more self-control? The answer might simply be that human beings are fickle creatures. They display inconsistencies in their tastes and prefer the flexibility to adapt to imminent opportunities.⁵² As much as some desire imposed obedience, others yearn to preserve future choice.

In the end, knowledge is power. While it is easy to recognize shortcomings, this awareness is meaningless and likely detrimental unless they can be changed. Given that achieving such change is a difficult process, it is helpful to understand the dynamics of an individual’s desires and the strategies that can effectively control them, all the while being cognizant of potential downsides. Although each individual is unique in his own right, everyone shares the ability to improve his standing through self-control.

⁵¹ Camerer, Colin et al. “Regulation for Conservatives: Behavioral Economics and the Case for ‘Asymmetric Paternalism.’” *University of Pennsylvania Law Review*, Vol. 151, No. 1211. pg. 1251.

⁵² Strotz, R. H. “Myopia and Inconsistency in Dynamic Utility Maximization.” *The Review of Economic Studies*, Vol. 23, No. 3, 1955-1956. pg. 173.

An Essay on Commerce Clause

Jae Bang

Topic: We have seen the expansion of the scope of Congressional power under the Commerce Clause starting roughly around 1937. Some are appalled by it, some think that the expansion is perfectly constitutional. Based on the cases from the midterm onwards, does the expansion make the federal power under the Commerce Clause virtually limitless as to undermine the states' sovereignty? Pay special attention to the structural limit, if there is any, inherent in the Commerce Clause and/or the "aggregate effect" argument.

In his concurring opinion for *United States v. Lopez*, Justice Clarence Thomas expressed his concern that Congress is in danger of having the power beyond its constitutional provision under the Commerce Clause. He referred to the Court's trend of reading the Commerce Clause more broadly since the New Deal, evidenced by such opinions that upheld the adoption of the aggregate effect doctrine first explicitly conceptualized in *Wickard v. Filburn*. He further stipulated that the substantial effect principle coupled with the aggregate effect doctrine would put virtually "every aspect of human existence" under the federal government control.¹ He was not alone in his apprehensiveness; among others, Chief Justice Hughes in *Shechter Poultry Corp v. United States* had previously warned the public of the danger of reading the Commerce Clause too broadly since at its face value, there seems to be no structural limit built into the Clause. However, this paper will show the Court has consistently acknowledged and remained faithful to the Clause's inherent structural limits through a careful examination of the Supreme Court opinions regarding the following: unconstitutionality of the delegation of Commerce power, the nature of the legislative procedure of Congress, and the Court's three concentric expansions of the reading of the scope of the Commerce Clause.

One of the most pervasive limits inherent in the Commerce Clause is the limitation put on the delegation of the power to regulate interstate commerce. The limit here has been a rather strict one. The Court not only struck down the delegation of *lawmaking* power to the executive regarding the regulation of interstate commerce in *Panama Refining Co. et al. v. Ryan et al.*, but, as evident in Justice Hughes' opinion for *Schechter*, it also deemed that it is unconstitutional to "delegate legislative power to the President to exercise an unfettered *discretion...*" (emphasis added).² As far as the Commerce Clause is concerned, even during the days of broader readings of the Commerce Clause (1937 - 1994), the Court remained steadfast to this limit on delegation of the Commerce power.

But it begs the question whether the exclusivity of the Commerce power imposes any actual or realizable limit on the scope of Commerce Clause. Put it another way, will not the broader readings of the Commerce Clause from 1937 onward overpower any impact of the restriction on delegation of power would impose and render the federal government powerful enough to regulate everything and anything it wants? Two Court opinions suggest otherwise. First, in *United States v. Lopez*, Justice Kennedy contended that the restrictive effect of no- power-delegation policy is an enduring one for the Commerce Clause because it clarifies "discernible lines of political accountability".³ After all, the ever expansive reading of the Commerce Clause is of concern to Justice Thomas and like-minded individuals in part due to the abstraction of who gets to exercise the power to regulate. It is not difficult to sympathize in concern if we were to take for granted that a nebulous central government official,

¹ Howard Gillman, Mark A. Graber, and Keith E. Whittington, *American Constitutionalism: Structures of Government*, Vol. 1, compiled casebook, 611.

² *Ibid*, 525.

³ *Ibid*, 609.

who is obscured from accountability, makes unguided regulatory decisions about various aspects of our lives. It is important to recognize here, then, that the Court has effectively addressed this concern by continuously sustaining that the power to exercise the interstate commerce regulatory power is exclusive to Congress and nontransferable without specified parameters. Such a limitation makes Congress, and only Congress, responsible for interstate commerce regulations and, in effect, increases the transparency and accountability. Secondly, Justice Blackmun's opinion regarding the nature of legislative process in *Garcia v. San Antonio Metropolitan Transit Authority, et al.*, shows that by reserving the Commerce power exclusively for Congress, the Constitution fully integrates the States' interest into the federal decision making process. Echoing Justice Brennan's dissenting opinion for *National League of Cities v. Usery*, Justice Blackmun specified that because the members of Congress are elected and re-elected by citizens of each State, "the principal and basic limit on the federal commerce power is that inherent in all congressional action—the built-in restraints that our system provides through state participation in federal governmental action".⁴ In other words, before exercising the "dangerous" power to regulate interstate commerce, Congress, as *representatives*, must deliberate by examining the issue at hand with respect to varying interests of each member's constituencies. Even under the most expansive reading of the Commerce Clause, in this sense, the Court has fully acknowledged that Congress is limited in exercising its regulatory powers; the Constitution has provided the citizenry with procedural safeguards against the potentially despotic, unchecked federal regulation.

The limit on the Commerce Clause discussed above appears to have one major shortcoming. Although the effect of non-delegation of Commerce power remains restrictive, the Supreme Court's decisions in *Lopez* and *United States v. Morrison* suggest that standing alone, the Commerce Clause does not *adequately* protect the citizenry from Congress' unconstitutional exercise of Commerce power. The Note from Harvard Law Review regarding the implications of *Lopez* explains why this may be the case: the political safeguards of federalism is diffused by such externalities as political compromises between many interest groups and the political actors' ties to political ideologies.⁵ Indeed, the limitation we have discussed is not of the power itself but merely of the process in which that power may be exercised. The next logical step in exploring the landscape of the Commerce Clause, then, is to examine if the Supreme Court has recognized any inherent structure within the Clause that would provide further guidance in drawing a more definitive boundary around the regulatory power itself.

The scope of the regulatory power of Congress over interstate commerce has been contested mainly because of the ambiguity laden in the Commerce Clause. In Article I, Sec. 8, the Constitution reads "The Congress shall have Power...To regulate Commerce with foreign Nations, and among the several States, and with the Indian tribes".⁶ By specifically enumerating powers that could presumably be incorporated within a broader reading of "the power to regulate commerce among the several States"—such as the power to coin money and create post offices—the Constitution imposes a vague sense of limitation, but it actively avoids defining with precision the exact scope of that power. Just how much can Congress regulate? Can it regulate only the commerce that occurs strictly between States, or any regulation that affects interstate commerce? It is obvious that the structural limit of the Commerce Clause is that it should not be used as a blank check of infinite powers and that at the end of the day, the legislation has to be done for the sake of interstate commerce. The Court has abided by this limit as evidenced by the fact that each successive concentric expansion refers directly to how far the activity regulated and interstate commerce could be in order for the regulation to be considered *for* interstate commerce.

The expansion occurred in three concentric circles where the latter one captured the aspects of the prior ones and expanded upon them. The innermost of these was the inclusion of activities

⁴ Ibid, 626.

⁵ Harvard Law Review. Note: The Lesson of Lopez: The political Dynamics of Federalism's Political Safeguards. December 2005. LexisNexis. 2.

⁶ Howard Gillman, Mark A. Graber, and Keith E. Whittington, *American Constitutionalism: Structures of Government*, Vol. 1, compiled casebook, 743.

(interstate or otherwise) that have “direct effect” on interstate commerce as can be observed in the majority opinions of *Schechter* and *Carter v. Carter Coal Co.* In *Carter*, Justice Sutherland made an explicit reference to this principle when he established that the Bituminous Coal Conservation Act of 1935 was unconstitutional because the activity meant to be regulated was neither interstate in nature nor did it directly affect interstate commerce.⁷ But another question arises: with the Court deciding to strike down the congressional regulation in both *Schechter* and *Carter*, did the direct effect principle signal any real expansion? It is a tricky question to answer. The domain of the Commerce power was expanded in so much as that the Court admitted that Congress could now regulate non-interstate activities as long as those activities *directly* affect the interstate commerce. On the other hand, opinions offer very little help in delineating at what point an intrastate commercial activity is deemed to have a direct effect on interstate commerce as opposed to an indirect one. What is telling, however, is the forcefulness of the emphasis Justice Sutherland and Hughes placed on the importance of distinguishing those activities with direct effect from those with indirect effect on interstate commerce for the “maintenance of our constitutional system.” The only reasonable conclusion we can arrive at, it seems, is that the first phase of the expansive reading of the Commerce Clause was theoretical at best. And by assuming a more literalist approach to the words of the Constitution than later expansions, the Court convincingly limited the scope of the Commerce Clause to those activities that had a plainly obvious relationship to interstate commerce.

The second expansion introduced a more actionable extension than the direct effect doctrine and let go of more – although some argue too much – of those limitations reinstated before 1937. From 1937 decisions onwards, we see the Court adopting what Justice Clarence called the “substantial effect” principle. Unlike with the direct effect principle where the close “proximity” of the activity to be regulated to interstate commerce was of utmost concern, the substantial effect principle provides no explicit guideline as to how intimately the to-be-regulated activity needs to be related to the interstate commerce. Instead, as is evident in Justice Hughes’ opinion in *National Labor Relations Board v. Jones & Laughlin Steel Corp.* the validity of regulation appears to be wholly dependent on the size of the impact that the activity to be regulated will have on interstate Commerce.⁸ Furthermore, whereas the ambiguity of “direct effect” worked to limit Congress, the ambiguity of what constitutes “substantial” worked to enlarge the scope of the Commerce Clause to the point where, at its face value, Congress could assume all sorts of power under the pretext of the Commerce Clause. The majority opinion of the landmark case of *US v. Darby* only aggravates the growing apprehension. Here, Justice Stone went as far as to say that

The motive and purpose of a regulation of interstate commerce are matters for the legislative judgment upon the exercise of which the Constitution places no restriction and over which the courts are given no control...The power of Congress over interstate commerce is not confined to the regulation of commerce among the states. It extends to those activities intrastate which *so* affect interstate commerce or the exercise of the power of Congress over it as to make regulation of them appropriate means to the attainment of a legitimate *end*, the exercise of the granted power of Congress to regulate interstate commerce... (emphasis added)⁹

In effect, the Court declared itself unfit to pass judgment about legislations that have ulterior motives or purposes as long as their main objectives are to substantively protect and/or promote

⁷ Ibid, 466-467.

⁸ Ibid, 470.

⁹ Ibid, 472.

interstate commerce. The critics of the substantial effect principle pointed out that the Court's deference to Congress signifies an alarming expansion in Commerce Clause because the principle, as so understood, does not specify whether the activities even have to be commercial in nature to be legitimately regulated by Congress.¹⁰ Such a broad interpretation of the Commerce Clause, they argue, is tantamount to passively granting extra powers to Congress since the legislative branch is now equipped with the means with which to usurp of power once thought to be exclusively reserved for the States.

A further examination, however, reveals that the second expansion was consistently restricted by an important practical limit recognized in the first expansion. Namely, just as it holds true for the direct effect principle, the caveat of substantial effect principle is that the overarching objective of regulating an activity has to be *for* the protection and advancement of the interstate commerce.¹¹ Furthermore, whereas the direct effect principle observed the structural limit of the Commerce Clause by mandating physical proximity between the regulated activity and interstate commerce, the substantial effect principle observed the limit by mandating sufficient (measured in magnitude) effect-relationship. As John Alexander notes, the magnitude requirement was observed strictly.¹² Take for instance *Lopez* and *Morrison*. In both cases, justices reasoned that because the gun-control or discrimination-protection had "attenuated" effects on interstate commerce at best, legislations used the regulatory power over interstate commerce as a mere means to addressing the central concern – the police power. The limit, again, imposed a very realizable restriction on congressional action.

As Anthony Varona and Kevin Layton suggested in their symposium piece, however, the method of determining whether the magnitude of effect is sufficient seems to be too ambiguous to survive anything other than the infamous "I know it when I see it" test.¹³ Would it not be just as easy to argue that the *Heart of Atlanta Hotel* ultimately used to legally protect African Americans from the segregation as opposed to serving the interest of interstate commerce? It is important to note here how John Alexander further qualified the aggregate effect principle. He argued that faithful to the limitation the Court previously recognized, the Court seems to utilize a minimal proximity test in conjunction to the magnitude test to determine whether the regulation is for the benefit of interstate commerce or for something else entirely. For instance, Justice Rehnquist's criterion stated that all of the regulated activities have to be at least "economic in nature".¹⁴ By restricting the congressional regulatory power of non-commercial activities to those that are at least economic in nature, Justice Rehnquist effectively excluded the inclusion of powers that were traditionally reserved for the States (i.e. internal police power over criminal matters). Again, consistent with its precedents, the Court strictly observed the structural limits of the Commerce Clause.

The last of these expansions was the adoption of the aggregate effect principle, first championed in *Wickard*. Whereas the substantial effect principle was implied to apply to an activity that, standing alone, could substantially impact interstate commerce, the aggregate effect doctrine allows for the regulation of activities (commercial or otherwise) that may be insignificant by itself as long as that activity, if committed by many, can presumably affect interstate commerce. As duly noted in Justice Steven's opinion for *Raich*, this principle is controversial for two main reasons. First, it explicitly expands the domain of Commerce Clause to those activities like growing your own wheat that are not only private but that also

¹⁰ Ibid, 615 - 616.

¹¹ The direct effect's emphasis on the "proximity" of the regulated activity and interstate commerce is a stricter interpretation of what it means to regulate activities *for the sake of* interstate commerce.

¹² John P. Alexander. "In Your FACE": Congressional Encroachment Under the Commerce Clause. *Georgetown Journal of Law & Public Policy*. Winter 2007. LexisNexis. 3.

¹³ Anthony Varona and Kevin Layton. Symposium: Anchoring Justice: The Constitutionality of the Local Law Enforcement Enhancement Act in *United States v. Morrison's* Shifting Seas. *Stanford Law & Policy Review*. Winter 2001. LexisNexis. 4.

¹⁴ Howard Gillman, Mark A. Graber, and Keith E. Whittington, *American Constitutionalism: Structures of Government*, Vol. 1, compiled casebook, 616.

have “trivial” effect—cannot be deemed to have substantial economic impact—on the market by itself.¹⁵ ¹⁶ Secondly, under this principle, the Court does not need to *determine* that non-commercial activities under regulation will have a substantial effect on the interstate commerce in aggregation but simply that there exist a “rational basis” for thinking so. Frankly, this is the broadest reading of the Commerce Clause thus examined; it is not at all difficult to sympathize with critics who take this principle to imply that most, if not all, of our daily activities are within the congressional power to regulate since in aggregate, anything can be presumed to have a notable impact on the interstate commerce.¹⁷

Justice Stevens, however, was quick to deny such a “sweeping implication” and contended that just as it was with the substantial effect principle, the aggregate effect principle limits its applicability to those that have reasonable ties to interstate commerce.¹⁸ He specified what constitutes this “reasonable tie” in his opinion for *Raich*: the regulated activity, in aggregate, has to impose direct economic consequences on interstate commerce. Specifically, he reasoned that the Controlled Substance Act in question in *Raich* was “quintessentially economic”—and hence proved its tie to interstate commerce—since it regulated an activity that in aggregate “competed” with the heavily-regulated interstate marijuana market. Applied to *Filburn*, farmer Filburn’s action was “economic” in a sense that his home-grown wheat, together with those grown by other farmers following Filburn’s example, competed with the wheat market the price of which Agricultural Adjustment Act of 1938 was trying to control. Moreover, the “reasonable-tie” limit provides an important guideline for understanding the aggregate principle since it can, consistent to the precedent, curb Congress from attempting to regulate whatever private activities it wishes such as sleeping. In particular, even in aggregate, whether people sleep one more hour or less cannot be reasonably argued to directly compete with some other regulatory policy on interstate commerce. But perhaps as a way of quelling further worries, the Court has also implicitly adopted the view that the activity, once conceptualized in aggregate, has to impose direct, reasonable impact on the interstate commerce.¹⁹ Such an implication is reflected in Justice Scalia’s concurring opinion to *Raich*. He stated that unlike in *Lopez*, the regulation of private cultivation or possession of marijuana is “necessary and proper for the regulation of interstate commerce” as *failure to do so* will seriously jeopardize “the legitimate end of eradicating Schedule I substances from interstate commerce”. In other words, the relationship between the activities to be regulated (imagined in aggregate) and interstate commerce has to be direct in so much as failure to regulate such an activity will *harm* interstate commerce. As it has been for more restrictive circles of expansion, the Court again established the necessity to prove the strength of the tie between the activity Congress enacted to regulate and interstate commerce in order to safeguard the States from the federal government’s despotic usurpation of power.

As can be observed in the close-examination of the discrete expansions of the reading of the Commerce Clause, at no point did the Court attempt to endow Congress, under the pretext of Commerce Clause, the power it was not originally guaranteed by the Constitution. In each concentric expansion, we see the Court adopting more liberal interpretations of the extent to which Congress can regulate activities *in order to* protect and advance interstate commerce. Yet, from the most restrictive reading—regulation of interstate activities and intrastate commercial activities that have direct effect on the interstate commerce—

¹⁵ Ibid, 613.

¹⁶ Activity is private in a sense that it was never meant to enter into commerce (buying, selling, distributing, etc.)

¹⁷ Martin D. Carcier. Gonzalez v. Raich: Congressional Tyranny and Irreverence in the War on Drugs. University of Pennsylvania Journal of Constitutional law. September 2007. LexisNexis. 8.

¹⁸ Howard Gillman, Mark A. Graber, and Keith E. Whittington, *American Constitutionalism: Structures of Government*, Vol. 1, compiled casebook, 614.

¹⁹ Aelx Kreit. Why is Congress Still Regulating Noncommercial Activity? Harvard journal of Law & Public Policy. Fall 2004. LexisNexis. 9-10.

²⁰ Howard Gillman, Mark A. Graber, and Keith E. Whittington, *American Constitutionalism: Structures of Government*, Vol. 1, compiled casebook, 614.

-to the most liberal reading—regulation of private, non-commercial activities that in aggregate can be reasonably assumed to have a substantive effect on interstate commerce—the Court paid its dues to the limit that lies at the heart of the Commerce Clause. It has readily recognized that the Commerce Clause was not a blank check under which Congress can enact laws that regulated activities such as those that are strictly criminal in nature. It also has consistently emphasized that the relationship between the regulated activity and interstate commerce has to be substantial at the minimum. Furthermore, as noted by Justice Jackson in *Wickard*, the Court trusted that the effective restraints on the exercise of the Commerce Clause will also be instituted by the political process inherent in the congressional deliberation and legislation. This paper does not deny that the attitude toward the Commerce Clause has evolved since 1935. Rather, it questions whether worries prominently expressed by Justice Thomas are justified and whether the Court's precedents show certain stability in its interpretation of the Clause. We have seen that there does exist a connecting thread; the Court has continuously held that Congress may regulate only interstate commerce and those activities that strongly affected interstate commerce. As far as we can see, there is no indication that the Court has ever been willing to entirely compromise the State sovereignty for the benefit of creating the ever-more powerful central government.

Human Longevity and Savings: A U.S. Case Study

Benjamin S. Forman

Preface

The fundamental question of “How long will we live?” has been asked since the beginning of recorded human history. Still today, biologists, demographers, statisticians, geneticists and economists alike grapple with this basic inquiry of human longevity. Religion has even addressed the issue, stating in Genesis 6:3 that people could not live longer than 120 years – “And the Lord said, ‘My spirit shall not strive with man forever, for he is indeed flesh; yet his days shall be one hundred and twenty years.’”

Amidst all hypotheses and beliefs regarding human longevity, the empirical evidence speaks for itself: humans are living to older ages than ever before. Over the past century, global life expectancy has increased from thirty-two years in 1900 to sixty-seven years today¹. The number of centenarians, people living over the age of 100, has doubled each decade since 1950 in industrialized countries².

This trend does not appear to be a past phenomenon; in fact, mortality rates continue to decline unimpeded at old ages. Regardless of the breadth of aging research, no consensus has been reached as to the future trajectory of human life expectancy or to the limitations of human longevity. If anything, mankind has been left with more questions than answers.

The consequences of the global ageing trend have already penetrated social, political, and economic arenas. Socially, the family structure has been altered and there is an increased demand for geriatric services and products. In politics, elected officials have been forced to address issues stressed by the elderly population. From an economic standpoint, governments have readdressed public policies and long term pension plans. Individuals, as well, have had tougher decisions to make with regard to savings and retirement.

This paper is divided into two main parts. The first part outlines the three main scientific camps with regard to the controversial issue of the future of human longevity. The second part of the paper focuses on a single economic consequence of increasing longevity, namely the savings decisions of individuals. Finally, it provides a commentary on the confluence of longevity increases and decreasing savings rates in the United States.

Introduction

The modern era has brought with it an unprecedented rise in human longevity. After fluctuating between twenty and thirty-five years since the Neolithic Age, human life expectancy has experienced a dramatic increase over the past two centuries. Due to improvements in public health and welfare referred to as the “health transition”, life expectancy stood at sixty-seven years at the turn of the 21st century. Certain developed countries have even achieved life expectancies above eighty years, with Japan ranked highest at eighty-two³. This striking increase in longevity has already produced a tangible demographic change – the number of people aged 60 years or over has increased from 200 million in 1950 to 700 million in 2006⁴.

But to what extent will this trend continue? Is the dramatic increase in life expectancy indicative

¹ James C. Riley, “Estimates of Regional and Global Life Expectancy, 1800-2001” *Population and Development Review* 31 (2005), 538.

² Kevin G. Kinsella, “Future Longevity–Demographic Concerns and Consequences,” *American Geriatrics Society* 53 (2005), 301.

³ CIA Factbook, 2007, 24 Mar. 2008.

⁴ World Population Ageing, United Nations Department of Economics and Social Affairs, Population Division, (2007), xvii

of a long term trend or merely a past aberration? Some believe that linear extrapolations of mortality decreases are the best method of forecasting global life expectancy. Such approaches project people to live until 100 years or more within the close of the 21st century⁵. Others, however, take an even more bullish approach—predicting that human life expectancy will increase exponentially due to the reversing of aging in the wake of unprecedented scientific and genomic advances. Aubrey de Grey, the leader of Strategies for Engineered Negligible Senescence (SENS) at Oxford, has boldly stated that through reversing and curing the process of aging, “the first person to live to 1,000 might be 60 already”⁶. Many, however, dismiss these claims as speculative science. They claim that it is illogical to assume the future will be like the past, and even more nonsensical to project four-digit life expectancies. This contingency of scientists refers to themselves as “realists”—positing that the upper limit to mean human longevity is age eighty-five.

While the scientific community remains divided as to the rate of future increases in human longevity, they agree that the prior increases and potential further improvements will profoundly affect the economic sphere⁷. The extension of lifespan influences an individual’s savings-consumption decision, investment in education, and retirement pensions. It poses serious issues to government health care plans, such as the U.S. Social Security System and Medicare. Many speculate that the aging phenomenon is inflationary since a larger portion of the population is not contributing to the economy but still demanding goods. Also, as the average lifespan increases, so does the standard deviation, putting more pressure on the individual to make estimations regarding their own length of life.⁸ While the economic effects of increasing longevity are broad, this paper intends to examine savings through the lens of increasing lifespan.

History

In order to conjecture about the future path of human life expectancy, it is necessary to understand its past. For most of human history, life expectancy remained fairly constant. It is believed that global life expectancy fluctuated between twenty and thirty-five years since the Neolithic Revolution, and at the turn of the 19th century, was likely below twenty-five years¹⁰. Many women died in childbirth and nearly half of children died before the age of ten.

However, at the turn of the 19th century, a steady rise in life expectancy began to take place in Northwestern Europe. University of Indiana’s James C. Riley documents this dramatic change in his book “Rising Life Expectancy: A Global History”, dubbing it the “health transition”. The preliminary engines of longer life, according to Riley, were products of the increased standard of living brought about by the industrial revolution, such as better nutrition standards and improvements in housing and clothing. During the latter part of the 19th century, additional increases to life expectancy were achieved through sanitary projects. The drivers of increased longevity in the 20th century were economic development, public health, and biomedicine¹¹.

By 1850, the changes that were taking place in Northwestern Europe were also occurring in Australia, New Zealand, and Canada. By the turn of the 20th century, Japan, Eastern Europe, the United States, and some countries of Latin America joined in. In the past half century, other developing economies,

⁵ Jim Oeppen & James W. Vaupel, “Broken Limits to Life Expectancy,” *Science* 296 (2002), 373.

⁶ Aubrey De Grey, “We Will Be Able to Live to 1,000,” *BBC News*, 3 December 2004.

⁷ World Population Ageing Executive Summary 2007, xxvi.

⁸ Assumes that members of the elderly population contribute to the demand rather than supply of economic goods and services

⁹ This assumes that future gains to life expectancy are primarily due to reductions in senescent mortality rather than infant and background mortality.

¹⁰ James C. Riley, *Rising Life Expectancy: a Global History*, (Cambridge: Cambridge UP, 2001), 33.

¹¹ Riley, 8.

such as those of India and China, began their health transitions.

The numbers are staggering. Despite the dearth of life expectancy data in early history, it is believed that global life expectancy has increased more than two-fold in the past two centuries. A study by a Dutch Demographer named John Bongaarts examined a cohort of 16 high income countries with life expectancy records traced back until 1850. The data showed a steady upward trend from 40-45 years of age up to 75-80¹². The only interruptions to this trend were the global influenza pandemic and the two world wars.

High-income countries are not the only ones who have rode the longevity wave. In fact, every continent on the globe has experienced life expectancy increases since 1950¹³. According to a U.N. report, life expectancy in a cohort of “least developed” countries increased from roughly 35 in 1950 to around 53. In the same study, a broader-defined set of “lesser developed” countries experienced similar increases from 40 years to around 62¹⁴. An interesting observation generated by the report is that the gap in life expectancy between the first and last ranked country decreased from 31 years to 25 years over the past half century. However, on a broader level, studies have concluded that there is no overall convergence trend between low and high life expectancy countries.

In light of this finding, it is prudent to examine the leaders rather than the laggards when examining the future course of life expectancy. In other words, one can assume that a country such as Belize, with a slightly above average life expectancy, will eventually achieve the gains that the leading countries have already experienced. In assessing the future of global life expectancy, we draw our focus to the countries that have achieved remarkable advances in life expectancy, such as Japan, the United States, and the countries of Western Europe. The gains in life expectancy that these leading countries have garnered from advancements in economic development and public health will likely soon be realized by the less advantaged countries. This train of thought rests on the notion that all people of the world, regardless of ethnicity or gender, are endowed with an equal quantity of health capital. Therefore, if Singaporean women achieve a life expectancy of 90 years, then we can logically deduce it is possible, at a point in time, for global life expectancy to achieve that mark. The worldwide cohort with the highest life expectancy is deemed the “best practice life expectancy”—a metric commonplace in demographic analysis and a centerpiece in many studies regarding future life expectancy.

Three Schools of Thought on the Future of Global Life Expectancy

Projecting the future course of human longevity is no easy task. Economists, biologists, politicians, doctors, statisticians, and demographers have produced a magnitude of literature trying to answer the straightforward questions of: How long will humans live in the year 2100? What about the year 2300? Is there a maximum human life span? The answers to these questions have produced anything but a consensus. In fact, academics within the same discipline have come up with completely different answers.

To simplify things, the prevailing views of future human longevity can essentially be placed into three schools of thought: the realists, the optimists, and the futurists.

The Realist Camp: A Peak at 85

In a 1980 article in the *New England Journal of Medicine*, James Fries made the bold prediction that

¹² John Bongaarts, “How Long Will We Live?” *Population and Development Review*, 32 (2006), 605.

¹³ World Population Prospects: the 1998 Revision, United Nations Secretariat, New York: Department of Economic and Social Affairs, Population Division, (1988), 546-573.

¹⁴ World Population Prospects: the 2006 Revision, United Nations Secretariat, New York: Department of Economic and Social Affairs, Population Division, (2007), 1-21.

human life expectancy had a natural limit at 85 years with a standard deviation of 7 years¹⁵. The Fries' Hypothesis, as it came to be known, is the fulcrum of what is now known as the Realist camp. Realists believe that, in the absence of medical interventions, average human life expectancy is unlikely to exceed 85 years. This theory is rooted in both biological and statistical underpinnings.

The origin of Fries work can be traced back to Aristotle. The Aristotelian view on human life span was incredibly simplistic, yet it was widely accepted for over two millennia and still has a following today. Aristotle believed that there were two forms of death—premature and senescent. Premature death was the equivalent of extinguishing a fire with a bucket of water; senescent death consisted of burning all the wood until it extinguished on its own. Aristotle maintained that each individual was born with a fixed amount of “fuel” or wood, and therefore had a finite limit to their lifespan.

Today, Dr. Carnes and Olshansky, two prominent realist colleagues, have produced copious amounts of literature to support the realist camp. As students of medicine, they take a scientific angle to aging—contending that a longevity gene is not naturally selected for because it falls beyond the reproductive ages¹⁶. As a result, harmful genes are able to operate at old ages without any Darwinian opposition¹⁷. In other words, realists believe that investing physiological capital into the body beyond the reproductive years and those years needed to nurture offspring is an unnecessary outlay¹⁸. According to this view, the longevity increases seen over the past century do not have evolutionary sources, but are due to exogenous causes such as improvements in public medicine. Likewise, any further increases in life expectancy beyond the age of 85 must be a result of further decreases in infant mortality and other premature deaths. Realists rest on the notion that past improvements in life expectancy were shocks, rather than engines, and are unrepeatable by nature. For instance, the reduction in mortality due to the creation of the polio vaccine was a one-time shock, rather than a continuous source of improvement.

Nevertheless, the Realists acknowledge that the modification of the human genome by artificial means or reversing the process of aging could provide a way to extend life expectancy beyond 85. They also recognize that advances in nanotechnology and other sciences could provide a breakthrough in longevity. However, given mankind's current ability and willingness to manipulate senescent genes, life expectancy's peak will not exceed 85 years.

Why the number 85? The study conducted by Olshansky and Carnes demonstrated that in order to reach this target life expectancy, death rates would have to be reduced by 55% from 1985 levels—a reduction equivalent to the elimination of cancer and heart disease. Furthermore, this study concluded that, with infant mortality constant at 5%, the elimination of all deaths before the age of 85 would be required in order for humans to achieve a life expectancy of 100 years. In other words, no deaths under the age of 85 could occur due to car accidents, homicides, cancer, obesity, HIV/AIDS, and other prominent mortality causes in order for humans to live to an average age of 100¹⁹.

In addition to contemplating a maximum average human life span, realists also take a stance on the limit to human life. Olshansky and Carnes liken human longevity limits to world record times for the one-mile run. Times that were beat by several seconds in the past are now surpassed by only fractions of a second. They claim that “a naïve extrapolation model...leads to the prediction that eventually the race will be completed the very moment the starting gun fires”²⁰. In other words, realists claim that there are practical constraints on how long humans can live. In their words, “while bodies are not designed to fail,

15 James F. Fries, “Aging, Natural Death, and the Compression of Morbidity,” *New England Journal of Medicine*, 303 (1980), 130.

16 Bruce A. Carnes and S. Jay Olshansky, “A Realist View of Aging, Mortality, and Future Longevity,” *Population and Development Review*, 33 (2007), 371.

17 John R. Wilmoth, “The Future of Human Longevity: a Demographer's Perspective,” *Science*, 280 (1998), 396.

18 T.b.l. Kirkwood, and R. Holliday, “The Evolution of Ageing and Longevity,” *Proceedings of the Royal Society of London*, 205 (1979), 535.

19 Kinsella, 300.

20 Olshansky and Carnes, 374.

neither are they designed for extended operation”²¹. Because bodies are not built for extended operation, life span is finite and subject to a warranty.

The Optimists’ Take: 100 and Beyond

The optimist camp consists of those who believe that life expectancy will exceed the realist’s peak at 85 years but will not experience an exponential rise, as the futurists claim. Optimists claim that life expectancy will continue to improve past the age of 85, and perhaps into the early or mid 100’s towards the end of the century. This view is based on statistical approaches and sociological explanations.

One of the most prominent longevity optimists is demographer James Vaupel. He argues that a limit to human life expectancy either does not exist or is out of the realm of current conceivability based on past empirical data. He points out that many published historical estimates of life expectancy limits have been surpassed. In 1928, the statistician of the Metropolitan Life Insurance Company, Louis Dublin, predicted a limit of 64.75 years to human life expectancy. Unbeknownst to him, this barrier had already been broken by non-Maori New Zealand women. More recently, Olshanky’s 1990 prediction of a life expectancy limit of 35 years at 50 years of age was broken six years later by Japanese females²². These are two of many instances of experts publishing life expectancy limits that later turn out to be broken. In fact, the U.N. Population Council has continuously made upward revisions to life expectancy limits from the 1950’s through 1980, at which point they abandoned the practice of imposing limits²³. Furthermore, the US National Research Council recently concluded that any limits to life expectancy are too far above the current level to impose ceilings in future projections.

In addition to scrutinizing past predictions, Vaupel’s argument also draws upon linear extrapolations of historic life expectancy data. He uses a metric deemed “best-practice life expectancy”— a measure of the highest gender and country-defined cohort globally. For instance, in 2007, the best-practice life expectancy cohort was Andorran females at 86.62 years. Vaupel notices an astonishingly linear trend in best-practice life expectancy. The data shows that best-practice life expectancy has risen steadily for the past 160 years at a pace of approximately 3 months per year ($r^2=.992$). In 1840, Swedish women were the longest-living cohort at 45 years; in 2002, Japanese women were living to a global high of 85. The regression line shows a slope of .243, namely an increase of a quarter-year per year, or two and a half years per decade. The best-practice life expectancy line happens to be equivalent to the record-holding female life expectancy country line due to the gap between female and male life expectancies.²⁴ However, it is noteworthy that record life expectancy for men has also risen linearly, albeit at a slightly slower rate of .222 years per year.

The value of these findings is incredibly significant. According to Vaupel, it suggests that “reductions in mortality should not be seen as a disconnected sequence of unrepeatable revolutions but rather as a regular stream of continuous progress”²⁵. This finding runs precisely counter to the realist claim. Moreover, the gap between a cohort’s life expectancy and best-practice life expectancy provides “a measure of how much better a country might do at current states of knowledge and demonstrated practice”²⁶. As mentioned earlier, there is no reason to assume that any nationality or gender is innately endowed with more health capital than another. As a result, the laggards should be able to experience the mortality decreases that come along with improvements in income, nutrition, education, medicine

21 Olshanky and Carnes, 374.

22 Oeppen and Vaupel, 1031.

23 Bongaarts, 607.

24 Throughout history, females have had longer life expectancies than males

25 Oeppen and Vaupel, 1029.

26 Oeppen and Vaupel, 1029.

and the like. Extrapolations of the data produce a scenario in which record life expectancy would reach 100 years in six decades.

The realist and optimist camps often engage in dialogue on specific issues within the longevity debate. For instance, the realists claim that gains in global life expectancy have leveled off in recent decades relative to the first half of the 20th century. Wilmoth and other optimists acknowledge that life expectancy has leveled off in the past century, but that death rates have, in fact, declined at an accelerating rate. In other words, as Wilmoth points out, it is possible for life expectancy to increase at a decelerating rate, while decreases in mortality remain constant or even accelerate. Life expectancy is, by definition, “the average age at death for any group of individuals whose lifetime mortality experience mirrors that of the period in question”²⁷. As a result, the decline in infant mortality at the beginning of the century had a greater impact on life expectancy than the decrease in old-age mortality is having today. This is for the simple reason that saving an infant, who may have lived to seventy-five, produces far greater gains in life expectancy than an elderly member surviving to eighty instead of seventy-five. In other words, diminishing gains in life expectancy doesn’t mean that longevity increases are coming to a halt.

Vaupel and other scholars in the optimist camp point to the fact that age-specific death rates at the oldest ages have exhibited steady declines and show no signs of leveling off. This trend is undetectable in life expectancy data, but it has become apparent through several studies examining death rates of the elderly. These claims run counter to several primary realist tenets. One centerpiece of the realist camp is the Gompertz curve, which describes an exponential increase in death rates with age. However, recent studies have invalidated the Gompertz curve due to the dramatic increases in survival of the elderly. Another long standing realist claim made by Fries (1980) suggested that: “the number of very old persons will not increase”. In spite of this, Kannisto looked at demographic data from 27 developed countries and discovered that the number of centenarians has roughly doubled every decade since 1950. Further, the population above age 80 has more than tripled in the forty years following 1950, growth disproportionate to that of the overall population.

Numerical analysis shows that average death rates in these 27 countries at ages above 80 have declined at a rate of 1 to 2 percent a year for females, and .5 to 1.5 percent for males since 1960. Kannisto points out that “if mortality among the oldest-old were approaching biological or practical limits, then countries that have the lowest death rates would be closer than other countries to such limits”²⁸. However, rates of mortality improvement show only a weak correlation to levels of mortality. Since half of all female and a third of all male deaths in developed countries occur after the age of 80, a reduction in mortality at older ages is crucial in determining the future trajectory of life expectancy²⁹. Another Vaupel study has shown that, at very old-ages, human mortality decelerates. According to a study of 287 million people, death rates seemed to follow a quadratic trajectory³⁰. After age 80, death rates increase at a decelerating rate until the age 110 at which point their decline is accelerated.

Due to decreased old age mortality, the number of centenarians is growing rapidly. A study by Vaupel and one of his colleagues indicated that the number of centenarians has doubled globally each decade since 1950, and grew at a staggering 7% annual rate between 1950 and 1980³¹. According to the Census Bureau, centenarians constitute the fastest growing segment of the U.S. population. Also, it is

²⁷ Wilmoth, 396.

²⁸ Vaino Kannisto, Jens Lauritsen, Roger A. Thatcher, and James W. Vaupel, “Reductions in Mortality At Advanced Ages: Several Decades of Evidence From 27 Countries,” *Population and Development Review*, 20 (1994), 802.

²⁹ Kannisto et al, 793.

³⁰ James W. Vaupel, James R. Carey, Kaare Christensen, Thomas E. Johnson, Anatoli I. Yashin, Niels V. Holm, Ivan A. Iachine, Vaino Kannisto, Aziz A. Khazaeli, Pablo Liedo, Valter D. Longo, Yi Zeng, Kenneth G. Manton, and James W. Curtsinger, “Biodemographic Trajectories of Longevity,” *Science*, 280 (1998), 856.

³¹ Jim Oeppen and James Vaupel, “Broken Limits to Life Expectancy,” *Science* 296 (2002), 1029-1031.

predicted that the chances of becoming a centenarian for those born in the baby boomer generation between 1946 and 1964 is one in 26, an estimated increase from 1 in 20 million at the beginning of the 19th century³².

Optimist scholars argue that if life expectancy in developed countries was approaching a maximum, then the pace of improvement in developed countries should be lower than that of lesser-developed countries. However, this is not the case. According to Riley, the gap between a cohort of “high life expectancy countries” and “lowest life expectancy countries” has remained virtually constant since 1900, barely increasing from 24.6 to 26.3 years³³. Most statistical studies examining this trend cannot find any evidence of a convergence in life expectancies worldwide.

In sharp contrast from the statistical approaches of Vaupel, Wilmoth, Kannisto, and other optimists, Nobel Laureate Robert Fogel attempts to explain the dramatic rise in human longevity through his Theory of Technophysio Evolution. He attributes past mortality declines to the unprecedented level of control that humans have over their environment. Over the past 300 years, humans have been able to “increase [their] average body size by over 50 percent, to increase [their] average longevity by more than 100 percent, and to greatly improve the robustness and capacity of vital organ systems”³⁴. Fogel attributes this increase to the synergies between technological and physiological improvement. Human physiological capital, he claims, is not fixed—in fact, it’s mutable. He argues that health capital will continue to increase as humans gain further control over their environment.

Optimists also have a biological response to the realist claim that human longevity is not an evolutionarily stable strategy. Judge and Carey claim that grandparents providing monetary support across generations can help improve the survival prospects of their kin. They state: “Increased per capita investment in offspring decreases juvenile mortality, increases the health and well-being of offspring, and thus improves adult health and survival.”³⁵ In other words, if intergenerational transfers from older to younger generations decrease mortality, the result is a natural selection for longevity. Transfers of resources, knowledge, and skills also flow from younger to older generations. For example, elderly moving back with their children has been a popular trend over the past couple decades. Overall, Judge and Carey suggest that a symbiotic relationship between generations may increase the survival prospects of all parties involved.

Up to this point, the studies discussed have taken a holistic approach to examining life expectancy. John Bongaarts, in his paper “How Long Will We Live?” seeks to decompose past trends in increasing life expectancy. He separates all causes of death into three categories: juvenile mortality, background mortality, and senescent mortality. Juvenile mortality, denoted as “J”, includes all those causes of death under the age of 25. Background mortality, denoted as “B”, includes all those causes of death that are independent of age (i.e. accidents, infectious diseases, etc.). Senescent mortality includes all the other causes of death that come along with the deterioration of biological processes at old ages (i.e. heart disease, cancer, etc.).

Bongaarts aims to isolate LE (life expectancy), LE_J (life expectancy assuming no deaths before age 25), and LE_B (life expectancy in which senescent mortality is the only cause of death). The effect of juvenile mortality (J) on life expectancy can be calculated as the difference between LE_J and LE. Likewise, the effect of background mortality (B) can be derived by subtracting LE_J from LE_B. The resultant equation allows us to estimate LE_B, life expectancy without any juvenile or background mortality.

³² The Future of Human Life Expectancy: Have We Reached the Ceiling or is the Sky the Limit?, The National Institute on Aging. Washington D.C.: Population Reference Bureau, (2006), 2.

³³ James C. Riley, “Estimates of Regional and Global Life Expectancy, 1800-2001,” *Population and Development Review*, 31 (2005), 541.

³⁴ Robert W. Fogel, “Changes in the Process of Aging During the Twentieth Century: Findings and Procedures of the Early Indicators Project,” *National Bureau of Economic Research*, (2003), 24.

³⁵ James R. Carey and Debra S. Judge, “Life Span Extension in Humans is Self-Reinforcing: a General Theory of Longevity,” *Population and Development Review*, 27 (2001), 417.

$$J = LE_j - LE$$

$$B = LE_s - LE_j$$

$$LE = LE_s - B - J$$

Through further algebraic manipulation, Bongaarts concludes that the change in life expectancy at birth is equal to the rise in senescent life expectancy, plus any decrease in background mortality or juvenile mortality.

$$\Delta LE = \Delta LE_s + \Delta B + \Delta J$$

Bongaarts applies this statistical decomposition to five developed countries that have relatively up-to-date records of causes of death since 1850—Denmark, England and Wales, Norway, Sweden, and the Netherlands. This exercise reveals some significant findings. Data from both males and females exhibited similar trends, and for purposes of this summary, only female data will be analyzed. Life expectancy over this 150 year stretch increased from 45.7 years to 80.7 years. Life expectancy without juvenile mortality, LE_j , over this same stretch increased from 63.9 years to 81.4 years, and senescent life expectancy, LE_s , increased from 72.3 years to 81.7 years. In other words, senescent life expectancy, LE_s , was already significantly high in 1850—26.6 years higher than normal life expectancy in that year. However, due to large reductions in juvenile mortality (J) and background mortality (B), senescent life expectancy (LE_s) is now only 1 year higher than normal life expectancy.

In other words, most of the improvements in life expectancy prior to 1950 were reaped because of decreases in juvenile and background mortality. However, after 1950, the rise of life expectancy was primarily caused by a rise in senescent life expectancy. As Bongaarts points out, an increase in public medicine helped senescent life expectancy advance—“medical treatment became more effective around the middle of the twentieth century with the widespread use of antibiotics and the ability to treat cardiovascular and other chronic diseases.”³⁶

After accounting for the effect of smoking in senescent life expectancy, Bongaarts makes several assumptions to project a future course for human life expectancy. He assumes that there will be no further decreases in juvenile or background mortality, and that all future gains in life expectancy will come from advances in senescent life expectancy. He also assumes that smoking levels stay constant. Further, he supposes that over the next fifty years, senescent life expectancy will increase at the same rate it did from 1950 to 2000 in 16 developed countries.³⁷

Over this stretch, senescent life expectancy increased on average .15 years per year or 7.5 years for the half century period. This projection rate is applied to a series of countries; for instance, life expectancy in the United States is projected to rise to 87.0 years in 2050. This linear trend in senescent life expectancy portrays strong evidence towards the optimist stance that there is no looming limit to human longevity. While this projection is slower than the .25 years per year estimated by Oeppen and Vaupel (2002), it is still significantly faster than the U.S. Social Security estimates of .11 years per year. Vaupel summarizes the optimist camp’s views well in saying: “Given the extraordinary rise in best-practice life expectancy and the demonstrated near-sightedness of expert vision, the central forecast should be based on the long-term trend of sustained progress in reducing mortality.”

The Futurists’ Take: Immortality?

The futurist approach to human longevity is undoubtedly the most controversial of the three views. Rather than being founded on history, the futurist approach to life expectancy focuses on the projected progress of science. Futurists make a bold prediction—namely that we are on the brink of a scientific revolution in which humans born in the 21st century, and maybe even the 20th century, will experience an exponential increase to four-digit life expectancy. While this may seem farfetched, there is a large

³⁶ Bongaarts, 614.

³⁷ The sample of countries has expanded in this part of the study due to the increased availability of mortality data over the past half century

contingency of scientists who believe that these advances are not only possible, but inevitable. In fact, a recent survey of 60 demographers, gerontologists, and aging researchers asked to estimate the life expectancy of a baby born in the year 2100 responded with a mean estimate of 292 years, with 9 members responding with figures above 200 years.³⁸

Futurists reject an extrapolation approach to estimating future life expectancy, as used by the optimists. Prominent futurist Aubrey De Grey uses an analogy of human progress to undermine the optimist's statistical approach to projecting future longevity—"In 1900, extrapolation of trends in the speed of ocean-going liners over the previous century or two would have predicted that the time taken to travel from London to Washington D.C. in 2004 would be at least a couple of weeks."³⁹ De Grey urges disbelievers to think of the human body as a machine, like a car, composed of a large number of parts working together. As we age, parts of our body may lose function—just as when a car gets older, its brakes may lose effectiveness or its overhead light may burn out. However, with the proper technology, any organ in the human body can be fixed or even replicated—similar to the way a technician installs a new break pad or rewires the lights in an automobile. If one agrees that an automobile can achieve immortality through temporary maintenance and replacement of its parts, it follows logically that a human body may do the same given the proper technology. De Grey points to buildings in Venice that have continued to exist over thousands of years due to periodic maintenance. Granted the human body is significantly more complex than an automobile or building—it still contains a finite number of parts whose malfunctions can be corrected by a finite amount of technology.⁴⁰

This idea of constantly re-engineering our bodies calls for a paradigm shift in the way science views aging. Rather than being an inevitable breakdown of our system, the futurists claim that aging is a disease that can be prevented or even reversed.⁴¹ By leveraging our understanding of nanotechnology, stem cell science, and the human genome, scientists will soon be able to overcome the aging process in the post-reproductive years. Nanotechnology could efficiently repair physical damage, Stem Cell Science could provide rejuvenation to our vital organs, and increasing knowledge of the Human Genome could allow us to identify and manipulate the genes that control longevity.⁴² Futurists points to seven causes of aging from cell atrophy to mitochondrial mutations—addressing potential cures and progress made in each category.⁴³

Many point to a hypothetical event known as Singularity as the launching point of an exponential increase in human longevity. Singularity refers to a period of extremely swift technological progress coupled with the advent of self-improving intelligence. It refers to the creation of artificial intelligence with greater capabilities than human intelligence. Begin with the idea that technology is the product of human intelligence. As a result, all technology is the result of human intelligence. However, if technology can, in turn, produce intelligence greater than the initial human intelligence, then the loop is closed—creating a positive feedback effect and a self-propelling cycle. The result is technology with the ability to self-improve and subsequently create new technology unforeseeable by mankind.⁴⁴

Artificial intelligence offers faster and smarter intelligence than that of humans. Computer chips fire

38 Theo Richel, "Will Life Expectancy Quadruple in the Next Hundred Years? Sixty Gerontologists Say Public Debate on Life Extension is Necessary," *Journal of Anti-Aging Medicine*, 6 (2003), 309.

39 Aubrey De Grey, *Extrapolabohus Anonymous: Why Demographers' Rejections of a Huge Rise in Cohort Life Expectancy in This Century are Overconfident*, Annals New York Academy of Science, (2006), 90.

40 *Do You Want to Live Forever?* Dir. Jason Pontin, Perf. Aubrey De Grey, (2007), Google Video, <<http://video.google.com/videoplay?docid=-3329065877451441972&q=aubrey+de+grey+documentary&ei=vYyESKmdJY6lrQKog7m2Ag>, Accessed 2 Feb. 2008.

41 B. Anton, L Vitetta, F Cortizo, and A Sali, "Can We Delay Aging? the Biology and Science of Aging," *Annals New York Academy of Science*, (New York, 2005), 529.

42 Priya Shetty, "Never Say Die?" *The Lancet*, 369 (2007), 1422, www.thelancet.com, Accessed 13 Feb. 2008.

43 "Do You Want To Live Forever?" Documentary.

44 "What is the Singularity?" *The Singularity Institute for Artificial Intelligence*, www.singinst.org, Accessed 3 March 2008.

at speeds ten million times faster than the 150 neurons per second rate of humans. Given the acceleration of speeds as witnessed by Moore's Law, a one-million fold increase is probable within the next couple decades. This kind of speed would produce the amount of thinking that normally takes place in a year to occur in 31 seconds. Better yet, the entire volume of human thought from Socrates to today would occur in a mere 22 hours.⁴⁵ Faster-than-human intelligence is one thing, but the core of singularity focuses on the creation of smarter-than-human intelligence. One mind, even slightly smarter than that of humans, could in turn create smarter minds. Considering the fact that all human technological advances have come from the threefold increase in human brain size over chimpanzees, the promise of self-improving technology is awe-inspiring. The creation of smarter-than-human intelligence could be "the first domino in a chain, [or] starting an avalanche with a pebble."⁴⁶

This acceleration of technological advances describes a phase in which humans would possess an encyclopedic knowledge of the human body, cures to virtually every intrinsic cause of death, and the technology to create synthetic organs and effectively conduct large-scale surgeries. It is as hard for modern day scientists to conceive of a post singularity universe as it was for Benjamin Franklin to imagine all the uses of electricity and all the inventions that came about as a result of it.⁴⁷ At the very least, however, humans could expect an increased life span, perhaps immortality.

An important distinction to be made in the debate over increasing longevity is "quantity" versus "quality" of the added years. Are additional years of frailty and decay tacked onto the end of old age? Or is our life stretched proportionally so we may enjoy more of each phase? Futurists opt for a third scenario in which technology would allow humans to stay biologically equivalent to a twenty-five year old for eternity. A life expectancy of one thousand would result from an indefinite possession of a mortality rate seen in young teenagers in wealthy societies today.⁴⁸

Part II: Longevity and Economic Savings

Determining which theory of human longevity will ultimately come to fruition is incredibly complicated, as the issue spans many disciplines and involves a multitude of variables. All three camps are supported by prestigious and intelligent personnel, and all three make a convincing argument. Perhaps humans will look back several centuries from now and remark at the transparency of the correct prediction, while scoff at the theories that were proven wrong. The concept of a "round world" several centuries ago was perhaps more unconventional than "four-digit life expectancies". Furthermore, one cannot neglect the possibility that none of the three theories is accurate in portraying human life expectancy. For instance, an incurable infectious disease, global warming, or nuclear conflict could reverse the trajectory of human life expectancy. Instead of weighing the veracity of each longevity theory and taking a clairvoyant approach, this paper will shift its tactic. It will assume that life expectancy will increase into the future and examine how it influences the human decision to save.

Imagining a world where humans live to 150, 200, or even 1000, is mind-boggling. Imagine staying in school until you're forty, graduating with an M.B.A., J.D., and PhD in Anthropology. Perhaps then you would spend thirty years as a lawyer, twenty as a businessman, and then set off to the third-world for a fifteen year sabbatical. Nine children and eighty years later, your first marriage ends. You go back to school for another ten years to get that M.D. You then work in medicine for fifty years before remarrying and settling into a forty-year retirement. Is this what a typical two-hundred year life would look like? Maybe, maybe not. Speculation is interesting in theory, but impossible to truly test. Instead of taking a holistic approach to how increased longevity will affect human life, this paper aims to approach the

⁴⁵ "What is the Singularity?"

⁴⁶ "What is the Singularity?"

⁴⁷ "What is the Singularity?"

⁴⁸ De Grey, 87.

consequences from an economic perspective.

Rising longevity has a host of macro and microeconomic consequences. Economists have teamed up with demographers and scientists to devise models to capture this ageing phenomenon. The studies have examined the impact of improvements in life expectancy on the fertility rate, schooling time, GDP growth, and retirement age, among many other variables. Methodologies include the construction of simple theoretical models, the regression analysis of macroeconomic data, and qualitative approaches to the subject. The broadest and most universal of the variables studied is savings—both on an aggregate level and the rates themselves. The remainder of this paper seeks to examine and understand the effects of increasing longevity on savings. The following section will review several of the current models reconciling life expectancy and savings, and the final section will look at how increased longevity has affected savings in the United States.

The most universal model of an individual's intertemporal saving and consumption was proposed by Albert Ando, Franco Modigliani, and Thomas Friedman in the 1950's. It is known as the Life-Cycle Model. The thrust of this model is utility smoothing—the notion that individual's consume a constant annuity of their lifetime income over each period of their life. In other words, individuals borrow against expected future income in childhood, save during their working years, and then consume the remainder of their wealth in retirement. In the absence of bequest motives or intergenerational transfers, the saving of the working aged population should perfectly offset the negative savings of children and elderly—assuming a uniform age distribution and no population growth.⁴⁹

If life expectancy increases and retirement age stays constant, the Life-Cycle model predicts greater average savings rates as individuals increase accumulation of assets for their retirement. Consumption would decrease during working years, as individuals substitute labor for leisure in order to save more for later years. Furthermore, due to compounding returns, there is a greater incentive to save at younger ages with a longer time horizon.

Jonathan Skinner illustrates this increase in savings rates as a result of rising longevity. Assuming you enter the workforce without any positive or negative savings, you need to save $1 - (\text{working years} / (\text{working years} + \text{retirement years}))$ each year in order to smooth consumption over an expected life span. For example, if you are a 25 year old entering the work force, planning to retire at 65 and live until 74, you need to save $1 - (40/49)$ or 18% of income per year in order to finance your retirement. Now let's assume life expectancy increases two years from 74 to 76. Keeping working years constant, the resulting savings rate is $1 - (40/51)$ or 21%.⁵⁰

If this simple model is accurate, rising longevity should result in an increase in savings rates at all ages. However, empirical evidence supports the opposite behavior. The past half century has seen decreasing savings rates coupled with rising life expectancies in many regions of the world. Skinner attributes this enigma to the “bequest motive”—the anticipation of intergenerational transfers from deceased family members.

Regardless, this simple model fails to take into account the exact nature of the longevity increase. The model assumed that the extra two years of life were tacked on at the end of retirement, a far cry from the actual reality of increasing life expectancies. Is a proportional rescaling of the life cycle more appropriate? In other words, if life span doubles, then each period of life doubles — resulting in one's childhood, working years, and retirement to all become twice as long. Under this proportional restructuring, Lee and Goldstein suggest that savings rates would be unaffected. As humans live longer, they spend more time in school, reproduce later, work longer, and retire later. Because working years and retirement years grow by the same proportion, savings rates can stay constant according to the Life-

⁴⁹ David E. Bloom, David Canning, and Bryan Graham, “Longevity and Life-Cycle Savings,” *Scandinavian Journal of Economics*, 105 (2003), 320.

⁵⁰ Jonathan Skinner, “The Effect of Increased Longevity on Capital Accumulation,” *The American Economic Review*, 75 (1985), 1143.

Cycle model.⁵¹ Assume life expectancy doubles. Under proportional rescaling, working years double, lifetime earnings double, and savings for retirement doubles—funding a retirement that is twice as long. In other words, a longer life span doesn't necessarily need to affect savings rates if working lifetime extends proportionally.

Lee and Goldstein also discuss the difference between weak proportionality and strong proportionality. The former adjusts to increases in life expectancy by shifting the mean age of each phase proportionally, while holding the variance of each phase constant. The latter shifts both the mean and variance proportionally. Assuming a weak proportional increase, a doubling of life expectancy would facilitate the start of puberty at 26 years of age, instead of the normal 13. However, if puberty typically lasts 5 years (from age 13 to 18), then after the weak proportional increase it would still last 5 years and take place from 26 to 31. Strong proportionality, on the other hand, calls for an increase in both age and variance—resulting in a 10 year long adolescence from 26 to 36 years.

Empirical evidence, however, indicates that life span does not increase proportionally, in either a weak or strong manner. Lee and Goldstein examined the major transition points of life such as completion of college, first marriage, and birth of first child in Japan, Sweden, and the United States. They found that these transition points were increasing at a rate faster than that of life expectancy. Among American females, for instance, age of first birth was increasing at 4 times the rate of life expectancy and age of marriage was increasing at 9 times the rate. They also discover the trend of increasing educational enrollment at every age, including younger ages. Extending education into adulthood supports proportionality, but increased enrollment in preschool and day care is contradictory to the notion of a stretched lifespan. In other words, the prescribed behavior for parents under proportionality would be to wait longer before enrolling their children in school.⁵² Other social evidence, however, supports the notion that the time it takes to reach adulthood is decreasing – demonstrated by younger voting ages worldwide, adult criminal penalties for minors, and the biological trend of reaching physical maturity at younger ages.⁵³

Proportionality does not seem empirically evident at the later stages of life either. If proportionality held true, one would witness later retirement ages due to the extension of the working years. Kotlikoff makes two proposals about shifting retirement ages. First, he suggests that retirement age may rise proportionally to an increase in longevity. Second, he suggests that individuals may treat the number of retirement years as constant at the end of one's lifetime.⁵⁴ However, neither of these proposals is supported by statistics. In fact, the opposite seems to be the case. Costa proved that old-age labor force participation rates have dropped along with retirement ages in industrialized countries that have experienced increases in life expectancy.⁵⁵ According to the National Academy on an Aging Society, retirement ages have dropped among men in the United States from over 70 in 1900 to around age 63 today.⁵⁶ Perhaps, as Lee and Goldstein suggest, a rising real income rate over this stretch may have increased the demand for leisure, thus driving down the retirement age. The increase in life expectancy is only one of many economic and social trends that have taken place over the past century, and it is vital to recognize that data reflects the cumulative impact of all these trends.

Clearly, proportionality has inherent flaws as a theory of increasing lifespan. Nevertheless, it is a widely used metric in economic models examining longevity. In the words of Lee and Goldstein,

51 Ronald Lee and Joshua R. Goldstein, "Rescaling the Life Cycle: Longevity and Proportionality," *Population and Development Review*, 29 (2003), 200.

52 Lee and Goldstein, 192.

53 Lee and Goldstein, 192-3.

54 Lee and Goldstein, 198.

55 Lee and Goldstein, 198.

56 National Academy on Aging, 6.

“proportional rescaling provides a starting point, a simple framework, from which to view the largely unexplored consequences of increasing longevity for the timing of different segments of life. We do not suggest that all the changes we considered are directly or indirectly caused by increased longevity. In some cases there are plausible links, but in many cases the causes of change are not in any obvious way connected to mortality change.”⁵⁷

Three economists, Bloom, Canning, and Graham, show that an increase in life expectancy prompts the rational individual to increase savings at every stage of life. Operating under the assumptions that leisure and consumption are normal goods, they conclude that a rise in life expectancy increases the optimal length of one’s working years. However, this increase is not enough to provide for consumption during retirement. Therefore, savings rates should increase at every stage of life.

However, while savings rates increase with increasing longevity, the effect on aggregate savings is more ambiguous. In a population with a stationary age structure, the savings of the young offsets the negative savings of the old. However, as Li, Li, and Zhang point out in their 2007 study, as the population ages, dissavers outnumber savers and aggregate savings is reduced. The old-age dependency ratio is a demographic metric that measures the number of old people in a population as a percent of the total working population. This factor needs to be considered when thinking about the influence that longevity has on savings.

There are two opposite effects taking place. One effect is that people save more at every age as they expect to live longer. A second is that as people live longer, older people increase in proportion to younger people, thus reducing aggregate savings. If these two forces cancel out, the net effect would be zero. Therefore, according to Li, Li, and Zhang, the prospect of increased longevity has a positive effect on aggregate savings due to increased savings at every age, but an increase in old-age dependency has a negative effect on aggregate savings as the number of dissavers increase relative to savers. Therefore, the effect of increased longevity on aggregate savings is ambiguous, depending on which factor is bigger.

D.E. Bloom et al. also points to several of the ways that increased longevity can affect savings. First, the individual must take into account old age morbidity and factor in the probability that their working life may be shortened. Secondly, effects of compounding interest and increasing wages produce extra incentive for savings. Thirdly, imperfect annuity markets may understate the actual value of savings. Fourthly, social security systems and other such government annuities discourage longer working lives. Their thesis is that the effect of life expectancy on national savings rates depends on the features of the social security system of that particular country. With no social security system in place, the optimal response to life expectancy improvement is the proportional lengthening of working life and no change in savings rates. However, in countries that have social security systems in place that create incentives to retire at a particular age, individuals treat retirement age as fixed and save more in order to fund a longer retirement.⁵⁸

The Li, Zhang, and Zhang study mentioned earlier attempts to reconcile savings, growth in longevity, and population age structures. It uses data from the World Bank from over 200 countries from 1960 to 2004. The study regresses (aggregate savings / output) against life expectancy, old to working age population ratio, and fertility. The authors expect the coefficients for the variables to be positive, negative, and negative respectively based on the predictions of their theoretical model. After including an additional variable of log GDP per capita growth into the equation, they find statistical significance in all the variables to at least the 10% level. Life expectancy had a beta of .002, and the old-age dependency ratio had a beta of -.603.⁵⁹

These results follow logically from the prediction that longevity has a positive impact on aggregate

⁵⁷ Lee and Goldstein, 202.

⁵⁸ Bloom et al, 94.

⁵⁹ Hongbin Li, Junsen Zhang, and Jie Zhang, “Effects of Longevity and Dependency Rates on Savings and Growth: Evidence From a Panel of Cross Countries,” *Journal of Development Economics*, 84 (2007), 146.

savings, while old-age dependency has a negative impact. The meaning of the .002 coefficient is that a one-year increase in life expectancy produces a two-tenths of a percent increase in the aggregate savings rate. Likewise, a one percent increase in the old-age dependency ratio leads to a six-tenths percentage point decline in aggregate savings. This study further analyzes the results by doing a rudimentary analysis of the World Bank Data Set. They look at a set of countries with life expectancies below 50 years over the period 1993-1998, and another set of countries with life expectancies above 70 years over the same time frame. The mean life expectancy in the latter group was 74.7 years, and those countries had an average aggregate savings rate of 21.2%. In the low life expectancy group, the average life expectancy was 44.9 years with an average aggregate savings rate of 5.8%. Furthermore, the low life expectancy group had an old-age dependency ratio of 5.5% versus 15.4% in the higher group. The differences in life expectancy of 30 years account for a 6 percentage point difference in aggregate savings rates (.002*30), while the difference of 10 percent in old-age dependency ratios account for a 6 percentage point difference. In this example, these effects balance out.⁶⁰

Case Study: Longevity and Savings in the United States

The United States is an interesting arena to examine the trend of increasing life expectancy and its economic impact. Life expectancy of Americans has increased at a rapid rate over the past century, much like other countries in the developing world. Furthermore, the old-age dependency ratio has increased, as the older segments of the population have expanded disproportionately. However, this longevity trend has coexisted with patterns in savings rates and retirement ages that are counterintuitive to the LZZ model. Retirement ages have, in fact, witnessed a fall over the past century in the United States. Furthermore, savings rates have turned negative in recent years. Are Americans underestimating their life expectancies when making decisions regarding consumption and savings?

A rudimentary examination of demographic data in the U.S. from the past fifty years reveals some interesting trends. Life expectancy has risen from 68.2 years in 1950 to 76.9 in 2000, an increase of nearly 13%.⁶¹ Going back to 1900, life expectancy increased from 47.3 years, representing a precipitous 65% increase to 2000. Likewise, the percentage of the population 65 and over has experienced a ten-fold increase over the past century. At the time of the last census in 2000, the population aged 65 and over stood at 35 million, constituting 12.4% of the United States Population. This is a rise from 12.3 million in 1950. The old-age dependency ratio was 17.4% in 2000, up from 14% in 1950.⁶²

According to the LZZ regressions, the rise in life expectancy from 1950 to 2000 should produce an increase in aggregate savings rates of .002*8.7, or nearly 1.7%. On the other hand, the increase in old-age dependency of 3 percentage points over this same stretch of time should result in -.603*3, or approximately a negative 1.8%. In other words, based on trends in life expectancy and old age dependency ratios in the United States, one would expect that these effects would cancel out and aggregate savings per capita would stay constant.

However, the contrary has occurred. Savings in the United States has shown a downward trend since 1950, even dipping into negative figures in recent years. In the 1980s, aggregate savings averaged nine percent; in the 1990s, they averaged five and a half percent; and from 2000 to 2005, the after-tax savings rate has averaged a measly one point nine percent.⁶³ The ratio of personal consumption expenditures to GDP has reached an all-time high of nearly 70%. To accompany this low rate of savings, U.S. households are carrying a large amount of debt. Recently, the household debt to personal disposable

⁶⁰ Li, Zhang, and Zhang, 148.

⁶¹ National Healthy Survey Report, 175; U.S. Census Bureau.

⁶² U.S. Census Bureau.

⁶³ Kevin J. Lansing, Federal Reserve Bank of San Francisco, *Spendthrift Nation*, (2005), 2.

income ratio reached an all-time high of 118%.⁶⁴ Furthermore, the average retirement age across the country has declined from just over 68 in 1950 to around 63 today for both genders.⁶⁵

How can people live longer, retire earlier, and save less? Is this behavior rational and, if not, why are Americans making irrational economic decisions? A large contingency of economists agree upon the fact that this behavior is irrational. Kevin J. Lansing, Senior Economist at the Federal Bank of San Francisco, states that “The decline in the U.S. personal saving rate and the dearth of internal saving raise concerns for the future. In coming decades, a growing fraction of U.S. workers will pass their peak earning years and approach retirement. In preparation, aging workers should be building their nest eggs and paying down debt. Instead, many of today’s workers are saving almost nothing and taking on large amounts of adjustable-rate debt with payments programmed to rise with the level of interest rates. Failure to boost saving in the years ahead may lead to some painful adjustments in the future when many of today’s workers could face difficulties maintaining their desired lifestyle in retirement.”⁶⁶

One rationale for earlier retirement ages and lower savings is that individuals seek to obtain their Social Security benefits earlier. Retirement income has often been considered a three-legged stool: personal savings, employee benefits, and social security.⁶⁷ However, the apparent trend is increasing reliance on the latter two sources. According to the Social Security Administration, social security and employee benefits account for 53.6% of retirement income for those aged sixty-five and over. In fact, one-third of the country has no income personal savings—essentially rendering this leg of the stool futile.⁶⁸ As labor force participation rates have taken a drastic dip over the course of the century, retirees have increasingly relied on social security to fund their later years of life. This behavior is not rational. Seniors are carrying huge burdens of debt and going into bankruptcy faster than ever. A recent CBS article stated that credit card debt among seniors age 65 and over has increased 89 percent to \$4,041 between 1992 and 2001.⁶⁹

Another plausible explanation for this irrational savings behavior is increased health care costs. In other words, decreased mortality does not necessarily mean decreased morbidity. Health care costs have skyrocketed for seniors in recent years. Hospital bills are becoming hard to swallow. Nursing homes are charging record enrollment fees. Anticipating these costs is incredibly hard from an economic perspective, and people generally tend to err on the short side.

Economic theory can only go so far to explain the way people behave. Perhaps it is people’s own faulty estimations of their personal longevity that is the root of the problem. In the life cycle model, the rational economic agent estimates their expected lifespan so that savings at the end of life is zero. In theory, this model sounds fine; however, in practice, the probability of ending up with exactly zero dollars at your time of death is negligible. It is reasonable to believe that if people act according to the life cycle hypothesis, then half of the population overestimates their longevity and half underestimates it. If half of the population plans to die earlier than they actually do, one can only imagine the economic hardship this would cause.

Richard Pollock and Jack Snyderhoud of the University of Hawaii conducted a study in 1992 which tested subjects’ ability to make rational expectations regarding their own lifespan. The question they asked was simple: do subject’s perceived life spans take into account further improvements in life expectancy over the course of their lifetime or are they aligned with current life expectancy tables? In other words, if a twenty year-old subject expects to live until eighty-two because the current life

⁶⁴ Lansing, 3.

⁶⁵ Murray Gendell and Jacob S. Siegel, “Trends in Retirement Age by Sex, 1950-2005,” *Monthly Labor Review*, 115 (1992), 23.

⁶⁶ Lansing, 3.

⁶⁷ William J. Wiatrowski, “Changing Retirement Age: Ups and Downs,” *Monthly Labor Review*, (2001), 4.

⁶⁸ Wiatrowski, 4.

⁶⁹ CBS News.

expectancy tables indicate that the life expectancy for a twenty year-old is sixty-two years, then that is an irrational judgment. It fails to take into account further improvements in life expectancy that will occur over a subject's lifespan.⁷⁰

They polled a large sample of Hawaiians at a variety of ages and asked them how long they expected to live. The study found that Hawaiians of both genders and of all ages underestimated their lifespan based on conservative forward extrapolations of U.S. life expectancy. More surprisingly, in every single age and gender cohort except for one, life expectancy expectations were below the current life expectancy tables. The cohort of 131 Hawaiian females between the ages of 35-39 expected their life spans to be over seven years shorter than current life expectancies, and ten and half years shorter than the conservative extrapolation estimate. In short, subjects grossly underestimated their survival prospects at highly significant levels.⁷¹

This study sheds a very peculiar light on the situation in the United States. If people believe that their current life span lies below current life expectancy tables, let alone taking into account further improvements in mortality, this poses a dramatic problem for the economy. In a prior study conducted by Economist Daniel Hamermesh, it was discovered that people judge their future life spans at least partially on those of their relatives.⁷² If people expect to live as long as their parents or grandparents, they are making irrational judgments that can have serious repercussions. From an evolutionary standpoint, it seems rational to err on the side of overestimating lifespan. That way, if one dies earlier than expected, their extra resources can be bequeathed to their offspring, thus helping their survival. Underestimation results in a reliance upon one's offspring—draining their resources and detracting from their survival prospects. Also, given the fact that the standard deviation of life expectancy has increased as well as the mean, additional incentive is provided for erring on the longer side because the risk of underestimation is greater.

Even if the most conservative longevity estimates of the realist camp transpire and humans live until eighty-five years of age, this will still result in an increase in life expectancy well beyond today's levels. In order to anticipate this, and perhaps greater increases, it is imperative that people are aware of the current increases in longevity taking place. As savings rates and retirement ages continue to drop, more and more elderly members of our population are going into serious debt towards the end of their lifetime. Perhaps it is time for the Social Security Administration to raise the retirement eligibility age in a way that reflects the increase in life expectancy. When Social Security commenced in the 1930's, life expectancy in the United States was around sixty years of age and twelve years at sixty years old.⁷³ Furthermore, the system still did not pay out benefits until age sixty-five. As a result, the majority of Americans never received a Social Security check and the system was self-sufficient. Now the situation is drastically different with the vast majority of the population living past sixty-five.

Until the government acknowledges the phenomenon of increasing longevity and gives it proper emphasis in public policy, the longevity miracle of the past century will turn into the longevity problem. People make retirement decisions based off ages set by the Social Security Administration, and it is therefore up to the government to guide people's judgments. In this case, good politics are needed to guide economics. As in many societal problems encompassing the economic and political spheres, it is to the benefit of government and its people to err on the side of caution. The existence of global warming, for instance, is still disputed by many. If society doesn't take any action to remedy the environmental problem, it may be alright and it may not be. On the other hand, if society is proactive about the issue,

⁷⁰ Richard L. Pollock and Jack P. Suyderhoud, "An Empirical Window on Rational Expectations Formation," *The Review of Economics and Statistics*, 74 (1992), 320-324.

⁷¹ Pollock and Suyderhoud, 320-324.

⁷² Daniel S. Hamermesh, "Expectations, Life Expectancy, and Economic Behavior," *The Quarterly Journal of Economics*, 100 (1985), 390.

⁷³ Wiatrowski, 4.

we either become more efficient as a society or we avoid a complete collapse. In other words, acting on global warming is a win-win situation, whereas standing idle puts us at the mercy of our circumstance. The longevity phenomenon is no different. Government can choose to act on this issue and raise awareness about longevity; or, on the contrary, it can sit idle and risk entering a national economic crisis.

Humans have been blessed with unfathomable increases in longevity over the past couple centuries and will likely experience further improvements into the future. It is the responsibility of both our government and the citizens of our world to study the aging phenomenon and raise awareness worldwide. This way, long life will be a blessing rather than a curse.

Getting your Politics, Philosophy, and Economic Wrong: An Institutional Understanding of Zimbabwe's Collapse

Rafael Burde

Background and Introduction

1.1 Colonization (1888–1965): Building Rhodes to Riches

In the 1880s, the British colonialists arrived in modern-day Zimbabwe by means of Cecil Rhodes' British South African Company. In 1888, British entrepreneur and infamous colonizer Cecil Rhodes extracted mining rights from King Lobengula of the Ndebele, which he used to persuade the British government to grant a royal charter to his British South African Company (BSAC), covering what is today both Zimbabwe and Zambia. Through such concessions and treaties, many of which were deceitful, he usurped the majority of the region's tribally-held land and seized control of the region's indigenous labor force and precious natural resources. In 1895 the BSAC adopted the name 'Rhodesia' for Zambesia, after Cecil Rhodes, and in 1898 'Southern Rhodesia' was officially adopted as the name for the part south of the Zambezi, later to become Zimbabwe. The part to the north was administered separately by the BSAC and was later named Northern Rhodesia, now Zambia.¹

Those most greatly affected by this upheaval were the indigenous tribes, who were aggressively displaced and discriminated by the colonial 'Rhodes' administration. The two main native tribes, the Shona and the Ndebele, staged unsuccessful revolts (Chimurenga²) against the encroachment on their lands in 1896 and 1897. As resistance efforts were repressed, the turn of the twentieth century marked the beginning of the accumulation of white power and wealth at the expense of the black people's land and rights.

However unfair and unequal the distribution of national resources, Southern Rhodesia flourished, economically, for over a century and grew steadily with an abundant agricultural surplus thanks to its fertile land, experienced white farmers and abundant natural resources.³ Zimbabwe was one of the most advanced and wealthy African states, with its own stock exchange created in 1896 and one of the highest standards of living, including among the black population, in colonial Africa. Southern Rhodesia became an official British colony in 1923 and remained relatively politically stable and prosperous until Britain's failed regional experiment in 1953. In the face of African opposition, Britain joined the two parts of Rhodesia with Nyasaland (now Malawi) in the ill-fated Federation of Rhodesia and Nyasaland, which was dominated by Southern Rhodesian settlers.⁴ Growing African nationalism and unrest, particularly in Nyasaland, forced Britain to dissolve the federation, conceding independence to Nyasaland and Northern Rhodesia.⁵ Whites in Southern Rhodesia were angered by what they perceived as "British appeasement"⁶ of the black nationalists, and the three countries went their separate ways in 1963. The 1960's marked the beginning of the dissolution of colonial rule⁷ on the continent, and Southern Rhodesia was soon to

¹ Roussos, Peter. *Zimbabwe: An Introduction to the Economics of Transformation* (Harare: Baobab Books, 1988)

² Chimurenga is a Shona word, meaning 'struggle.' It has also been used in a broader context to describe a struggle for human rights, political dignity and social justice.

³ Including coal, chromium ore, asbestos, gold, nickel, copper, iron ore, vanadium, lithium, tin, platinum group metals

⁴ Kurotwi, Lovemore. *Zimbabwean Business: How colonialism underdeveloped Zimbabwe* (Harare, Zimbabwe: RAE, 2004), 73.

⁵ For a map of present day Zimbabwe and its neighbors see Appendix A.1

⁶ Europa Regional Surveys of the World: Africa South of the Sahara, p 1288

⁷ Economically speaking, colonialism was first and foremost an act of political control, which led well-organized states with dynamic

join the list of newly formed independent republics.⁸

1.2 UDI and civil war (1965–1979): The White on White fight

As African-majority governments assumed control in neighboring Northern Rhodesia and in Nyasaland, the white-minority Rhodesia government led by Ian Smith made history by declaring unilateral independence from Britain on November 11, 1965. Britain immediately imposed sanctions, asking the United Nations to do the same, and began years of negotiations with the Smith administration that ended in stalemate.⁹ The Smith administration boldly declared the creation of the Republic of Rhodesia in 1970, which was recognized at the time only by South Africa's Apartheid¹⁰ administration. Although this was seen as a suitable arrangement for the white minority in Rhodesia, the fortunes of the black majority remained inferior and dismal and led to massive frustration and revolts. Over the years, the guerrilla fighting against Smith's UDI government intensified and a civil war ensued. Referred to as the 'people's war'¹¹ as it was called, this civil war was spearheaded by two rebel nationalist factions: the Zimbabwe African National Union (ZANU), led by Robert Mugabe with strong support from the Frente de Libertação de Moçambique (Frelimo) movement fighting the Portuguese in Mozambique as well as the People's Republic of China, and the Zimbabwe African People's Union (ZAPU), led by Joshua Nkomo, which was based mainly in Zambia and received training and weaponry from the USSR.¹²

For most Zimbabweans, the struggles of the later decades had been about recovering land, and commentators have likened the guerrilla war of the 1970's to a "peasant uprising."¹³ The strongly socialist training and orientation of both ZANU and ZAPU attracted the support of the millions of disenfranchised blacks, and both resistance movements promised a more equitable distribution of the nation's resources and the empowerment of the black majority. Ultimately, the civil war was unsuccessful in thwarting uncontrolled resettlement or in preventing the land issue from fueling further discontent.

The political, social and economic situation deteriorated until Smith's government was forced to start negotiations with the leaders of the temporarily united nationalist movements known as the Patriotic Front (PF).¹⁴ In March 1978, with his regime near the brink of collapse, Smith signed an accord with the three principle black figures (PF), led by Bishop Abel Muzorewa, under the essential condition that the PF could guarantee safeguards for white civilians who were concerned for the safety of their land and their lives. As a result of this accord, also known as the Internal Settlement,¹⁵ 'free' elections were held in April 1979. The United African National Council (UANC) party won a majority in this election. On June 1, 1979, the leader of UANC, Abel Muzorewa, became the country's Prime Minister and the country's name was changed to Zimbabwe Rhodesia. The Internal Settlement left control of the country's police, security forces, civil service, and judiciary in white hands. It assured whites of about one third of the economies to establish supremacy over a variety of disorganized, poor peoples in Africa and Asia.

⁸ The imperial grip of Belgium, Germany, France and Holland began to loosen throughout the African continent and provided tens of former colonies the opportunity to gain independence in the 1960's.

⁹ The major inter-governmental talks took place in 1966 and 1968.

¹⁰ Apartheid, Afrikaans, directly translates into 'separateness' and was essentially a codified racist order that protected white minority interests, particularly those of the Afrikaner nationalist movement.

¹¹ Europa Regional Surveys of the World: Africa South of the Sahara, 1287.

¹² Military and financial support from Communist countries continued well after independence. Until the mid 1990's the North Korean 5th battalion was stationed in Harare training and reinforcing Zimbabwean troops.

¹³ Europa Regional Surveys of the World: Africa South of the Sahara, 1287

¹⁴ The Patriotic Front was an expedient partnership between Nkomo's ZAPU and Mugabe's ZANU nationalist movements.

¹⁵ Turner, Barry ed. The Statesman's Year-Book 2006 (London: St. Martin's Press, 2006), 1388.

seats in parliament. It was essentially a power-sharing arrangement, which did not amount to majority rule and left the black patriotic fronts unsatisfied.

Six months later, in December 1979, the British government invited Bishop Muzorewa and the leaders of the Patriotic Front to participate in a constitutional conference at Lancaster House. The purpose of the conference was to discuss and reach agreement on the terms of an independence constitution, and that elections should be supervised under British authority to enable Rhodesia to proceed to legal independence and the parties to settle their differences by political means.¹⁶ Henceforth, successful trilateral negotiations led to the signing of the landmark Lancaster House Agreement, ending the civil war.

1.3 Independence (1980): The pitfalls of Post-colonization

On April 18, 1980 the country attained independence and along with it a new name, Zimbabwe, new flag, and new government ruled primarily by ZANU. Initially, Canaan Banana served as the first president, with Robert Mugabe as Prime Minister and Joseph Nkomo and other ZAPU members holding various cabinet positions.¹⁷ As early as 1982, Nkomo and his followers were ousted from his cabinet, sparking fighting between ZAPU supporters in the Ndebele-speaking region of the country and the ruling ZANU. A peace accord was negotiated in 1987, resulting in the permanent merger of ZANU and ZAPU into the ZANU-PF. In that same year the government amended the constitution to provide for an Executive President and abolished the office of Prime Minister. The constitutional changes went into effect on January 1, 1988, establishing Robert Mugabe as President.¹⁸

Mugabe continued to gain power, and Zimbabwe prospered despite the political turbulence following the constitutional amendments. Zimbabwe was a major tobacco producer and a potential bread basket for surrounding countries. GDP per capita (PPP¹⁹) was one of the top five on the continent, and Zimbabwe enjoyed stable positive economic growth and large-scale exports for most of the 1990's. Unfortunately, cracks were beginning to show in the Mugabe regime. The budget deficit in the mid 1990's began to grow out of control, and in September 1995 the International Monetary Fund (IMF) announced the nonrenewal of loans for balance-of-payments support. After Mugabe's third re-election in March 1996, the private sector began to put pressure on the administration to enforce the reforms sought by international lenders including military and civil service budget cuts.²⁰ The situation was deteriorating but, with international support and proper regulation, collapse could reasonably have been avoided, had it not been for the misguided and speedy reforms of the Mugabe administration.²¹ These reforms, beginning in agriculture and spreading to the financial and political arenas soon after, sought to address the country's economic and social inequalities and the growing racial divide, but ultimately tipped Zimbabwe into an uncontrollable and perpetual downward spiral. The next chapter will discuss arguably the most damaging reforms lying at the epicenter of the looming collapse, those of land redistribution.

¹⁶ This meeting took place three months after the Meeting of Commonwealth Heads of Government held in Lusaka from August 1-7, 1979.

¹⁷ Europa Regional Surveys of the World: Africa South of the Sahara, 1288.

¹⁸ Mugabe and his party, the ZANU-PF, won every re-election until March 2008 when the ZANU-PF lost the parliamentary majority to the Movement for Democratic Change under Morgan Tsvangirai.

¹⁹ PPP stands for purchasing power parity and is an adjustment to a raw GDP per capita figure that takes local currency-buying power and exchange rate fluctuations into account.

²⁰ Turner, Barry ed. *The Statesman's Year-Book 2006* (London: St. Martin's Press, 2006), 1389.

²¹ These tendencies are later to be explained as commonly seen traits in neopatrimonial states.

The Tipping Point

2.1 The Facts about the Land Reforms and the New Millennium:

History has shown that there is seldom an easy solution to structural imbalances in developing countries, which are often rooted in imperial glory and greed. The case of Zimbabwe exemplifies this struggle to reverse the inequities of the past by using the instruments and institutions of the state; a developmental approach can be dangerous if orchestrated by the wrong types of state leaders. This chapter will explore the first of Zimbabwe's institutions to be corrupted: that of property rights. By tracking the evolution of land legislation and its relationship to economic decay, this chapter will demonstrate the institutional roots of the national collapse and illustrate that the years following 2000 were the major watershed period that precipitated a string of related failures. The four land-related topics that this chapter focuses on, the "willing-buyer willing-seller" program, the Land Acquisition Act, the forced seizures, and *Operation Murambatsvina*, will highlight the increasingly corrupt and biased agenda that the government followed in enacting land reform and provide a framework for understanding the anatomy of the economic collapse.

Zimbabwe's fragile property rights system was raised to the national agenda by Robert Mugabe as part of his ZANU campaign in the struggle for independence in the late 1970's. Many experts²² argue that the establishment of widespread property rights is an "indispensable ingredient"²³ in economic and social development - 'if not the silver bullet'. Economists including, Hernando de Soto, argue that the reason that some countries have managed to integrate the vast majority of their population into the official legal system and the market economy, whilst in many others people remain stuck in poverty, violence and lack of education, is the creation and enforcement of an inclusive property rights system. So if the institution of property is "necessary [in providing the] underpinnings for the rule of law along with the incentives for sustainable growth,"²⁴ then the Mugabe administration chose a bad staging area to start addressing the country's historical inequalities. Sadly, over the course of just a few years, the Mugabe administration managed to destroy trust and transparency in the market and thereby damaged a critical linchpin behind economic and social development.²⁵

The origins of Zimbabwe's land issue date back to the nineteenth century and Rhodes' BSAC's control of most of the country's arable land. Estimates suggest that at the time of independence, the majority of arable land in Zimbabwe belonged to about 4500 white commercial farmers, who controlled roughly 70 percent of the country's arable land until the early 1990's.²⁶ This unfortunate legacy of colonialism fostered discontent by the black majority and the new majority-rule government and, unsurprisingly, became a national priority soon after independence.²⁷ As early as 1980, Mugabe's party had promised to tackle this critical issue that had been plaguing "most Zimbabweans for many decades,"²⁸ and which was congruent with the ZANU-PF's "stated socialist goals."²⁹ Mugabe held true

22 Including Hernando de Soto, President of the Institute for Liberty and Democracy.

23 Richardson, Craig, *The Collapse of Zimbabwe in the Wake of the 2000-2003 Land Reforms* (The Edwin Mellen Press, 2004), vi.

24 Richardson, xii.

25 Hammar, Amanda, Brian Raftopolous and Stig Jensen ed., *Zimbabwe's Unfinished Business: Rethinking Land, State and Nation in the Context of Crisis*, Harare (Weaver Press, 2003), pg 112. For further readings: Jeffrey R., Bradford F. Mills, Nelson Taruvinga, "Why Has Poverty Increased in Zimbabwe?" 2002

26 Turner, Barry ed., 139.0

27 Other sources give more prudent estimates of 50% of the arable land belonging to 6000 white commercial farmers (Chigara, Ben, *Land Reform Policy*, Ashgate Publishing, 2002, 52)

28 Europa Regional Surveys of the World: Africa South of the Sahara, 1287.

29 Ibid., 1287.

to this promise and his preliminary program put into place in the beginning of Mugabe's term as Prime Minister, circa 1982, was that of a "willing buyer-willing seller"³⁰ model. Although this programmed provided *de jure* opportunity to interested black buyers, with whites making up less than 1% of the population but holding 70% of the country's commercially viable arable land and with most whites unwilling to sell, the process was slow, frustrating and largely insignificant. Additionally, the restrictive provisions of the 1979 Lancaster Agreement prohibited direct land redistribution for a period of ten years, so the 'willing buyer-willing seller' program remained in place until 1989. This was a frustrating time and the government's authority was further challenged by acute land problems in Matabeleland, which heightened the already tense political balancing act. One factor mitigating the uncomfortable situation was British funding for the program and the Thatcher administration's initial £44 million allocation subsidized many of governments legitimate land purchases from 1979-1989.³¹

After a decade of frustration for the millions of peasants and having his hands tied by the Lancaster provisions, Mugabe attempted a new approach at acquiring white land and appeasing his elites. In March 1992, the Zimbabwean legislature passed the Land Acquisition Act following the expiry of the Lancaster Agreement's provisions.³² The acts main aim was "to more equally distribute land" and was represented a compromise between the socialist agenda of the ZANU-PF and the capitalist entitled interests of the white farmers.³³ Zimbabwe negotiators accepted the British agreement to underwrite half the costs of a resettlement program in exchange for guaranteeing existing property rights, but this Act still ignited the first battle in a string of bitterly-contested disputes (both legal and physical) between the government and the powerful white-dominated Commercial Farmer's Union (CFU).³⁴ Despite these clashes, the period of 1993-2000 saw Zimbabwe's GDP, agricultural output and life expectancy grow, leading many to believe that the future "looked bright."³⁵ Instead, the new millennium ushered in one of the fastest collapses of any developing country and tipped Zimbabwe to brink of dissolution.

The next and most devastating reforms came just after the turn of the millennium in the form of forced removals and forced seizures. It all started in late February 2000 when the Mugabe government stood idly by as a group of armed black men seized a white commercial farm by forcibly driving them off their property.³⁶ This sparked a wave of similar forced seizures, with the marauding groups often accompanied by Mugabe's army veterans and with the tacit support of the government.³⁷ In many cases the Mugabe government supported the raids by publishing a list of 841 targeted white-owned commercial farms in the newspaper as "available."³⁸ These farms comprised a total of 8.3m hectares, which was destined for take-over without fair compensation.³⁹ Dozens of farm owners were killed during the chaotic three year period and it is estimated that nearly 400,000 people found themselves unemployed and starving with a further 1-2 million dependents of these workers in a similar position.⁴⁰ Ultimately, the forced seizure of almost all white-owned commercial farms, with the stated aim of

³⁰ Chigara, Ben, Land Reform Policy (Ashgate Publishing, 2002), 28.

³¹ This line of credit was cut in 1997 by British Prime Minister Tony Blair when information surfaced that the money was being used to purchase land for members of the ruling ZANU-PF elite rather than landless peasants.

³² Europa Regional Surveys of the World: Africa South of the Sahara, 1289.

³³ Raftopoulos, Brian & Tyrone Savage ed., Zimbabwe: Injustice and Political Reconciliation (Cape Town: Institute for Justice and Reconciliation, Weaver Press), 2005.

³⁴ Coldham, Simon, "The Land Acquisition Act, 1992 of Zimbabwe", Journal of African Law, No. 1 (Spring 1993), 82.

³⁵ Richardson, 1.

³⁶ Ibid, 3.

³⁷ White-owned businesses in the cities also become the target of 'invasions'.

³⁸ Unattributed, "Zimbabwe to name thousands of blacks to get farms of whites," New York Times, Dec. 30, 2001.

³⁹ Banks, Arthur and Thomas C. Muller, ed. Binghamton, Political Handbook of the World (New York: CSA Publications, 2007).

⁴⁰ The World Food Program estimated in May 2002 that retrenched farm workers and their dependents numbered about 825,000.

benefiting landless black Zimbabweans, led to over a 30% fall in all major agricultural commodity production levels and precipitated the collapse of the agriculture-based economy.⁴¹

Across a broad spectrum of products grown in different regions and by different kinds of producers, the average three year reduction in agricultural production was over 50 percent. Zimbabwe's once abundant and diversified agricultural sector collapsed in the space of three years with maize, groundnuts, cotton, wheat, soybeans, coffee and sheep production shrunk by between 50 and 90 percent by 2003.⁴² Zimbabwe's production of tobacco, its second most important source of foreign currency, and once the second-biggest in the world, has slumped from 273m kilograms in 2000 to 70m in 2007. With more than half of a country's population relying on the agricultural sector for sustenance or employment, the repercussions of this kind of loss were dramatic. The Zimbabwean government took land from legitimate land owners and, in most cases, gave it to those that showed unconditional support for the regime and to those that had won personal favor with the government instead of the poor. The Zimbabwean poor thus continued to be excluded, and many have chosen exodus over exclusion with millions of its poor crossing the borders into neighboring countries. Regardless of how direct Mugabe's role was in the removals and whether the program as whole was designed to reward Mugabe loyalists or not, the byproduct of the forced removals has been a legacy of misery and chaos permanently impressed on the Zimbabwean nation.

To put the consequences of 2000-2003 in perspective, the extent and speed of the collapse can more easily be understood by following striking circumstances in 2003.⁴³ (1) Life expectancy sharply dropped. While a baby was expected to live until 56 if born in 1993, just ten years later only half would make it their 35th birthday. (2) Real GDP collapsed. The economy shrunk by 5 percent in 2000, 8 percent in 2001, 10 percent in 2002 and perhaps as much as 15 percent in 2003. (3) Agricultural output dropped to 30 percent of its former level. Half of the population faced starvation in 2004, when 5 years earlier Zimbabwe used to feed itself and export to others. (4) The money supply increased dramatically, fueling 500% annual inflation. (5) Zimbabwean dollars lost more than 99% of their value versus other hard currencies, such as the dollar, since 2000. (6) The government's autocratic actions against the media and political opponents earned it the rank of one of the most repressive regimes in the world. (7) Foreign direct investment plummeted to nearly zero, as anxious overseas investors transferred their funds to other, less troublesome areas of the globe. (8) The International Monetary Fund stripped Zimbabwe of its voting rights in June 2003 after the country failed to make timely payments; it currently owes the Fund over \$273 million dollars.

Despite the ghastly situation, the Mugabe administration's repression and delusional policies unfortunately did not stop there. Although the reasons for and severity of the forced land seizures cannot be understated, and their drastic consequences can easily be seen as the catalyst in sparking a domino effect that brought down the rest of Zimbabwe's economic and political institutions in the following years, there were other developments in this struggle for land saga post 2003. One of these instances was another authoritarian attack launched by the Mugabe government on its opponents, which included forced removals of any in the administration's way—literally. Following rigged elections in 2005, the government initiated “Operation Murambatsvina”⁴⁴ a supposed effort to crack down on illegal markets and homes that had seen slums emerge in towns and cities. Otherwise known as ‘Operation Restore Order,’ this action was launched in May 2005 and has been widely condemned by opposition and international figures, who charge that it has left a substantial section of urban poor homeless and

⁴¹ Richardson, 3.

⁴² African Development Bank, Statistics, www.afdb.org.

⁴³ “It's the King's Land, Ok?” *The Economist*, Dec. 31, 1999.

⁴⁴ This name loosely translates to ‘Operation Drive Out Trash’ which may signal Mugabe's true intentions to forcefully remove opposition supporters and anyone that stood in his way.

according to UN estimates, affected at least 2.4 million people or over 20 percent of the population.⁴⁵ The president said it was an effort to boost law, order, and development, and provide decent housing to the population; critics accused him of driving out and making homeless large sections of the urban and rural poor, who comprise much of the internal opposition to the Mugabe administration. Either way, the razing of “illegal structures” left some 700,000 people without jobs or homes by May 2006,⁴⁶ according to UN estimates. Seeing that the Zimbabwe government has yet to deliver any new housing for the forcefully removed people, the operation should rightfully be understood as a targeted attempt to destroy slums housing opposition supporters.⁴⁷

2.2 Analysis and Explanation

As this research has demonstrated that Zimbabwe’s problem stems from a history of gross imbalances and inequities, symptoms shared by many African developing countries. The more poignant question asks why it is that many post-colonial African states (and others around the world) managed to more smoothly and liberally integrate and advance their economies and societies without reversing the extremes in wealth and land distribution (think, South Africa, Botswana or its South American counterpart, Nicaragua). Yet some leaders ignore these precedents and follow narrow sighted agendas. What this study is addressing is not the orientation or intentions of the Mugabe government in addressing the socio-economic needs of its people but simply that “a system of accumulation that reserves its advantages and opportunities for only its elite”⁴⁸ is bound to fail over time, and that once political, legal and economic institutions have been sufficiently damaged or manipulated, the problems then become endemic, chronic and ultimately paralyzing.

So what is the best way to explain this rapid disintegration? Some theories use a ‘house of cards’ metaphor, explaining Zimbabwe’s demise as a sudden collapse due to a combination of simultaneous factors resulting in a chaotic pile of fallen cards. Some theories found this approach unsatisfactory and sought to find a common thread that could knit together the various aspects and problems that lead to Zimbabwe’s unraveling. Craig Richardson (2004) undertook such a task, and after examining dozens of economic indicators, graphs and charts he noticed one thing that “jumped out”⁴⁹ at him. Nearly every economic indicator showed some sort of collapse during or shortly after the year 2000.

The chaotic implementation of the land reform mortally wounded the commercial farming sector, the country’s leading source of exports and foreign exchange, turning Zimbabwe into a new importer of food and sending the economy into a downward spiral, but the connection between a collapse in commercial farming and the overall meltdown of the economy needs some unpacking. Essentially, the land seizures of 2000 proved the importance of three factors for any market economy, namely, land equity, trust and knowledge. The Mugabe government failed to protect these building blocks of a free market and ultimately the economic and democratic institutional frameworks on which they were built came crashing down.

Firstly, by wiping out billions in land equity, the land seizures made wealth creation and individual borrowing impossible⁵⁰. The new black land owners were effectively leasing their ‘recently acquired’ farms from the government, and with no means of borrowing against their land (they held no titles for

⁴⁵ International Crisis Group, Zimbabwe: Danger and Opportunity (Harare: ICG Africa Report).

⁴⁶ The operation took on a different name after international criticism and become known as ‘Operation Roundup’ in early 2006.

⁴⁷ Zimbabwe Country Review, CountryWatch Incorporated, 2008.

⁴⁸ Richardson, xiii.

⁴⁹ Richardson, 2.

⁵⁰ Ibid, 5.

the land), they could not obtain loans to finance their farming operations.⁵¹ The land seizures caused a vast constriction of borrowing, which rippled from business to business and from sector to sector. Calculations done by Craig Richardson estimate that five billion U.S. dollars in wealth was wiped out from the agricultural sector, in one year, and ultimately more than 75 percent of the entire value of all commercial farmland vanished. The result is what economist Hernando de Soto calls “dead capital.”⁵²

Secondly, the land seizures broke a chain of vital business knowledge. With the majority of the country’s productive land in the hand of people with little to no farming experience, yields dropped dramatically. With very little understanding about modern farming methods, the farmers were doomed from the start as was their sector of the economy. Considering that 60 percent of the manufacturing sector was directly tied to the agricultural sector, the contagion spread rapidly.

Thirdly, the land seizures broke down the trust, confidence and perception that the rules of the marketplace would be fairly enforced by the government. The rule of law was willfully ignored by the Mugabe government, even after the land reforms were declared unconstitutional by the Supreme Court. This marked a much more serious violation than previous government abuses and infringements as it set a dangerous precedent. This was the first time that the executive branch of government had directly condoned the expropriation of private property, and there was nothing that the judicial branch could do. The erosion of people’s trust in the rule of law soon spread to the stock and real estate markets, and foreign direct investment plummeted an astonishing 99 percent from 1998-2001⁵³. A breakdown in trust and confidence in the institutional frameworks made Zimbabwe an unattractive place for both foreign and domestic capital and signaled the beginning of the end for this ‘risky’ dictatorship.⁵⁴ The country had reached a tipping point, and it was the land reforms that sent them over the edge.

For many of the reasons illustrated above, the remaining sectors of the Zimbabwean economy were soon to share a similar unfortunate fate as agriculture and manufacturing. The mining and tourism sectors quickly overtook agriculture as the leading sources of foreign currency inflows, but they too collapsed due to an overvalued currency, a rapidly declining tourist base and the general distrust and lack of confidence in the economy. Ultimately, the data suggests that of all the possible causes attributed to Zimbabwe’s failures, the 2000-2003 land reforms and the erosion of an enforceable property rights system had the most significant and widespread impact and, along with other institutional failures, lie at the root of the subsequent national collapse. With the help of the visual below, the string of events and consequences created by the 2000-2003 land reforms can be readily understood.

The Present

This chapter will expose the harsh realities of present-day Zimbabwe and highlight the severity of the problems. When compared to its neighbors and viewed from an international development perspective, the overall failure of Zimbabwe’s regulatory institutions and the complete decay of liberal markets may become more tangible. There has not been a case of a country, to the best of my knowledge, in the past fifty years, whose fortunes, prospects and prosperity have dropped so quickly to the extent that journalists are calling this a case of “de-industrialization” and “an economic catastrophe.”⁵⁵

⁵¹ The link between land equity and market growth was unfortunately illustrated recently in the United States where a reevaluation of the sub-prime mortgage market in the United States led to a crisis in the credit market and ultimately a sharp slowdown in growth and wealth creation.

⁵² Richardson, 5.

⁵³ The official FDI into Zimbabwe fell from \$443 million in 1998 to a mere \$5 million in 2001.

⁵⁴ Zimbabwe’s risk profile escalated dramatically as the World Bank changed its risk premium on investment in Zimbabwe from 3.4% in 2000 to 20.4% in 2001. The severity of the financial problems become palpable if one compares them to the reaction when the US Fed cuts interest rates by a quarter percent or inflation rises by a percentage point.

⁵⁵ Kriger, Norma, “From Patriotic Memories to ‘Patriotic History’ in Zimbabwe, 1990 – 2005,” *Third World Quarterly*, (Sep 2006, Vol. 27,) 1159.

Endowed with rich mineral assets, an educated workforce, and beautiful natural wonders, Zimbabwe seemed poised to be an African success story. Unfortunately, Zimbabwe went from a place of hope to one of the grimmest places on earth in the space of just a few years. The shortages and oppression suffered by the Zimbabwean people, today, are of biblical proportions, and the systematic series of misguided reforms and institutional failures on behalf of the Mugabe regime have buried its people in despair and poverty. Zimbabwe is currently hyperinflated, and chronic shortages in fuel and consumer goods⁵⁶ have left the majority of its population on the brink of survival. The damage is so pervasive and contagious that Zimbabwe has consistently been at the bottom of most lists of global development reports across most economic indicators, continually setting new record lows. The evidence in this chapter paints a picture of one of the world's worst places.⁵⁷

A closer look at Zimbabwe's economic and development indicators over the past eight years paints an equally dismal picture. The World Bank and the International Monetary Fund illustrate the consequences of Mugabe's economic mismanagement and fiscal irresponsibility: according to them, the percentage of Zimbabwe's population living below poverty line increased from around 50 percent 1999 to over 80 percent 2004, and GDP per capita fell from US\$2440 in 2000 to just \$340 in 2007, dropping Zimbabwe from a lower-middle income country to a lower income country according to World Bank classifications.⁵⁸ The official unemployment figures estimate over 80 percent unemployment in 2008, meaning that over 9 million Zimbabweans are stuck in a "poverty trap"⁵⁹ reinforced by lack of credit, jobs, currency or food.⁶⁰ These kinds of statistics, placing Zimbabwe in the lowest ten percent of countries worldwide, are usually only witnessed in countries experiencing traumatic civil war, regime change or a disaster of some sort.⁶¹

One indicator that has received worldwide attention and scrutiny is the current hyperinflation paralyzing the Zimbabwean economy. By definition, inflation is simply a price index, which changes as a result of a change in a country's money supply relative to the production capacity of goods and services or as a result of changes in the specific price of certain goods and services.⁶² This research has touched on the massive capital flight and drying up of foreign direct investment, and given the last chapter's lengthy discussion of the damage done to production capacity, a surge in Zimbabwe's inflation seemed unavoidable. The Reserve Bank of Zimbabwe started aggressively printing money in 2001 because the credit markets dried up and tax revenues were down as a result of the illegal squatters and land redistribution.

The effect on inflation was immediate. The official annual inflation rate reported by the Central Statistical Office (CSO) in 1999 was 59 percent. Despite being about ten times greater than an average Western developed country's inflation, the market still functioned efficiently at this level. Consumer goods were readily available and the exchange rate allowed Zimbabweans to trade and travel with relative ease.

56 The author experienced these shortages and the desperation of even the wealthy in Zimbabwe during a trip he took to Harare in July 2007. He was asked by members of his family to bring some basic consumer goods and food stuffs with him. Necessities like dishwashing liquid and olive oil could not be found in Harare and some luxury items like quality brand chocolate and comfort foods simply were not stocked in any shops in Harare.

57 IRIN (News Agency), Zimbabwe: "Rural conditions now apply in the capital," 2 August 2007

58 World Bank, *The Country Brief: Zimbabwe*, 2007.

59 Sachs, Jeffrey D. *The End of Poverty* (Penguin Books, 2006), 23.

60 Zimbabwe's unemployment rate is currently the third highest in the world, only behind the countries of Liberia (population 3 million) and Nauru (population 13000). This is striking given the size (13.1 million people) and relative development of Zimbabwe. Related article: Associated Press, "Bleak Christmas for Zimbabweans," January 2008.

61 Marawanyika, Godfrey, "Zimbabweans Shun Banks after Cash Shortages," (Harare: Agent France-Presse, 13 January 2008).

62 United States Bureau of Labor Statistics Consumer Price Index homepage, URL: <http://www.bls.gov/cpi/>

The situation deteriorated very rapidly, and the inflation rate rose exponentially even on a monthly basis after the year 2000. By 2001, inflation had surpassed 100 percent, increasing to 384 percent by 2003 before reaching 977 percent by the end of 2007. Effectively something that cost Z\$5 in January 2007 now cost Z\$50 by the end of the year. To illustrate the absurdity of daily life in Zimbabwe, a tank of gas, when available, costs an estimated Z\$1.3 billion, and with the absence of a banking system this must be paid for in cash. A simple can of Coca Cola will cost over a Z\$1 million, meaning that everyone is forced to carry around briefcases, sometime suitcases of money.⁶³ It is hard to imagine a system or society that could tolerate this stress, and in 2008 hyperinflation set in and the inflation rate skyrocketed to numbers not seen since the 1920's in Germany. Zimbabwe officially has the world's worst inflation, and in February 2008 it was reported at 100,520 percent or roughly a 275 percentage average increase in the *daily* price of goods.⁶⁴

The next category in which Zimbabwe leads the pack of losers is life expectancy. Life expectancy at birth for males in Zimbabwe has dramatically declined since 1990 from 60 to 36 in 2007, the lowest in the world. Life expectancy for females is even lower at 34 years, going from the highest in sub-Saharan African to over ten years below the sub-Saharan average in the space of under a decade.⁶⁵

Concurrently, the infant mortality rate has climbed from 53 to 81 deaths per 1,000 live births in the same period. It is estimated that 5.6 million Zimbabweans live with HIV⁶⁶, nearly half the population. Many have pointed to this as a major cause of Zimbabwe's woes.⁶⁷ According the United Nations Health Program, the estimated percentage of the population infected with HIV/AIDS was 20.5 percent in 2007.⁶⁸ This is the fourth highest infection rate in the world behind Zimbabwe's fellow sub-Saharan countries of Swaziland, Botswana and Lesotho. Basic health services have nearly ceased to exist, with surgical operations in the biggest hospital having to be cancelled because basic equipment is defunct and drugs have run out. Three-quarters of the doctors have emigrated, along with more than half the nurses, physiotherapists and social workers. Patients seeking operations and medical treatment must buy medicine themselves.⁶⁹

Ultimately, life is a struggle for survival. Both Zimbabwean citizens as well as the Mugabe regime are battling to survive in this poisonous environment. The government is paralyzed by one of the highest external debt ratios in the world, which stood at 132 percent in 2005, making it impossible for it to fulfill its obligations or balance budgets. The country's once-bulging gross domestic product fell to just over \$3 billion in 2006⁷⁰, using the official exchange rate calculation, equating to just one percent of the GDP of neighboring South Africa. Trade deficits rose to astronomical levels, and like many other economic variables, Zimbabwe's exchange rate against the US dollar reached six figures. Back in 1980,

63 For a list of daily prices, in July 2007, see Appendix A.4.

64 Reuters, "Zimbabwe inflation reaches new record" Feb. 21, 2008.

65 World Bank, Data and Research Indicators.

66 Meldrum, Andrew, *Where we have Hope: a Memoir of Zimbabwe* (New York: Atlantic Monthly Press (1), 2004), 9.

67 See section 4.5 for an explanation of why the HIV/AIDS epidemic is not the root cause of Zimbabwe's crisis.

68 UN Development Programme, Human Development Report 2006, UNDP.

69 The Economist "Coming to a Crunch" March 22, 2008.

70 The exact figure is \$3.146 billion. A nation's GDP at official exchange rates (OER) is the home-currency-denominated annual GDP figure divided by the bilateral average US exchange rate with that country in that year. The measure is simple to compute and gives a precise measure of the value of output. Many economists prefer this measure when gauging the economic power an economy maintains vis-à-vis its neighbors, judging that an exchange rate captures the purchasing power a nation enjoys in the international marketplace. Official exchange rates, however, can be artificially fixed and/or subject to manipulation - resulting in claims of the country having an under- or over-valued currency - and are not necessarily the equivalent of a market-determined exchange rate. Moreover, even if the official exchange rate is market-determined, market exchange rates are frequently established by a relatively small set of goods and services (the ones the country trades) and may not capture the value of the larger set of goods the country produces. Furthermore, OER-converted GDP is not well suited to comparing domestic GDP over time, since appreciation/depreciation from one year to the next will make the OER GDP value rise/fall regardless of whether home-currency-denominated GDP changed.

the Zimbabwean dollar was stronger than the US dollar. However, in 2008 the black market rate was around Z\$250,000 to US\$1.⁷¹ Ultimately, there was profound weakness in the domestic economy and the state, with its neopatrimonial tendencies, attempted to undertake economic activities directly to fill the vacuum. Because of the state's non-developmental proclivities and organizational weakness, efforts to produce and regulate goods in the public sector or remedy economic crises failed. The alternatives of importing goods or attracting foreign investment, as will be shown in the next chapter, would have made sense but were foregone due to Mugabe's self-imposed isolation and a lack of alternative sources of demand and income.⁷²

Many questions remain: (1) how did the situation get this bad? (2) Why was the collapse so systematic and so rapid? And (3) what could have been done to prevent this from occurring? These are the issues that will be dealt with in chapter 4, which examines the institutional reasons for the collapse and explores the true causes of the systematic failure.

The Real Reasons for the Collapse

4.1 The Institutional Nature of the Collapse

The world has witnessed instances of imperfectly-executed land redistribution programs before (England, Canada and Australia), and economic and development conditions have deteriorated close to the extent that they did in Zimbabwe in other developing countries. What makes the case of Zimbabwe unique is the systematic institutional collapse and perversion of all major regulatory bodies and checks and balances at the expense and isolation of the Zimbabwean people. One way to describe this type of state that intervened heavily in its economy, but with disastrous effects, is 'neopatrimonial state'. Atul Kohli, a professor of Politics at Princeton, argues in *State Directed Development*⁷³ that neopatrimonial states have often emerged in societies with weak private sectors, but instead of strengthening the private sector, these states have appropriated scarce economic resources and diverted them everywhere but toward productive investment. These states are neopatrimonial because, despite the façade of a modern state, public officeholders tend to treat public resources as their personal patrimony (see section in Chapter 2 on forced seizures).

"They are often not really modern; rational-legal states [see section 1.2 and section 4.3 for a description of some legislative and judicial abuses]. [Generally speaking,] whether organized as a nominal democracy or as a dictatorship [the case not being so clear in Zimbabwe], state-led development under the auspices of neopatrimonial states has often resulted in disaster, mainly because both public goods and capacities to pursue specific tasks in these settings have repeatedly been undermined by personal and narrow group interests."⁷⁴

A widely-cited example of this state typology is that of Nigeria, which encapsulates how the ill-designed setup and operations of the state can lead to economic stagnation and underdevelopment in a very resource-rich country. Likewise, this section will illustrate Zimbabwe's inconsistent economic policies, failure to support indigenous capitalists, poor-quality but activist labor, and political instability. The Zimbabwean state usurped control and dominance over both societal and state institutions by means of significant organized power, as well as organized coercion to centralize their control and serve their minority interests. These minority interests included those within Mugabe's ruling elite, high-ranking military and government officials, and Mugabe's native tribe - the Ndebele. Tribalism has often been associated with neopatrimonial states (as too was the case in Nigeria), giving preferential treatment to those members of the tribe over rivals and using the state's resources to empower and enrich its

71 The Economist "Coming to a Crunch" March 22, 2008.

72 Kohli, 15.

73 Kohli, 15.

74 Kohli, 9.

leaders. Furthermore, neopatrimonial states tend to have a weak sense of public purpose, such that ideology does not play a very significant role.⁷⁵ Pronouncements of public goods are usually cloaks for the pursuit of personal and sectional interests.⁷⁶ The organizational underpinning of neopatrimonial states also tends to be underdevelopment: politics tends to be 'preclass, interest groups are often not well organized, and public bureaucracies lack competence and professionalism'.⁷⁷ These factors are all found to be evident in Zimbabwe and it is as a neopatrimonial state that the collapse of Zimbabwe can best be understood. The following sections will explore how the ZANU-PF abused and mismanaged the state apparatus and held a violent monopoly over all aspects of life leading to economic collapse and suffering in a resource-rich country.

A collapsed agricultural sector and negative economic growth are not particularly unique to Zimbabwe, and have been witnessed across Africa and the developing world. However, many of these countries still survive thanks to international aid efforts and the conditions related to that aid regarding good governance and sound economic management. The dismal situation described in Chapter 3 could have been prevented, or at least mitigated, had some of the state's organizations and institutions not been bent around the will and needs of Mugabe and his sectional interests.⁷⁸ This chapter will first explore how and why Zimbabwe became completely isolated from the international community, and how the state perverted all of its organizations with a self-serving bias and ill-designed policies leading to what some have labeled "an institutionalized dictatorship".⁷⁹ The later sections of this chapter will address some of the most widely-cited factors for the collapse and describe why each of these causes, from drought to HIV to the personality of Robert Mugabe, supplemented to the primary institutional decay and hence the inability of the state to remedy or mitigate the ensuing collapse.

There are many institutions that are needed to create a well-functioning, balanced and healthy state. Some of these include (1) a well-enforced property rights system, (2) a free and independent press, (3) fundamental democratic procedures and values, (4) free and independent judicial and legislative system, (5) rational economic and fiscal policy, and (6) an appropriate level of integration into global capital markets. This section will demonstrate, in turn, how each one of these elements were manipulated and perverted by an autocratic state from 2000 to present.

The first of these elements has been previously covered, and for a full description of the destruction of the property right system in Zimbabwe following the land reforms and its connection to economic decline, see Chapter 2. Chapter 3 uncovered the extent of the crisis. However, at the same time, the economy was coming off its proverbial tracks, so journalistic and political freedoms were being crushed.

4.2 The Press under Oppression

The second of these elements, a free and independent press, began to be eroded in 2001, and the overall ill-treatment of the press, both foreign and domestic, escalated to the point that observers now categorize Zimbabwe as one of the most repressive regimes in the world. In its continual battle for control and power, the government launched an autocratic and repressive campaign against the media and political opponents shortly after the land reforms of 2000. The country's only independent daily newspaper with readership of over 1 million people, the *Daily News*, was routinely raided and threatened.

⁷⁵ Ibid, 13.

⁷⁶ Dashwood, Hevina S., *Zimbabwe: The Political Economy of Transformation* (Toronto; Buffalo: University of Toronto Press, 2000), 28.

⁷⁷ Kohli, 22.

⁷⁸ For an insight into the inadequacy of the government to set proper agenda and budgets, see Government of Zimbabwe, *Zimbabwe: Towards Sustained Economic Growth: Macro-economic Framework for 2005-2006*, 2004.

⁷⁹ This is how Morgan Tsvangirai, leader of the opposition party categorized the Mugabe regime in July 2005.

In 2001, its printing presses were bombed before being forcefully closed down in September 2003.⁸⁰ The BBC and CNN are officially banned and even bloggers have been threatened and punished for publishing content critical of the government. As a result, there has not been a free and fair election in Zimbabwe since 2000. Control of the press took on a legal form when the Access to Information and Privacy Act was passed in early 2002. It required all journalists working in the country to seek approval from the state. By June 2002, more than 10 journalists had been detained, and the remaining foreign journalists were expelled. The independence and freedom of the press, something most theories hold to be essential for a functioning neo-liberal state, has all but been demolished and replaced by the biased use of national instruments for propagandist agendas against so-called 'enemies of the state'.⁸¹ Zimbabwe's 'fourth estate'⁸² has been corrupted, along with many of Zimbabwe's previously sophisticated institutions, taking with it any checks and balances that it may have provided for the executive or legislative branches. After being arrested for committing journalism, an American journalist had this to say after his recent release from a Harare jail: "The veneer of freedom Mr. Mugabe permits the press is applied with the thinnest of coats."⁸³

4.3 Democratic Institutions and the March 29, 2008 Elections

This contagion soon spread to the political sphere. Democracy, and its institutions, soon became tools in Mugabe's arsenal against its enemies. Every election since June 2000 has been marred by the imprisonment and torture of political opponents⁸⁴, the use of scare tactics by the ZANU-PF, and the alleged rigging of election results. Ultimately, the coercive apparatus of the state destroyed the democratic institutions. Basic human rights were ignored and democratic values plundered in every election. Police approval was needed for a gathering of more than three people, MDC supporters were often targets of physical attack, and activists were routinely arrested and detained. The so-called Independent Electoral Commission, led by an army officer and mostly staffed by military personnel, was not autonomous. The MDC was not allowed to inspect any of the election voters' roll, but claimed that two million of the six million names on it were of 'ghost' voters.⁸⁵ This year's, March 29, elections witnessed another round of intimidation, rigging and governmental tampering.

The March 29 elections were the first time in over 25 years that groundbreaking change could be in store for Zimbabwe. Mugabe's main opponents in the elections were Simba Makoni, a former finance minister and ZANU-PF member, and Morgan Tsvangirai, the leader of the main opposition party, the Movement for Democratic Change (MDC). Makoni and Tsvangirai were well-positioned to give Mugabe his toughest political fight yet. Mr. Tsvangirai only narrowly lost the 2005 elections, 56% to 44%, in an election fraught with intimidation, violence and complete control of the media. Estimates by the Mass Public Opinion Institute predicted Mr. Tsvangirai would win 28% of the vote, Mr. Mugabe 20% and Mr. Makoni 9%. Nearly a quarter of the population, 24%, refused to reveal a preference, illustrating how institutionalized repression and fear have become in Zimbabwean's minds. 8% were undecided.⁸⁶ Many were hoping for change: a change in leadership, a change in their fortunes, a change in their living

⁸⁰ Darnolf, Staffan and Lisa Laakso ed., *Twenty Years of Independence in Zimbabwe: from Liberation to Authoritarianism* (Basingstoke, UK: Palgrave Macmillan, 2003), p. 245.

⁸¹ Norman, Andrew, *Robert Mugabe and the Betrayal of Zimbabwe* (Jefferson, N.C.: McFarland & Co., 2004).

⁸² The term "Fourth Estate" refers to the press, both in its explicit capacity of advocacy and in its implicit ability to frame political issues. The term goes back at least to Thomas Carlyle in the first half of the 19th century.

⁸³ Bearak, Barry, "Jailed in Zimbabwe: A Reporter's Ordeal," *New York Times*, April 27, 2008.

⁸⁴ Leader of the opposition, Morgan Tsvangirai, was famously beaten close to death by the henchmen of the Law and Order Ministry on 11 March 2007.

⁸⁵ Timbe, Augustine Mano, *Democracy in Emergent States: Case Study of Zimbabwe and Other Developing Countries* (Harare: 2007).

⁸⁶ *The Economist*, "Coming to A Crunch" March 22, 2008.

conditions and a change in Zimbabwe's reputation.

The results of the March 29 elections were initially a 'miracle.' Although no official results were announced until weeks after the elections, preliminary reports suggested that Tsvangirai's MDC had won 113 of 210 parliamentary seats, giving it the majority it needed to win the elections and claim parliamentary, if not presidential, victory.⁸⁷ The unofficial results reported by the Zimbabwean Electoral Commission showed Morgan Tsvangirai with 50.4%, Mugabe with 43.7 and the independent, Simba Makoni, with 7% of the 2.3 million votes cast.⁸⁸ A peaceful exit by Mugabe was unimaginable until the months leading up to the March elections. Reports from high-level ZANU-PF officials suggested that negotiations were taking place between MDC and ZANU-PF that would save Mugabe from international prosecution by human rights agencies for the crimes his regime committed in return for a peaceful acceptance of the majority vote and a quiet exit from power. The Zimbabwean Politburo began drafting emergency rebuilding and reform strategies, which the international community estimate would cost over US\$1 billion per year for many years to come.⁸⁹ Mugabe is still clinging to his seat in power despite national and international clamor for him to step down and the next few months will be a watershed time in Zimbabwe's history. Until the state's vice-like grip on the country is loosened and transparency, trust, and a market system returns to Zimbabwe the problems will not be solved.

4.4 Judicial and Legislative Abuses

The fourth element needing exploration is the health and independence of the judicial and legislative systems in Zimbabwe. Here too, it will be shown that these branches of government unfortunately also fell into the hands of state-directed manipulation. In keeping with the perversion associated with a neopatrimonial state, variations in Zimbabwe's basic authority structure were a product of three sets of competing influences capable of such decisive political intervention: colonialism, nationalist movements, and coercive politics of national armed forces.⁹⁰ Zimbabwe's history incorporates all of these malevolent factors, each of which influenced and changed the state's balance of power and abused many legislative and judicial standards and practices along the way. For instance, the instigators of the 2000-2003 land invasions, despite being found guilty of trespassing and illegal squatting, were never brought to justice. Instead, the judicial system was used to harass the opposition. Many judges were forced into early retirement because of their unwillingness to comply with the state's demands and pressures. With the rule of law all but gone, civil society nearly collapsed, and fear forced out most people that could leave the country. It is estimated that the white population in Zimbabwe had fallen from 200,000 in 2000 to around 25,000 in 2005. A United States foreign policy statement in May 2006 belittled Mugabe's governance as "illegitimate and irrational."⁹¹ Mugabe manipulated laws for his political purpose, as was the case in 2001 when Libyan president Col. Muhammar al-Qaddafi was allowed to donate funds for the forthcoming presidential election to the ZANU-PF, although, ironically, Zimbabwean law had recently been changed to prohibit foreign funding of political parties.⁹²

In 2005, when the ZANU-PF captured the two-thirds majority of parliament and needed to make

⁸⁷ Time, "Zimbabwe Ponders Life after Mugabe", 1 April, 2008.

⁸⁸ Although the media has not focused as much on the campaign of Simba Makoni, his brave decision to break away from his ZANU-PF cronies and run as an independent against an oppressive regime may have stolen just enough votes from Mugabe to tip the MDC over the crucial 50% mark that prevented a run-off ballot. These heroic acts should not go unmerited, and Mr. Makoni should be welcomed into a new government whose main task is to piece together the broken fragments of Zimbabwe's once-healthy democratic and financial frameworks and inject a glimmer of hope into the average Zimbabwean's life.

⁸⁹ "Zimbabwe reconstruction \$1 billion a year-UK," Reuters (April 3, 2008).

⁹⁰ Kohli, 17.

⁹¹ Skalnes, Tor, *Politics of Economic Reform in Zimbabwe: Continuity and Change in Development*, (London: Macmillin, 1995).

⁹² Sylvester, Christine McNabb, *Zimbabwe: the Terrain of Contradictory Development* (San Francisco: Westview Press, 1991).

constitutional amendments, the full force of the state came down on any opponents. Now land owners were denied the right to appeal the expropriation of their land. This change empowered government officials to confiscate passports, in the interest of national security, with no right to appeal. Nowadays, the police have the freedom to make arrests based on creative charges ranging from 'dangerous parking' to 'failure to stop for the President's motor cavalcade in a timely fashion'.⁹³ Notwithstanding the plethora of new amendments and laws aimed at protecting the President's personal and tribal interests, Mr. Mugabe has reaped significant financial benefits during his reign as 'Right Honorable President of the Republic of Zimbabwe'. His family's personal complex in downtown Harare is said to have cost over US \$110 million (the equivalent of nearly 4% of GDP)⁹⁴ and all cameras are banned within two blocks of the property. The head of Zimbabwe's Law Society, and leading human rights lawyer, openly states that "ultimately, there is no law in Zimbabwe," adding that "the law only applies when it serves the perpetuation of the state".⁹⁵ So with severely diminished confidence in corporate, constitutional, property, legal and human rights, Zimbabwean society began to crumble.⁹⁶

4.5 Fiscal and Economic Mismanagement and Isolation

The last two elements will be dealt with in conjunction, as they are related to one another and vital in explaining the uncontrollable demise of the country. The economic woes of Zimbabwe are rooted in the ideological shift that took place after independence, moving from a Western capitalist paradigm to a socialist-inspired party commanding the controlling heights of the economy.⁹⁷ The ZANU-PF and its leadership's socialist tendencies, many having been trained in communist-inspired camps or bases in Tanzania, China or Russia, were inevitable going to inform some new public policy and the economic agenda. Unfortunately, without effective organizations, neopatrimonial states tend to lack developmental power and are rarely capable of defining and setting economic goals, as was the case in Zimbabwe.⁹⁸ Understandably, the waves of new policies and priorities adopted by the ZANU-PF had mixed results, and although the black majority enjoyed equal rights and improved civilian benefits (education, social mobility and job access) the private sector was opposed to this new competition, and many white professionals and multinationals left the country after independence. This capital flight and brain drain forced Mugabe to reluctantly loosen control over the economy and revise the country's investment guidelines in the 1980's after the surge of divestment. The ZANU-PF relatively loosened control over the economy until 2000 and the previously mentioned land reforms. Instead of finding solutions to the ensuing crises, the government became increasingly inflexible and self-serving.

Economic resources controlled by the state were put to corrupt use and ended up in the hands of elites for private consumption, leading to failed efforts at state development.⁹⁹ Moreover, politically-connected individuals were allowed to prosper in a crumbling market after the land reforms. Houses

⁹³ The author was arrested for the charge of dangerous parking in July 2007 and evaded custody by bribing his way out of jail for Z\$500,000 ("US \$4). These charges apply to citizens and visitors alike and no pardon is given if one is not familiar with the bylaws surrounding how and when one should stop if one sees the Presidential cavalcade approaching. This is indicative of the level of paranoia and fear that the president lives with and the measures he is willing to take to protect himself from his own people.

⁹⁴ Mumbengewi, Clever ed., *Macroeconomic and Structural Adjustment Policies in Zimbabwe* (New York: Palgrave, 2002), xxi, 308.

⁹⁵ Quote from Beatrice Mtetwa taken from Barry Bearak's "Jailed in Zimbabwe: A Reporter's Tale," *New York Times*, 27 August 2008.

⁹⁶ Simultaneously Zimbabwe's built environment began to decay with infrastructural collapse lagging the institutional crises. Basic public services are unreliable with the electricity in Harare frequently off: the main transformer is broken. Water is scarce in some of the poorer townships has not flown for since 2005. And as *The Economist* so delicately put it: "The only thing multiplying, apart from the noughts on the bank notes are pot-holes in what used to be Africa's smoothest roads north of the Limpopo river".

⁹⁷ Yergin, Daniel and Joseph Stanislaw, *The Commanding Heights: The Battle for the World Economy* (New York, Free Press, 2002).

⁹⁸ Kohli, 22.

⁹⁹ *Ibid.*, 22.

in the northern suburbs of Harare were sold for Z\$50,000m (US\$50,000) when the average monthly salary was Z\$20m (US\$20), and the monthly cost of a basic food basket for a family of six was Z\$60 (US\$600).¹⁰⁰ Due to the ensuing collapse of the banking and foreign currency markets, shortages surged in all imported items, including fuel, electricity, medicines, schoolbooks, machinery and spare parts. Corruption took hold of all branches of government, and despite publicly acknowledging the existence of corruption, arrogance and maladministration in July 1999, the Mugabe government began using more and more of its resources to reign in the unraveling economy.¹⁰¹ Some in the administration were aware of the inconsistencies and self-serving bias of the regime. The Governor of the Central Bank of Zimbabwe, Gideon Gono, was among the few who acknowledged that the problems the country faced were in part caused by corruption, but nothing changed and the balance of power continued to shift towards the state.

Zimbabwe's isolation began in June 2002 when it was suspended from the Commonwealth of Nations on charges of human rights abuses during the land redistribution and election tampering. At a time when Zimbabwe desperately needed international support, Mugabe intentionally isolated the country from what he considered "racist, colonialist" institutions and rejected any form of assistance from so-called 'white' Western governments or development organizations. "In abandoning the basic values of the Commonwealth—democratic institutions and good governance, basic human rights and the rule of law, which were ironically enunciated most graphically in the landmark Harare declaration of 1991—Mugabe has seriously jettisoned the well-being of his people and spurned the friendship of the outside world. It is not surprising that this man, who could have entered legend as an African hero, has lost the confidence of his Commonwealth colleagues and that consequently Zimbabwe removed itself from the Commonwealth in 2003"¹⁰² Thanks to staggering balance of payments and current account deficits and an inability to repay its loans, Zimbabwe was then suspended from the IMF in February 2007 because it had still failed to reform its broad mismanagement of the economy and trim its "bloated and inefficient civil service, massive budget deficits and souring inflation rate."¹⁰³ The tragedy is that Zimbabwe's economic policies were inadequate to fix the problems and exacerbated them instead. Mugabe blamed most of Zimbabwe's woes on "imperialists" and wanted Britain to pay for the aftermath of its historical gross injustices. One of the misguided economic and fiscal policies enacted by the Mugabe regime was its vain attempt to control prices. In June 2007, businesses were ordered to cut their prices by 50 percent, and company executives and shopkeepers who failed to do so were arrested. Supermarkets soon emptied and manufacturing, which had already dropped 50% in the past decade, collapsed further.

Another economic catastrophe was the Central Bank's mismanagement of the country's currency. In the five years between July 2001 and July 2006, the Zimbabwean dollar lost 99.94% of its official value. The Governor of the Central Bank—the same Mr. Gono that acknowledged widespread corruption—had devalued the currency by 24 percent in August 2000 to little avail, and he responded to the continuing monetary crisis not by shoring up foreign reserves, using open market operations, or targeting interest rates but by slashing three zeroes off all currency in July 2006.¹⁰⁴ At the same time he announced a 60% devaluation of the currency, which altered the exchange rate from Z\$100,828 = US\$1 to Z\$250,000 = US\$1. The removal of the 'three zeroes left the official daily interbank exchange rate at Z\$250 = US\$1, making arbitrage and abuses all too easy for those in the ruling elite. Part of Mr. Gono's radical reforms was an announcement that old banknotes and bearer checks (issued during the 2003

¹⁰⁰ "Mugabe Aides Split Over Whether He Should Step Down," Bloomberg (4 April, 2008).

¹⁰¹ "Mugabe: Liberation hero turned tyrant," Time (1 April, 2008).

¹⁰² Taylor, Ian, *The Devilish Thing* (Round Table, July 2005).

¹⁰³ Turner, Barry ed. *The Statesman's Year-Book 2006* (London: St. Martin's Press, 2006), pg. 1389.

¹⁰⁴ Sandawana, *Irreverently Tracking the Economic Recovery/Decline in Zimbabwe (and dabbling in the region) 2002-2005*, Sandawana Column, 2005.

cash crisis) would be demonetized on August 21, 2006, leaving anyone holding these old instruments three weeks to present them at banks for conversion and giving any overseas currency holders no chance to redeem any value from their old notes. Furthermore, the Central Bank launched various measure to try catch anyone suspected of hoarding cash, defined as holding Z\$5 million or more in old money. In a country where a loaf of bread cost Z\$1 million (at that time equivalent to US\$9.92), anyone who had enough money to buy five loaves of bread was over the limit and subject to punitive measures. As a result, the next day authorities seized over Z\$100,000 billion at borders as parties who had exported Zimbabwean dollars tried to re-import them ahead of the 21 August deadline. This devaluation had immediate negative effects: the Zimbabwean people were bewildered and even more mistrusting of the Zimbabwean dollar and the government backing it. On the 'black'¹⁰⁵ market, the exchange rate fell from Z\$100,828 = US\$1 on 31 July to Z\$650,000 = US\$1 on 2 August. One year later nearly all sectors of the economy had ceased to use the Zimbabwean dollar and the 'three zeroes' had reappeared. In August 2007, the 'black' market exchange rate was Z\$400,000 = US\$1. Had it not been for the 2006 removal of three digits, would have been more like Z\$4,000,000 = US\$1.¹⁰⁶

Foreign-exchange reserves had been negligible throughout the current crisis, and at 31 December 2005, they stood at US \$24.8 million, enough to cover only six days' worth of imports of goods and services. The 2006/2007 budget made no attempt to quantify gross international reserves. Export volume was still declining by over 7 percent in 2005 and 2006. Moreover, the government seized profits from gold mines, leading to nationwide shutdowns. In November 2006, in what was called '*Operation Chikorokoza Chapera*' ('No to Illegal Mining'), people who were desperately looking for gold and other minerals were rounded up and sometimes beaten.

The most recent round of Mugabe's economic paranoia began in March 2008 with the Indigenization and Economic Empowerment Act, with potentially grave consequences for white entrepreneurs. It stated that "indigenous Zimbabweans shall own at least 51 percent of the shares of every public company and other businesses" and would tacitly entitled a minister to transfer the majority share of any company—a garage, shop, factory, and, more significantly, a mine or a bank—owned by non-indigenous Zimbabweans to "any person who before 1980 was disadvantaged by unfair discrimination on the grounds of his or her race, and any descendant of that person."¹⁰⁷ That effectively means nationalizing 51% of any white-owned business, and will cause even more whites to flee and deter any foreign capital away, just to provide Mr. Mugabe with another method of reward for his loyalist and cronies. "This will entail the destruction of the economy," predicts Harare-based economist Godfrey Kanyenze, but he adds that "those in power never learn and they repeat the same mistakes over and over again, expecting different results. This is insanity."¹⁰⁸ Many observers would agree with Kanyenze, but it's hard to imagine that this will truly be the last act by Mugabe in a string of ill-timed, ill-conceived, racially motivated policies aimed at serving himself, his tribe and the political elites as the typology of a neopatrimonial state would predict. The Act in fact incentivizes local businessmen to take action and take control of white businesses with the establishment of an economic empowerment board to "give loans to local individuals intending to acquire shares, start businesses or expand existing ventures."

¹⁰⁵ The 'black' market refers to a parallel market or underground economy consisting of all commerce on which applicable taxes and/or regulations of trade are being avoided. They tend to exist in economies in major crisis where prices are too volatile for normal free market mechanism to function.

¹⁰⁶ The author was in Harare in July 2007 and witnessed the failure of the banking system first hand. No ATMs worked, credit cards were charged at the official exchange rates, which were at times ten times less favorable than the black market rates. The currency the author managed to get was from the 'black' market and the Z\$6 million he had would have technically been punishable as hoarding.

¹⁰⁷ Jongwe, Fanel, "Warning sounded over Zim equity law," Mail & Guardian, 11 March 2008.

¹⁰⁸ Ibid.

4.6 Was Zimbabwe's HIV/AIDS problem to Blame?

Some have pointed to Zimbabwe's alarmingly high HIV/AIDS rate as an important cause in the country's socio-economic and developmental woes. Although these health problems are significant they are not sufficient to have created or dictated the systematic collapse. A brief look at Botswana, Zimbabwe's neighbor, will illustrate how a country with an even higher infection rate can adequately address the problems without any significant economic or political consequences.

The infection rate in Zimbabwe reached 20.5% in 2006, and the scope of the problem has reached all tiers of society, including the infection of many cabinet members.¹⁰⁹ There has been very little governmental effort made to address the problem, and education about prevention and treatment are almost non-existent. As a result, Zimbabwe's infant mortality rate has remained around a poor level of 51 deaths per 1000 live births, and over 150,000 Zimbabweans die as a result of the disease each year. Zimbabwe is not the only southern African country plagued by the HIV/AIDS epidemic, but it has done the worst job of dealing with the associated problems and tacitly allowing hundreds of thousands of its citizens to suffer.

The detrimental effects of such a high HIV infection rate on the economic and agricultural base of a country take the form of a diminished labor force, an increased demand for national health services, and the onerous multiplier effect of having families without income-producing parents or with sickly children. But even under these dire circumstances, the AIDS epidemic cannot fully account for the agricultural, economic and political turmoil witnessed since 2000. As previously mentioned, Botswana has a higher infection rate, at 31%, but has effectively used government resources to build up health services and address the problems. Botswana had even more work to do because of its relatively weak education system, but has managed to stabilize the spread of the disease and lead the way for southern African countries trying to fight this killer disease. Zimbabwe's institutional collapse has paralyzed its ability to remedy its health crisis and prevented the state, which otherwise would have had the resources and know-how to combat AIDS, from being able to cure or mitigate the AIDS epidemic crippling the country.

4.7 Was Zimbabwe's Collapse caused by the 2001/2002 Drought?¹¹⁰

The government for a long time blamed a severe drought in 2001/2002 on food shortages and related economic failures. This is convenient, seeing as how the weather is out of the control of the Mugabe administration. The government appealed to international relief agencies in 2001 for more aid and food to counteract the drop in agricultural production. The World Food Program agreed and surprisingly attributed the crisis to "bad weather, a shortage of key inputs such as fertilizers and tractors, the crumbling irrigation system and the disincentive effect of the price controls put in place."¹¹¹ However, Zimbabwe's dependence on rain is shown to have dramatically diminished over the past decade, and the severity of the drought was not as significant as the government suggested. Yet, Zimbabwe's economy remained stable during these past droughts. The difference from past droughts, when the agricultural system was organized well enough for commercial farmers—both large- and small-scale—to produce enough in good years to create sufficient reserves, was that many commercial farms had been confiscated by the Mugabe government since 2000, severely affecting crop yields. With the virtual collapse of the agricultural infrastructure, thousands of farm laborers no longer had employment or food. Furthermore, the state had reformulated policy so that all cereal imports had to be processed through the Grain Marketing Board, a government-controlled monopoly that fixed retail grain prices,

¹⁰⁹ Hill, Geoff, *What Happens after Mugabe?* (Cape Town : Zebra Press, 2005).

¹¹⁰ Richardson, 70.

¹¹¹ Richardson, 65.

further illustrating the abuses and misadministration by the Mugabe government.¹¹² The severity of the drought is also a debated subject. The World Food Program (WFP) found, after multiple visits and reports, that the drought only lasted from January 2002 to early April 2002 and that “it primarily affected the Southern districts.”¹¹³ Furthermore, most areas in the north received average rainfall and it is in these districts in which maize, the staple food of most Zimbabweans, is grown.

From 1980 to 1999, the correlation between real GDP growth and rainfall was calculated to be 0.69. In other words, 69 percent of GDP growth was correlated with rainfall, giving an indication of just how important the agricultural sector was in driving the economy. With the economy sputtering at -0.7 percent growth in 1999, the link between GDP and rainfall then sharply disconnected in the year 2000, even as rainfall returned to above-normal levels. One can infer a different conclusion than the IMF and the WFP drew regarding the 2000/2002 crop season. In fact, the amount of rainfall during the relatively short four-month drought was just 22 percent below the 50-year average. There is no doubt that the four-month drought caused devastation for communal farmers. However, to put primary blame on the drought for the sudden drop in overall agricultural and economic production, as Mugabe, the WFP and IMF had, misses some key points.¹¹⁴

4.8 Was Robert Mugabe’s Megalomaniac Presidency and Personality to Blame?

When President Julius Nyerere of Tanzania arrived in Harare for the Zimbabwe independence celebrations on 18 April 1980, he greeted Prime Minister Robert Mugabe with the words, “You have inherited a jewel. Keep it that way.”¹¹⁵ The first decade or so Zimbabwe had become a darling of the international community and promised to be a shining example for sub-Saharan Africa, but Robert Mugabe soon proved to not be the role model that Zimbabweans had hoped for. Under his 28-year presidency the economy has shrunk on average by 1.9 percent annually and the national motto: “Unity, Freedom and Work” is a mockery, since those three things have all but disintegrated.¹¹⁶ Nevertheless, the press attention and international criticism focused on Mr. Mugabe’s leadership might be too hasty and too harsh. Mugabe’s reign was self-serving and destructive but the roots of the problems lie much deeper and predate Mr. Mugabe’s presidency.

While it must be accepted that Robert Mugabe was the source of many of the irrational and illegitimate decisions and maneuvers made by the Zimbabwean government, it would be presumptuous to think that one man can bring down an economy and a civil society, especially one with the resources and prospects that Zimbabwe had, single-handedly without the state being partly culpable. Zimbabwe’s downfall had just as much to do with the centralization of power and violence in the hands of the ruling elite as it did with the president’s megalomaniac personality and dysfunctional leadership. The minority groups within the ruling class (war veterans, Ndebele chiefs, ZANU-PF cronies and corrupt officials) fueled much of the violence, oppression and corruption and drove many of the policy changes across a variety of subjects. Therefore, it was ZANU-PF’s neopatrimonial tendencies that lay the faulty groundwork for a state whose institutions were mismanaged and leveraged toward serving the ruling elite. Think of the president as being the driver of a car, which represents an entire country. Extending this metaphor, it was as if Mr. Mugabe steered Zimbabwe off a well-paved highway towards success and took what he thought was a dirt road detour to appease some of the more important passengers. In doing so he got lost and the car broke down, becoming unable to get back on track. In this case,

112 UN Development Programme, Human Development Report 2006, UNDP

113 Richardson, 66.

114 Richardson, 84.

115 Harold-Barry, David ed., *Zimbabwe: The Past is the Future* (Harare: Weaver Press, 2004), 25.

116 “Zimbabwe Ponders Life after Mugabe,” *Time* 1 April, 2008.

institutions act like well-laid roads with proper signposts and markings that constrain and guide drivers towards cooperative and optimal driving practices. Neopatrimonial states have a tendency to sacrifice these infrastructural necessities in setting national agendas, and instead pursue the interests of just the driver (the ruling elite) at the expense of everyone in the car (the whole country). So although Mr. Mugabe was certainly not a very good driver, he never had the appropriate license to take his vehicle off-road and he failed to take responsibility for all of his passengers, the decision and blame to take the car off-course was not solely his, nor was he solely capable of steering it back on track once the car starting stalling on the dirt road.

Robert Mugabe should shoulder a large burden of blame and responsibility for the despair and ruin endured by the Zimbabwean people during his leadership. However, it was not solely his fault. For argument's sake, if he was completely removed from the equation in the 2005 election, one might suspect that much of the mismanagement and institutional collapse would have been promulgated by a likely ZANU-PF successor. His African sympathizers, like former Zambian leader Kenneth Kaunda, argue that the blame lies in the successive British colonial governments that preceded his rule. President Kuanda wrote in June 2007 that "leaders in the West say Robert Mugabe is a demon, that he has destroyed Zimbabwe and he must be got rid of - but this demonizing is made by people who may not understand what Robert Gabriel Mugabe and his fellow freedom fighters went through."¹¹⁷ Similarly, Senegalese President Abdoulaye Wade responded to his critics by saying that Zimbabwe's problems are the legacy of colonialism. The true test may only come when Mugabe is gone from power but the problems are much too complex and pervasive to lay all the blame on one man.

4.9 Is there a road to recovery?

The fortunes of Zimbabwe have, for more than two and a half decades, been tied to President Robert Mugabe. Perhaps now that Zimbabweans have managed to loosen his grip on the country, if not remove him completely from the political arena, their fortunes and futures seem brighter. Zimbabwe will need to fix its broken institutions, beginning with its worthless currency, and couple that shift with major reforms in the legal, economic and political systems. Thankfully, history has also shown that recovery is possible.¹¹⁸

One road to recovery requires revolutionary changes. "Zimbabwe needs a serious revolution," according to Craig Richardson, and he envisions it as "a legal one and not one that is imposed by force."¹¹⁹ More specifically, it needs to reestablish a system of legal, extralegal and customary practices that rests on the aspirations and sense of fairness of the majority. This legal revolution is the only way that an economic revolution can occur, which is vital in bringing confidence and sustenance back to the majority of Zimbabweans. To reverse the root of the current problems, an integrated system of private property rights that makes physical possession of assets possible for all citizens, as well as enforcing those rights, must be reformulated.

This theory is reaffirmed by the lessons learned halfway around the globe in a small South America country two decades ago. Nicaragua experienced much the same devastation as Zimbabwe after its own land reform movement in the early 1980s—hyperinflation, crashing GDP growth, and a tremendous decline in wealth. Yet within five years after the election of a moderate government, Nicaragua's economy began to flourish again from the midst of rubble. With a new set of pro-market policies and reforms that adopted a strict restoration of property rights, and in collaboration with international aid agencies, the economy and the political institutions recovered and are back on track to prosperity. The point

¹¹⁷ Otton, Chris, "Canny Mugabe still hero for many Africans," Johannesburg: AFP, 6 December 2007.

¹¹⁸ The recoveries of Post-depression America, late 1930's Germany and 1990's Argentina illustrate that no matter how terrible the conditions and desperate the people affected, recovery is possible and change is often for the better.

¹¹⁹ Richardson, xvi.

being that if regime change is fluid, proactive, pro-market, and internationally supported, it is possible to reverse the almost fatal damage done by the Mugabe administration.

Conclusion: Getting your Philosophy, Politics and Economics Wrong

To say that Zimbabwean policymakers did not know what the consequences of their actions would be unfair. Nevertheless, even an elementary student of philosophy, politics or economics knows enough about the fundamental concepts of utility, due process, democracy and distributive justice to worry about the dangerous game the Mugabe regime was playing. By perverting and destroying “the cooperative and competitive relationships, which constitute a society and an economic order,” the government of Zimbabwe reset the rules, compliance procedures and ethical norms with horrific results.¹²⁰ Despite being in better shape than most African countries and having a brighter future than all of its neighbors in the early 1990s, this sinking *Titanic* now threatens to bring its neighbors down along with it. This research has explored the multiple levels of state failures and their domino effects, and has addressed Mugabe’s Presidency, the HIV/AIDS epidemic and other supplementary reasons for Zimbabwe’s collapse. As Lord Acton said in 1887, “Power corrupts, and absolute power corrupts absolutely,” and the Mugabe government, with its structural imbalances and faulty construction, has reaffirmed this maxim over the past decade.¹²¹ Even though recovery has been shown to be possible, the structural changes and distortions experienced by Zimbabwe over the past two decades provide an all-too-coarse and distressing account of how and why economic, political and moral decay began and how deep and ingrained the problems are that Zimbabwe faces.¹²²

This case study of Zimbabwe teaches us how a neopatrimonial state, tribalism and nearsighted policies can lead a country down a slippery slope that can quickly become irreversible and disastrous. Ultimately, the political elite were never able to overcome the original deficiencies and inequalities of state construction,¹²³ and they simply went from crisis to crisis, both controlling and wasting the society’s scarce developmental resources while cloaked under ideological and nationalist agendas. Ultimately, the misguided agricultural and economic policies were the first dominos in a chain of events at the institutional level that affected every aspect of society and led to Zimbabwe’s inability to remain internationally competitive or domestically stable. Free market frameworks collapsed due to a lack of trust, liquidity and the rule of law, forcing billions in capital and millions of people over Zimbabwe’s borders. Developing countries have much to learn about the balancing act between the interests of the ruling elite and overall sound institutional design in which their citizens must interact. Governmental tampering with institutions and policies is a dangerous game when decisions are misguided, actors uninformed and agendas self-serving. Let the lesser-developed world take a closer look at the institutional nature of Zimbabwe’s collapse so as to promote more productive, cooperative and ethical states with better understandings of the philosophical, political and economic implications of their actions.

¹²⁰ North, Douglas, C, *Structure and Change in Economic History* (New York: Norton, 1981), pg. 201.

¹²¹ The second part could interestingly also be applied to Zimbabwe as it says that “All great men are bad men”. Many proclaimed Mugabe as great until his reign began and his maliciousness was uncovered.

¹²² North, 201.

¹²³ Kohli, 19.