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Markets and Manipulation

Time for a Paradigm Shift?

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Abstract

There is a growing appreciation in economics that people have emotional vulnerabilities, commitments to social norms, and systematic irrationalities, which impact their decision making and choice in the marketplace. The flip side of this is that human beings are susceptible to being manipulated by unscrupulous agents who are single-minded about marketing their services and wares. This paper reviews George Akerlof and Robert Shiller's book, *Phishing for Phools: The Economics of Manipulation and Deception*, alongside other writings in the field, and discusses how this research agenda can be taken forward. The paper shows how this new research can shed light on the ubiquity of corruption in so many societies, and proposes ideas for controlling corruption.

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Markets and Manipulation: Time for a Paradigm Shift?

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1. Introduction

The free market's promise has for long been the central paradigm of economics. In its most extreme version, and not one with any shortage of adherents, it asserts that individuals are purely self-interested and rational. But this should not worry us because the market, left free from intervention, can, via its invisible hand, help coordinate individually selfish behavior to achieve the social good. The less extreme, and more ubiquitous, form of the central paradigm recognizes that markets occasionally fail, and associates the failures with the existence of externalities. Take care of these externalities by using an appropriate combination of taxes and subsidies, and you can restore the optimal properties of the market.

George Akerlof and Robert Shiller's new book, *Phishing for Phools: The Economics of Manipulation and Deception*, aims to take this mainstream construction apart, not through one large demolition exercise but, section by section, by assembling and narrating a string of stories from the history of economics and from around the world. In these stories, consumers are enticed into consuming tobacco, alcohol, and things like the 880-calorie Cinnabon, which can impair their health; consumers are tempted into overspending and consequent painful financial insecurity; and Wall Street helps create bubbles and bankruptcies, which contribute to massive macroeconomic fluctuations. The overall outcome is a brew of health problems, personal financial insecurity, and financial and macroeconomic instability.

The message that emerges from the embers of this exercise is clear enough. Human beings, by and large, want to maximize their utility, but they have vulnerabilities. They have impulses that are hard to control and may not be good for them. They can be gullible. They have a propensity to misread information depending on how it is presented. They have fears, often irrational, that can be taken advantage of. It is as if human beings had monkeys on their shoulders who make the choices for them but not always in their interest. This creates an opportunity for the scheming and the ruthless to take advantage of consumers by enticing, misleading, and misinforming them. "Phishing for phools," refers to this phenomenon and is not a spelling mistake.

The first central idea of the book is that of a "phishing equilibrium." Hence, even when the First Fundamental Theorem of Welfare Economics, which is a formalization of Adam Smith's idea of the invisible hand,[1] is applicable (because the conditions under which the optimality of

[1] Starting from the late eighteenth century, when Adam Smith published his seminal work (Smith, 1776), the idea of the invisible hand has had a colorful history (Foley, 2006), culminating in the formal proof by Arrow (1951), demonstrating that a competitive equilibrium is Pareto optimal, provided that some critical axioms are satisfied. What is often missed is that when we write a model, we start by describing a framework and then write down the axioms. But the axioms are merely the *visible* assumptions, whereas there are, invariably, assumptions built into the woodwork of the model, which, for that reason, escape attention. That human beings can speak and communicate through language is not written down as an axiom; yet it is arguable that this is an essential assumption. Much of trade and exchange would not occur if language did not exist. Likewise, I have argued

markets is supposed to hold are valid), the optimality is achieved not in terms of the true preferences of the individuals but instead, in part, in terms of the preferences of the monkeys on their shoulders. At one level, this is a simple message, but as this book demonstrates, it is also a many-splendored one, affecting different aspects of economic life in different ways, raising a host of questions and policy challenges. All this, as well as the several stories from everyday life, makes *Phishing for Phools* a compelling work and rare economics book, a fast-paced monograph of fables, at the end of which many a mainstream economist will end up questioning some of her own long-standing beliefs and presumptions.

My appreciation of the main project of this book is not surprising, because of my own view that economics' neighboring disciplines, including psychology, need to make greater inroads into economics and, in particular, into the world of development policy making. Behavioral economics is widely used by private corporations, salespersons, and politicians running for office. However, it is rarely used by policy makers and development practitioners to promote good practices, development, and human well-being. Accordingly, in 2013, we decided to devote the *World Development Report* to this sub-discipline of economics,[2] which touches, from a practitioner's perspective, on many of the themes pursued in this book.

Nevertheless, all these strengths do not put the book beyond criticism. The main criticism is that of missed opportunities. The central message of the book is the phishing equilibrium. Thus, the book unites the demand side of the usual behavioral economics with the supply side. The second most important message of the book concerns the role of stories or "narratives." How stories are formed and their contribution to motivation and decision making is then a further major challenge to economic thinking. Around these main messages, there are many implications, some of which are pursued in the book, but some other important leads are proposed but not pursued. This review aims to lay out the main arguments of the monograph briefly, critically assessing the strengths and vulnerabilities. The review then tries to show that there are some missed opportunities, which, pursued properly, can shed important light on everyday economic life and also open doors to new research and, eventually, policy.

2. The Mainstream and the Main Message

The central message of the book, as the authors point out in the Conclusion (p. 150), is summed up in the following: "There is a story regarding free markets that is widely believed in

elsewhere (Basu, 2000), certain social norms are prerequisites for markets to function well. The end of certain undesirable practices, such as child labor, it has been argued (Lopez-Calva, 2000), rely as much on norms as on economic incentives. Because we do not build our models from a more rudimentary basis, which would require the norms to be written down as axioms, their presence is overlooked. What this book does is bring to light many of the missing assumptions or axioms in the woodwork of mainstream economics.

[2] The report entitled *Mind, Society, and Behavior* was the outcome (see World Bank, 2015).

the United States and is also influential abroad. … Just let everyone be "free to choose," says the mantra,[3] and we will have an earthly paradise, as close to the Garden of Eden as our existing technology, our human capabilities, and the distribution of income will allow. … We (the authors) see the cornucopia that free markets have delivered. But just as every coin has two sides, so do free markets. The same human ingenuity that produces the cornucopia also goes into the art of the salesman. … That means we need protection against the problems."

A large part of the build-up to this message has to do with the salesman, so bent on maximizing profit that he or she is willing to exploit all human vulnerabilities. One can see examples of this in modern advertising, where products are placed in popular stores to tempt customers and especially children,[4] in the crafting and sale of financial products, and in the markets for used cars and new homes. This is what lies behind some of the big market disaster and depression stories, from the crash of the individual Ponzi to the sub-prime crisis in the United States, which triggered a worldwide recession. The irrationalities and psychological vulnerabilities of some people[5] and the hyper-rationality of others, especially when they are marketers and salespersons, can be a deadly brew. The book provides the reader with an abundance of examples of market-based manipulation, which are delightful to read and dreadful to be at the receiving end.

For instance, we learn about the Wilson Ear Drum Company in the early twentieth century advertising its product with the blunt "DEAFNESS CURED" and the message that the little device

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[3] There is clearly an allusion here to Friedman and Friedman (1980). There was indeed a dominant view once that the market left free can not only deliver society to its Pareto optimal frontier, but also cure certain forms of injustice and discrimination. In keeping with the message in Akerlof and Shiller's book, there is a literature rooted in theory and evidence, arguing that, when it comes to some of the worst forms of discrimination, such as those based on caste and race, the market left to its own devices may not be up to the task (see Deshpande, 2016; Darity and Deshpande, 2000; Basu, 2000).

[4] Here is Susan Neiman (2016, p.4), describing the ordeal of wheeling a three-year-old through the grocery store: "Finally you reach the checkout line where she lights upon brightly gleaming packs of nutritional garbage—whole rows of them, in fact, placed precisely at the eye level of a child in a cart whose capacity for delayed gratification has just been sorely tested for the past half-hour."

[5] The book draws on behavioral economics in a big way, but goes beyond at least the first principles of behavioral economics in several dimensions. A lot of basic behavioral economics is rooted in systematic "irrational" tendencies people have in dealing with risk, such as the way they assess risk and process losses and gains, from the seminal work of Kahnemann and Tversky (1979) to more recent studies (see, e.g., Basu, 1994; Halpern and Pass, 2012; Ispano and Schwardmann, 2016). These studies concern behavior that is "irrational" but that can, nevertheless, be derived from the payoffs or utility functions. Some of the irrationalities that this book is concerned with go beyond this kind of behavioral economics, to one where behavior cannot be deduced purely from the payoffs, and where the setting, framing, and history can give rise to deeper psychological propensities (Kahneman and Tversky, 2000; Sunstein, 2015). For instance, by baking its pastries on the premises, thereby creating a powerful aroma in the area of its outlets, and by placing many of the outlets in airports where people may be stuck waiting for planes, the company that invented the Cinnabon had "explosive success" (Akerlof and Shiller, 2015, p. 2). It can entice many people to consume something that violates their preferences to have a healthy diet.

"Instantly restores the hearing—Fits Perfectly, Comfortably, and Does Not Show." This was concerning ear drums about which the *Journal of the American Medical Association* noted "as a cure for deafness, [Wilson ear drums] was not worth 5 cents." Nevertheless this "reason why" advertising boosted sales, raking in massive profits for the Wilson Ear Drum Company. We also learn about the "genius" of Claude Hopkins (b. 1866), who made Schlitz Beer advertise how it produced its beer, aged it, and conducted all operations under sterile conditions. This boosted the sales and profits of Schlitz Beer. What people did not realize was that these were exactly the same ways in which beer was made by all its competitors.

We do not have to go back into history to find such examples. The evidence of consumer gullibility and its exploitation is all around us. Think of a lethal-sounding chemical and advertise in bold how your shampoo does not use it. Never mind that no shampoo uses it (because this chemical has nothing to do with shampoos), but the suggestion that your shampoo is special and safe will give your sales a boost. In a similar vein, we are told that a certain pain medicine "is the only over-the-counter pain reliever" that can give you relief all day long with "just 2 pills." Most consumers overlook the fact that another medicine for which you need four tablets could have rolled two into one and made the dose two as well.

I find it fascinating that we are so-often told how, if we buy one piece of something, we will get a second piece of that thing "absolutely free," or how the cereal packet gives away 20% additional cereal without a charge.[6] Since the price of the one piece and the price of each gram of the cereal is set by the seller, these statements mean little, but their widespread use suggests that at least some consumers do get persuaded by them. Finally, it is impossible not to be taken in by the audacity of candy boxes that come with the instruction, which sounds like advice from a medical practitioner: "Chew two after each meal."

We see misinformation in political life. Take the U.S. presidential election. The candidates want to win and so doctor and feed the television viewer with information accordingly. The television stations want to maximize the time you spend watching TV so that their ratings go up, and so feed "exciting news," by giving more coverage to the more hair-raising candidate, to achieve this. The loser is the viewer who watches TV for excessive amounts of time and becomes misinformed.[7]

Finance and financial products are excellent areas for trading lemons and extracting wealth. People who buy financial products are often unable to understand the contracts and the

[6] For an analysis of how the human mind processes a "zero" price, see Shampanier, Mazar, and Ariely (2007).

[7] The venturing into psychology by economists has also revealed some disturbing facts of social life, such as how inferior performance in certain situations may have no basis apart from the fact that certain groups have been made to believe that they are inferior. Priming this status is what actually makes them perform worse. Manifestations of this in the context of the caste system are captured well by Hoff and Pandey (2006, 2014). What causes this kind of behavior is open to question. It presumably has something to do with the sense of esteem, both that of self and of one's peers (Robert Akerlof, 2015).

fine print that they sign onto, and frequently end up in trouble they had not anticipated. As the village moneylender has long known and the research economist is now learning, many villagers would take a loan more readily if it were described as entailing an interest rate of 10% per month rather than one that charges 140% per annum (see Gourville, 1998).[8]

Clearly, the free market left completely unfettered becomes a playground for ruthless businesses. The optimality that is supposed to be delivered by the invisible hand that helps coordinate the actions of thousands and millions of selfish individuals never actually materializes, but when it does, it does so in terms of the preferences of the monkey on the shoulder. This is a central message of the book. But at the same time, the book is not a wholesale rejection of mainstream economics, nor of the importance of the market, as some other critiques have been.

Akerlof and Shiller point out that one important contribution of mainstream economics, and presumably also game theory, is the concept of "equilibrium," and demonstration of its wide applicability. I agree. This is a huge contribution of mainstream economics. From early ideas of market equilibrium to more recent game-theoretic concepts, such as the Nash equilibrium and subgame perfection, the notion of equilibrium has allowed us to analyze and predict economic life and outcomes and understand the science of coordination among multiple agents.[9]

The most exciting ventures in economic analysis that the book opens up entail combining the fallibility of the human mind and cognition with the concept of equilibrium. This opens up the idea of how this could be combined with multiple equilibria, which is not discussed in the book. For instance, there is in economics a substantial literature on multiple equilibria— from early explorations in development economics on how the lack of development can itself be a trap, creating vicious forces that hold back an economy at a low level of performance,[10] to various microeconomic applications, such as inter-generational forces of transmission that hold back individuals in penury, and, equally, make it difficult for the sons of rich fathers to become poor (Corak and Piraino, 2016). What is exciting and remains to be explored adequately is the interface between behavioral economics and the analysis of multiple equilibria.[11] Once we take into

[8] 10% per month, compounded, works out to over 200% per annum.

[9] Bardhan (2015, p.29) takes a similar line when he observes, "Many economists I know … never displayed any blind faith in self-regulating markets, even though they did and continue to value the important coordinating role and disciplining functions of the market mechanism."

[10] "[T]here may be *critical thresholds*—in overall wealth and human capital—that must be reached before the forces of standard competitive theory take hold. Countries can face thresholds and individuals can, too." (Bowles, Durlauf, and Hoff, 2006, p. 2). For a comprehensive survey of the concept of multiple equilibria and its applications to development, see Hoff and Stiglitz (2001). The intertwining of institutions and different equilibria is illustrated in Myerson (2004). The important role that institutions play is to create focal points among competing equilibria (Posner, 2009).

[11] The use of multiple equilibria in explaining social and economic phenomena is at times contested on the ground that the existence of multiple equilibria has not been demonstrated empirically. This is a flawed argument, since the uniqueness of equilibria also cannot be demonstrated empirically. The fact that an economy is in some state

account the propensity of the human mind to adapt to the social environment, giving rise to certain mindsets, group identities, social norms,[12] and even cognitive capacities (Banerjee and Duflo, 2011), we will get greater insights into various equilibrium traps in which individuals and groups can be caught, along with ideas for policy interventions to break out of them. Market forces left to themselves may not be up to the task.

What is not always easy to accommodate in mainstream economics but is true is, for instance, the way in which language affects behavior, through its play on human psychology. There are interesting studies of how gender identity in children, even pre-schoolers, can be enhanced purely by the use of a certain kind of language and behavior on the part of the teacher. Hilliard and Liben (2010) show that whether a teacher avoids making gender explicit or makes it salient, for instance, by assigning boys and girls to separate bulletin boards and lining boys and girls up separately when a queue is to be formed, makes a difference in how the children identify themselves and how they relate to others. One of the advantages of this kind of research is the way in which it draws our attention to other matters. It is, for instance, arguable, based on Hilliard and Liben's finding, that in nations in which major elections, such as national parliamentary or presidential elections, are protracted over a long period, the long exposure to the debates and arguments in the media enhances the citizens' political party identities, and tends to make for a more polarized society.

Akerlof and Shiller are aware of the power of markets to deliver, and the power of individual motives, whether to maximize profits or utility, to create growth and promote development. But if these forces are left unfettered, they can also lead to manipulation and deception, the two key words in the title of the book. One reason that markets deliver, despite this flaw, so argues the book, is the outcome of another fact that mainstream economics misses out on, namely, individual goodness, morality, and altruism.[13] There are individuals who are committed to helping others, promoting the social good, and even willing to take personal losses to achieve this. These "heroes" offset some of the negative fall-out of the usurers and exploiters.

(and treating that as a sign that that is an equilibrium) does not prove that there is one equilibrium. It shows there is at least one equilibrium. Hence, this cannot be resolved empirically either way.

[12] Although the role of identities and social norms in shaping human behavior is now accepted, if somewhat grudgingly, by economists, a criticism that is often leveled is that these seem to be plucked out of thin air, compelling us to ask the question: where do they come from? Fortunately, there is now some partial answer to this question rooted in our more basic instincts of seeking esteem and understanding of how others see us (Benabou and Tirole, 2011; Kranton, 2016; Robert Akerlof, 2015).

[13] For an interesting recent paper pointing out how a lot of standard game-theoretic analysis also misses out on this aspect of human behavior and hence gets predictions wrong, see Dreze (2016). The blurriness of the line between moral and self-serving behavior is complicated by the fact that it plays a useful role even within a person's own mind, allowing him or her to be immoral while keeping up the delusion of being moral. For an interesting analysis, see Mazar, Amin, and Ariely (2008).

These two arguments create a possibility that is beyond the analysis in the book, namely, a model of market equilibrium in which most individuals are gullible and vulnerable and thus open to manipulation and deception, but in which there are also people who like to stand up and speak out against manipulation and deception even at some cost to themselves (Fehr and Gachter, 2002). This brew with two *kinds* of people has received little attention in economics.

The book then suggests to me that this needs to be formalized and written up as a model. A demonstration of what the equilibrium looks like in a world of such a cast of characters would make it possible for other economists and policy analysts to use it.

Pursuing the leads presented in the book and then developing a full equilibrium model has the potential for a paradigm shift. It is not within the scope of this paper nor the ability of the author to achieve this; but it is possible to pick up on some of the leads to develop some of the ideas more fully. And that is what I try to do in the pages that follow.

3. Critique

The book is about phishing equilibria in which, to be competitive, people in business must do what other businesspeople are doing likewise. That is the nature of a phishing equilibrium. Akerlof and Shiller do not sufficiently emphasize that this means that bad equilibria are not necessarily the result of bad people.

The line between the good and the bad, I will argue here, is in reality blurred, for reasons that are in fact a part of the thesis of Akerlof and Shiller. People often *evolve* to becoming a naïve consumer easy to prey upon, or a market manipulator who preys upon consumers, starting from the same origin, just as they may evolve to have morals and altruism (Basu, 2000; Alger and Weibull, 2015). People who for instance have been lucky enough to have led a sheltered life with little exploitation and war may become innately trusting and even somewhat naive, having shed the faculty of being on guard.[14]

So to solve some of the problems the book draws attention to, we have to look at *systemic* problems and *collective* follies.[15] There are also interesting problems of exploitation and folly that arise with agents as rational as they can be, but for reasons that are novel and not mainstream.

[14] There are also situations where the manipulation is not done by a different person but by oneself. Hence, as Akerlof's (1991) own work on procrastination illustrates, there are cases of victimization, but no perpetrator (see also O'Donoghue and Rabin, 1999). It is a person's multiple selves that mislead and take the person to an outcome that, in retrospect, may be hurtful to her true preference. What makes this a challenge is the awareness that we now have from careful experimental studies showing that a person's time preference is subject to change by affecting his mood (Ifcher and Zarghamee, 2011). All this is part of a larger literature on self-control (see, for instance, Gul and Pesendorfer, 2001).

[15] One example of this, which does not even have to bring in the consumers, is group behavior of business people shaped by their individual interests but hurting their collective interests (Dixit, 2015).

One simple problem is the overload of information, which forces people to choose what information they want to take in. This may be an impossible problem to solve rationally. Modern game theory also shows how it may be rational to be irrational, although as the construction of this sentence immediately suggests, this runs us into deep philosophical paradoxes.

There are also some deep reasons for malfunctions in an economy that are related to language. It is, for instance, arguable that reality and possible states of the world are more finely grained (they may even be a continuum) than language is able to capture. Since the coarseness of language or our conception of the world may be different depending on the person or the language, this can give rise to inefficiencies and market failures. Suppose, for example, that no language is able to describe or has words for all the integers. One language has words only for pairs like … {1, 2}, {3, 4}, {5, 6} …, whereas another language has words for pairs like … {0, 1}, {2, 3}, {4, 5} and so on. Misunderstandings among people belonging to these two different language groups trying to converse and coordinate their behavior can lead to market failures and crashes.[16] This can be unintended, although it is also possible for some to take advantage of the fact that we have no language to describe fully all worlds.

As I said earlier, there are parts of the book where I would have preferred that the authors had resorted to some formalization and algebra. This may need a little explanation, since economists are usually criticized for over-formalization and the use of mathematics for the sake of using mathematics. Although this criticism may be fair, formalization is often a disciplining device that compels researchers to confront questions that they otherwise would gloss over, and leads them to other important questions and puzzles. It is for these reasons that it would have been worthwhile for the authors to resort to methods of formal modeling at least in a few places, of the kind that both authors have used in their earlier papers and books. By drawing attention to the flaws in mainstream economics that give rise to complacency, to a feeling that all is well, it also creates the space for policies and interventions for a better and fairer world. Behavioral economics has given us numerous ideas for doing so,[17] but there is ample scope for doing more.

The problems that the book talks about have been with us from ancient history, when some groups conquered or cajoled and duped other groups into submission and exploitation. The book rightly points out that such behavior is not the exception but part of life. But this raises the

[16] While the point being made here is a broad philosophical claim, there are some analyses in economics that illustrate this problem in special situations. See, for instance, Rubinstein (1989) and Morris and Shin (1998).

[17] We know now that a small change in the college application process can have a large impact on the quality of the colleges that students from low-income families actually attend, which substantially increases their projected lifetime average income (Pallais, 2015); we have learned how, through some simple cues, we can curb excessive payday borrowing (Banerjee and Duflo, 2011; Bertrand and Morse, 2011); we have learned a lot about the analytics of commitment savings, which can have a large impact on human welfare (Thaler and Benartzi 2004; Karna Basu 2014); and we know how in certain situations we can improve road safety by encouraging passengers to speak up (Habyarimana and Jack, 2011). World Bank (2015) provides many more examples of the uses of this kind of knowledge in enhancing human welfare.

question about what we should do about it, and also who the "we" refers to. Maybe this will not have an answer, but formalizing and taking the story forward in search of that answer would be worthwhile.

There are two critiques that will, one can anticipate, come from the mainstream against the main theses in this book, one that can be disposed of easily, and another that cannot. The first is the charge of paternalism. As soon as one recognizes, as this book does, the presence of a monkey on the shoulder, misdirecting the ordinary consumer or laborer, it gives rise to the question of correcting this through the intervention of the state or a regulator or, for a nicely neutral term, a guardian. The charge that is leveled against this kind of analysis and research is that of paternalism, namely, that of trampling over the preferences of individuals.

Indeed, this is a question that cannot be dismissed out of hand.[18] Once we open the window to interfere with a person's individual choice, there is a risk of hurting individual freedom and, worse, of the guardian, be it the regulator or the state, taking advantage of it. Since Akerlof and Shiller do not take on this pervasive criticism directly, it may be worth pausing to fill in the caveat.

In taking on the criticism, it is important to distinguish between two kinds of paternalism: one where the state compels people to make certain choices or desist from certain others, and one where the state influences people's choice by, for instance, appropriate framing or providing critical information. Let us refer to the former as "paternalism by compulsion" and the latter as "paternalism by influence."[19]

A law *requiring* people to wear seatbelts in cars or helmets on motorcycles is an example of the former. Giving people the *choice* of donating or not donating their body organs in the event of an accident and, for instance, reminding them that there is a great need for organs is an example of the latter. Indeed, there are studies showing that if you give people the choice between donating their body organs and not donating, which one you make the default option (that is, in the event of not explicitly making a choice, what the answer is presumed to be) makes a huge difference to the number of people who opt to donate their organs after their death.[20] One of the most striking examples of this comes from Johnson and Goldstein (2003).

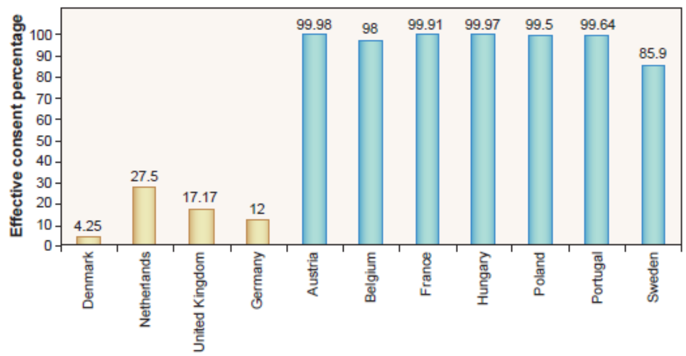
[18] This was a critique frequently leveled against the World Development Report on Mind, Society, and Behavior (World Bank, 2015) in the early stages of that report.

[19] "Paternalism by influence" is similar to the concept of "libertarian paternalism," as developed by Thaler and Sunstein (2003) and Sunstein and Thaler (2003), and also "asymmetric paternalism" in Camerer et al. (2003).

[20] This is just one example of many studies that show how features of a choice situation, which standard economics would consider irrelevant, make a difference to what people choose and how they behave. A recent study conducted in Sierra Leone shows that if one person in a pair is given some money and then given the choice to give some of it away to the other person in the pair (the "dictator game"), they give away 19% more if there is a white man standing in the room (Cilliers, Dube, and Siddiqi, 2015). I think it would be safe, further, to hazard that if

The table below is taken from their paper. In the first four countries, where organ donation ranges from 4.25% to 27.5%, the default option is not to donate. That is, if you say nothing, your organs will not be taken. In the remaining seven countries, the default option is to donate, and donation occurs at rates that range from 85.9% to 99.98%. The difference in behavior is huge. It shows that, just by presenting the options in a certain way, we can change the choices that people will make. This finding, we know, carries over to the other domains of human life, from saving for retirement to getting your children educated.

Table 1



Effective consent rates, by country. Explicit consent (opt-in, gold) and presumed consent (opt-out, blue).

Source: Johnson and Goldstein (2003, p. 1338).

Paternalism by compulsion, such as the compulsory helmet and seat belt law, has been the source of some philosophical debate (Nussbaum, 2001). Does it amount to an encroachment on individual freedom and, if so, how much of this is legitimate? It is easy to see that this can be a reasonable source of difference of opinion. This review is not the occasion to resolve it (if there is a resolution at all). All that can be said here is that one has to be cautious in using this kind of paternalism and, ideally, use it minimally. Even if it can be justified on grounds of systematic human failing to take the right decisions (it is arguable that few would use seatbelts if the habit were not inculcated by the use of law and threat of punishment[21]), there is a risk of exploitation by the guardians who are meant to help.

What about paternalism by influence? Many mainstream economists object to this as well. But that objection seems to me to be misplaced. Once the guardian, for instance, the state,

the white man stood in shorts and sandals, instead of suit and tie, that would also make a difference. For the experiment enthusiast, there is clearly a research idea here.

[21] Many years ago, I was told in Italy that I could buy a T-shirt with a seat belt painted on it so nicely that the police would not know I was not wearing one.

learns through its choice of actions that it can influence a consumer's choice of action, the battle of paternalism is over. There is no way to avoid paternalism. To see this, suppose a consumer has to decide whether or not to choose X, and the guardian has to choose between A and not A. Assume that if the guardian chooses A, the consumer will choose X, and if the guardian does not choose A, the consumer will not choose X. Once the guardian learns about this connection between its choice and the consumer's choice, there is no way the guardian can avoid paternalism, because whatever it does (or does not do), it will influence the consumer's choice. In other words, as behavioral economics advances and we learn how we can influence people's choices by how we present the options, how we frame them, and whether or not we give some information to the people, and so on, paternalism by influence will become more and more unavoidable. We will then not have the luxury of wondering whether or not to be paternalistic, but be forced, instead, to confront the question of how to use paternalism correctly.[22]

Hence, a large part of the paternalism critique of the Akerlof and Shiller argument is invalid. However, there is a deeper issue and conundrum that arises from this discussion that we have to confront. Given that the regulators or the guardians, who are supposed to curb the power of the monkeys on the shoulders and protect the consumers, can themselves influence the choices of the consumers, and end up manipulating them for their own advantage, are we not likely to run into the same problem that we are trying to guard against, namely, ordinary people being subjected to manipulation and deception, this time not from the market manipulators but from the very guardians meant to protect them?[23] Akerlof and Shiller address this question but do not take it seriously enough, especially since their policy prescriptions and examples are aimed at societies in which corruption is relatively unimportant. They instead discuss, to considerable extent, the effects of money-raising on the legislative process.

This is the age-old question that troubled David Hume (1758) about where the power of the state comes from. If it comes from the policeman's baton, the question must arise about who polices the policeman. This is not a hypothetical question. There are plenty of examples throughout history of agents of the state exploiting ordinary people for their own gain. Often, this began differently, with the state trying to protect vulnerable people from loan sharks, unscrupulous salespeople, and fraudulent advertisers. But once the agents of the state acquired the power to do so, there was often a slow erosion of the original values; and many times those who were meant to do the protecting became the oppressors. Hence, in some sense what is

[22] It is worth emphasizing that this discussion pertains to paternalism by influence, and not paternalism by compulsion.

[23] It may appear to the reader that implicit in this question is the presumption that the regulators or leaders invariably take advantage of their superior position. That is not true. As Akerlof and Shiller point out, there are people who are mindful of the interests and well-being of others and work toward that. There are actual examples of how this may have worked. Thus, Mazaheri, Al-Dahdah, Poundrik, and Chodavarapu (2013) document how in developing transportation infrastructure in rural Bihar, in India, a few leaders managed to bring about institutional change, altering the culture of law enforcement, and improving development outcomes.

described here as the problem of the economy and markets is a problem of life. That does not make the central argument in the book wrong, but it makes the solution to the problem harder and more elusive than suggested.

Now I will turn to the second, more difficult critique that will come from the mainstream against the theses of the book. The book draws a rather clear line between what is manipulation of preference and what is not. It is arguable that there is a case for greater blurriness here; and this is so for a rather deep reason. Akerlof and Shiller are right in challenging the assumption that every individual being is endowed with an exogenously given utility function or preference relation, and individuals then live their economic lives trying to maximize their utility. As the book stresses, most human actions and decisions are influenced by the narratives that people tell themselves. But then, given the narratives that people are telling themselves, they can be phished for phools: in one type of case, because they have a narrative that is dysfunctional to them; in other cases, because, for their own purposes, others are manipulating the narratives they are telling themselves. Akerlof and Shiller, whose book is about the negative effects of manipulation and deception, do not tell the positive side of these narratives.

I would argue—and this is a matter of some consequence—that we human beings actually come hard-wired not so much with well-defined goals as with the capacity and even a propensity to develop new goals.[24]

The best example of this comes from sports. It is possible to set up three wooden poles, two vertically up from the ground and one across the two, creating a rectangular shape, at one end of a barren stretch of land, and an identical structure at another end. Then by giving people a ball and two sets of 11 people shirts of two different colors, we can get them all charged up trying to kick the ball through those rectangular posts. We know that, over time, people can get so hooked on this that they will run around panting and risking breaking bones, as if nothing else matters in life, just to be able to kick the ball through those posts, while others go equally wild to stop this from happening. I am of course describing soccer. People do not try to get the ball through the goal so as to move higher up along their indifference curves to be able to buy more apples and clothes[25] but they do it because getting the ball into the goal is so much fun in itself.[26] People are not born with this desire but acquire it. Most sports are similar. People gradually acquire a taste for them and then are willing to make major sacrifices to win.

If human beings were made the way economics textbooks describe them, there would be no sport (at least not without prize money). The fact that there is so much sport, from street

[24]Among other things, this makes unclear what is manipulation of and what is a natural change in a person's preferences.

[25] However, on occasion, there may be prize money associated with winning in soccer.

[26] For an early and deep analysis of non-consumption-related motives of human choice and behavior, see Loewenstein (1999).

corners in developing countries to large sports stadiums the world over, is strong endorsement of behavioral economics.

If we look around us, we will see that a large number of our goals and ambitions are not innate but created or evolved naturally.[27] Academics like to publish papers and many would be willing to pay to achieve this, a behavior non-academics, that is, the rest of humanity, find baffling.

People are willing to lay down their lives for their nations, that is, for an arbitrarily created space marked by boundary lines on earth. People make large sacrifices for their religious or racial kin, although it is equally possible for them to have these identities dormant with no awareness of them.

Some of these identities may be a part of our DNA, such as helping our family and friends, but many are created. Even today, there are people who have no idea about their national identity, whereas once this group identity is nurtured, there will be many who will strive to advance their nation at a considerable cost to themselves (and at even greater cost to the citizens of other nations).[28]

What we have in us is not so much an objective function to start with but an innate propensity to acquire new objective functions, targets, and ambitions as we go through life. This propensity to develop new goals and ambitions can at times be exploited, as *Phishing for Phools* so persuasively reminds us. Corporations, we know, rely considerably for their success on employees having the welfare of their respective corporations at heart, and being willing to work extra hard and make personal sacrifices to make their corporation succeed and be richer. In other words, corporations are successful when they manage to imbibe the spirit of competition in their employees, so that they behave the way the soccer team behaves to make the team win. Indeed, some of the most successful and wealthy corporate heads are people who manage to inspire their staff to live to maximize the corporation's wealth, while the heads themselves live to maximize their personal wealth.

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[27] This is not necessarily by the individual or anybody else deliberately. We do not choose the community into which we are born. Even when we make a deliberate choice to adopt a given social identity, we have very limited control over the full set of features of the group. Much evidence suggests that our experiences and exposure to particular environments shape our preferences and even our perception and cognition. For example, university students in China think more holistically (for example, they categorize objects more in terms of the relationships of the objects to each other than in terms of their membership in abstract categories), the greater is the percentage of cultivated area devoted to rice paddies in their home province (Talhelm et al., 2014). Rice paddy cultivation requires an enormous amount of coordination among people, which shapes the culture and individuals' way of thinking. University students in countries around the world are less intrinsically honest, the higher is the prevalence of rule violation in their country (Gaechter and Schulz, 2016). Taking into account how society shapes our preferences, perception, and cognition means that the range of possible equilibria is much broader than with rational actors who have fixed preferences: social patterns can change who a person is, and the individuals who have been influenced by society may sustain the social patterns (Hoff and Stiglitz, 2016).

[28] In Basu (2005), I analyze why and how certain identities become malignant.

Although this kind of manipulation and deception occurs, many of people's aims and objectives appear in life through nobody's doing, but as an outcome of natural processes. This is important in the context of the book. It suggests that even those who exploit consumers and laborers do not always do so deliberately, but through an evolutionary process of trial and error. Stores that place the most tempting foods near the exit, just before the payment counter, are likely to do better than other stores. Hence, this can be a deliberate behavior by the store or the inadvertent behavior we see in stores that have survived in a competitive market. It is arguable that a lot of the seemingly exploitative behavior is the outcome of evolutionary processes. This can render policy challenge much more difficult than when all bad behavior is deliberate bad behavior. When exploitation occurs naturally, through a process of evolution, the intervention has to be more *systemic*, and may well be much harder.

Another beautiful idea that is discussed but not developed adequately is that of "reputation mining." As individuals, corporations, and brands acquire a good reputation, there will be an increasing tendency to "cash in on that reputation." Great universities, which historically admitted the most gifted students and imparted to them knowledge and other intellectual skills, often acquire such high reputations that the rich are willing to pay large sums of money to get themselves admitted. Reputation mining is admitting students simply because they are willing to pay a large amount of money (Basu, 1989). I believe the cycles that we have seen throughout history of great academic institutions coming into existence and then gradually withering away is because of their failure to resist the temptation of reputation mining. Actually, in some ways, this may be the rational thing to do. The longer one maintains a high reputation, the more people are willing to pay, and at some point it becomes rational to cash in on the reputation that one has built up.

This explains why certain brand name goods have now become cheap, everyday commodities. Once a brand becomes more and more established, people are willing to pay large sums of money to have that logo on their shirt pocket and jacket lapel. At some point, it becomes worthwhile for the corporation to keep the logo and cut quality. Opinion catches up after a time and the brand value is lost. The trouble is that this temptation is there for all bodies that run on reputation, such as banks and rating agencies. When they begin to mine the reputation, it can be quite distressing for those at the receiving end. In future work, it should be possible to take this fledgling idea forward, developing a full theory and explanations of how brands, like empires, rise and fall.

4. Kontrolling Korruption

Phishing for Phools provides the ingredients for a better understanding of corruption. It is common to blame human depravity for the corruption that prevails in society. On this view, we argue that politicians should be more honest and business people should desist from corruption. This suggests an inability to understand that corruption can often be an equilibrium phenomenon. There are certain market conditions under which it is not possible *not* to be corrupt.

Although the book recognizes this important idea, the discussion is brief (see Akerlof and Shiller, 2015, pp. xi-xii). The idea is that, in certain settings, each businessperson's choice is often between being corrupt and dropping out of the industry altogether. Hence, those whom we see in the industry are all corrupt. The kind of corruption that occurs in this setting compels us to think differently about how to control corruption, which in deference to the spelling of "phishing for phools," we may refer to as "kontrolling korruption."

To develop this idea, let us start with the seminal model of Becker (1968), in which a person evaluates whether or not to be corrupt the same way that a person evaluates whether or not to go to a restaurant. He or she weighs the joy of eating, or the heist from the corrupt act, against the cost—price in the case of the restaurant and the expected cost of being punished in the case of the corrupt act. The fact that we may have a moral aversion to being corrupt plays no role in the decision.[29] It is like saying that people do not pick pockets when traveling by bus only because the money in the wallet is likely to be less than the expected cost of punishment, that is, the probability of being caught multiplied by the fine. This is clearly not a realistic assumption. If this were really the way people thought and behaved, traveling by bus would be a fraught experience. The thought that all passengers are busy calculating the expected profit from picking your pocket is indeed a disconcerting thought.

Clearly, the Becker assumption is wrong. That would be fine if it were harmless and made analysis with it easy. Unfortunately, that is not the case. It leads to erroneous results. To see this, make the more realistic assumption that while some people may be as Becker and so much of mainstream economics assume, other people have a moral and ingrained aversion to being corrupt. To use the language of Akerlof and Shiller, amid all the extortion and market manipulation that goes on in life, there is, luckily, a "moral community"—people who are innately moral and adhere to certain values, even if doing so inflicts a cost on them. What I am claiming here, and is hinted in the book, is that this can give rise to a lemons-like phenomenon, à la Akerlof (1970).

Akerlof's lemons model described a market in which there was no price at which used cars could be sold. A key assumption was that a seller knew the quality of his car but a buyer knew only the average quality of all used cars offered for sale. As a result, there was just one price for *all* used cars. The lower the price, the more low-quality cars were offered for sale. Knowing that the average car for sale was now of lower quality, the less the buyer was willing to pay. For some parameters, there was no price at which used cars could be sold. That is, the equilibrium entailed zero sales. This was true even though the people who owned the used cars

[29] There is now good evidence that people do have "attitudes" toward corruption and that the attitudes vary across societies (Cameron et al., 2009). This actually gives rise to another route to multiple equilibria (not pursued here), which recognizes that the institutional character of a society shapes citizens' attitudes toward corruption and their attitudes toward corruption, in turn, shape the nature of society.

valued cars of a given quality less than did the people who were interested in buying used cars. Below I will describe a situation in which there are some intrinsically moral people, but in the equilibrium everyone in industry will be corrupt. Just as the price in Akerlof's lemons model changed the average quality of cars for sale, here the equilibrium payoffs will change the possibility of moral behavior and thus who the people are.

To formalize this, consider an individual deciding whether or not to enter an industry (that is, to set up business and start producing). If she enters, she has to decide whether or not to be corrupt. To fill in the story a bit, assume that each person actually has two options: (1) to be a professor who gets a steady income of 0 (that is just a normalization) and has no scope for corruption, and (2) to enter the industry. In other words, not entering the industry means being a professor (P).

Once the individual enters the industry, there is scope for being corrupt. Let us assume that there are two kinds of persons in society. There is first the Beckerian type, often called *homo economicus*, for whom being corrupt is like buying oranges. They will be corrupt if the benefit (the joy one gets from an orange) outweighs the cost (the price of the orange). Second, there is the "moral" type, to whom corruption has an innate negative connotation. Moral types would rather not enter the industry if entering means having to be corrupt. I shall refer to them as "moral" people. That is, a moral person is willing to settle for the 0 payoff by staying out, even when one could have got more by entering the industry and being corrupt.

Let h be the value of the heist from corruption. The probability of a corrupt person being caught is p, and, if caught, she has to pay a fine, f. Hence, the expected return from corruption is given by d:

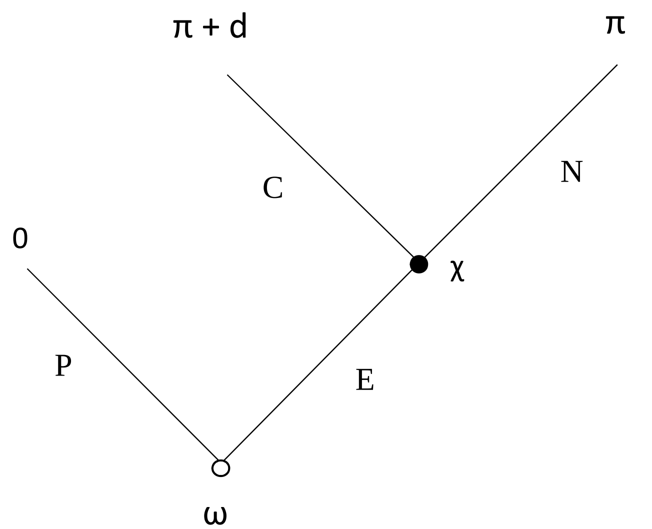
$$d \equiv h - pf$$

Let us use π to denote the profit earned if one enters the industry and does not indulge in corruption. Of course, the value of π will depend on the market structure, how many other firms are already in the industry, and if the industry is playing a Cournot or a Bertrand game. These details can be filled in later, as and when this is needed. If, on the other hand, she decides to be corrupt, her payoff is $\pi + d$.

The choices faced by a person and the payoffs she gets are described in the one-player "game tree" below. I call this a game tree, aware that this is not a regular game, since players may have values that make them disregard the payoff.

The first decision is at node ω. The individual has to choose between entering the industry (action E) or staying out (action P). If she enters, she reaches node χ and has to choose between being corrupt (C) and not being corrupt (N). The payoffs as described above are displayed in the game tree. If $d < 0$, no one will be corrupt. So let me turn to the more interesting case, where $d > 0$. If there are lots of corrupt people, then, as more and more enter the industry, the returns from the industry will be driven down toward normal profit, which in this case is 0. That is, $\pi + d$ will go to zero. This means in equilibrium $\pi < 0$.

Game Tree



Recall now that a moral person invariably chooses action N, at node χ. This means that as the industry becomes competitive, all moral people will opt for action P. The only people who remain in the industry are the homo economicus; and all firms indulge in corruption. The sheer act of survival takes us to this bad outcome. A curious implication of this is that the assumption of mainstream economics, that all people are Beckerian, has some kind of equilibrium validity. All those who stay in the industry are Beckerian indeed.

This analysis has *prima facie* validity. We often hear about industries that are inherently corrupt, such as the construction or used car industry. Much of this is hearsay, but it is also quite reasonable to see that once you get into such an equilibrium, it is very difficult to get out of it. Interestingly, this bad outcome is more likely in competitive industries than oligopolistic ones, in the sense of Cournot.

By throwing in a little more structure, we can get even more abysmal results. Suppose all careers have the scope for corruption. In other words, the branch P in the game tree also leads to a choice, where one can be corrupt or not. Hence, the branch P could look very similar to branch E. Let us assume that even the moral people have limited resilience for honesty. They are not like the standard homo economicus: faced with a choice between getting zero payoff, negative payoff, and positive payoff with corruption, they choose zero payoff. But if the only choice is between negative payoff and positive payoff with corruption, they are willing to be corrupt. In brief, there is a sufficiently low payoff such that if not being corrupt means going to or below that low payoff, people opt for corruption. It is easy to construct a model where a few homo economicus can poison the whole atmosphere, where everybody indulges in corruption. This again is not implausible. We do know of societies in which corruption is rampant and a way of life. What this analysis suggests is that such societies do not have to consist of different kinds of people but a "normal" set of people caught in a corruption trap.

Once corruption becomes rampant in industry, the methods of controlling it have to be very different from what textbooks suggest. For instance, the standard advice of setting $d < 0$ to control corruption by raising p or f sufficiently may be the right one to use when cases of corruption are the exception rather than the rule. Such a policy associated with Becker (1968) could work well. But once corruption becomes endemic, if we suddenly raise p and f to make $d < 0$, we will have $\pi + d < 0$. There will be a mass exodus from the industry—everyone flooding to be a professor. This will cause much normal economic activity to come to a halt and growth to crash. One can see elements of this in what is happening in Brazil even as this review is being written.

What then do you do to start controlling corruption in industry when it is already rampant? This is a political problem that many countries that are serious about controlling corruption, be it Brazil, China, or India, are confronting today (see, for instance, Macfarquhar, 2015).[30]

The problem stems from the fact that, when corruption is rampant, even if one is serious about eventually ending it everywhere, one has to decide where to start. If both friends and foes are corrupt, the political leader has a choice. If he or she does not discriminate between them and arrests from both groups, the leader will lose friends and, as every leader knows, when that happens, it becomes impossible to survive in politics. Realizing this, it is only natural that the initial effort will be directed at the foes. That, in turn, will raise the charge of cronyism, and it could be self-fulfilling as the leader seeks the support of friends even more and, in combatting corruption, directs all his or her attention at the opposition.

The way out of the dilemma that is suggested by the above model is to announce in advance that one will, in six months or a year, start a clampdown on corruption by raising p and f sufficiently to make $d < 0$. If this can be done credibly—maybe by arresting a few people, in egregious cases, before making the announcement, then this could be effective. In other words, people get advance notice that $\pi + d$ will become less than π. This will prompt people, friends and foes, to change their behavior without the need, eventually, to catch people. To go from a

[30] In October 2014, in China, for instance, an amendment to the Criminal Law was proposed, called Amendment IX, which was aimed at strengthening the machinery to curb corruption, and a new website was launched for reporting corruption, with the option of doing so anonymously (Berlin and Spagnolo, 2015).

pervasive-corruption equilibrium to a no- or a negligible-corruption equilibrium, there is no other option but to give advance notice. The alternative is to begin in earnest but slide into cronyism.

5. The High Art of Financial Fraud

There have been dreadful practices of financial fraud in the world. We have become acutely aware of this since the sub-prime crisis of 2007 and 2008 and the Lehman collapse of September 15, 2008. In such a context, to say that the moral line between right and wrong can be blurred does not fetch a sympathetic audience. Nevertheless, the critique that I made earlier of the need to recognize the fuzziness of the moral line is important in the context of financial markets. Consider the infamous Ponzi. If financial fraud were always as blatant as the basic Ponzi, it would not be such a concern. We would outlaw such a practice and bring to book anyone nurturing it. The problem stems from the fact that we can have what Robert Shiller (2000) has called "naturally occurring Ponzi" schemes, that is, financial bubbles that form without the manipulator's baton, but from natural market forces and with one person's expectations influencing and magnifying another's.

Suppose people expect house prices to rise. They will then beg or borrow (even if we leave out the steal) to buy houses, because they expect to make capital gains by holding onto them and selling later. When many do this, the prices of homes rise, confirming their expectations, which in turn lures more people into investing in houses. This kind of spiral, which has more to it than people's expectations feeding into more expectations, can cause huge price rises. When the bubble eventually bursts and prices return to more realistic levels, many people who had bought homes at a high price, expecting it to go higher, lose out. In such cases, it is not easy to find the culprit and one is compelled to think of policy differently. The aim is not to spot and punish the culprit, but to try to make systemic changes so that these naturally occurring Ponzi schemes do not form in the first place.

This in turn gives way to a more troubling idea, that of a camouflaged Ponzi, which blends legitimate activity with more dubious activities, undertaken at times deliberately, but also often unwittingly (Basu, 2010a). Consider, for instance, the widespread practice of giving stock options to the employees of a company. To see how this can create a camouflaged Ponzi, consider a company that has labor productivity below the prevailing wage, but it responds to this by setting the salary of each laborer below the market wage and making it attractive for workers to nevertheless join the company by offering stock options. Think of a Silicon Valley startup that hires highly-skilled graduates by offering a package where the wage in itself is not attractive, but by offering stock options, which carry the promise of large future incomes. As the firm grows by employing more workers, the entrepreneur can earn high profit, as can early employees of the firm, although, like in all Ponzi schemes, this will eventually crash, hurting the later employees. The entrepreneur's profit comes from the difference between the value of the products sold on the market and the low wages, since he gets to keep a part of this difference while giving away the rest as dividends on the stock options of senior employees.

The art of stock options is potentially much more lethal than most people realize. Given the ubiquity of stock options, this argument may be worth spelling out. Suppose an entrepreneur starts a firm to sell a financial product that has some value, but not enough to pay the kind of salaries he needs to to hire skilled employees. In particular, suppose each employee the firm takes on creates additional products and sales worth v dollars in each period. However, the workers demand an income of more than v dollars in each period to be persuaded to do this job. At first sight, this looks like an impossible situation, but here is what an ingenious entrepreneur can do: offer employees a salary of w dollars, which is less than v, but give attractive stock options. In period 1, employ one worker and offer her half of all profits that period onward. Next period, double the employees in the firm (i.e., employ 1 new worker) and offer the new hire one-fourth of the profit from that period on. In period 3, again double the number of employees and offer the new employees, together, a share of one-eighth of all profits that period on, which means that each new hire in period 3 is offered one-sixteenth of all profits.

The general rule is, from period 2 onward, for every period m, employ 2^{m-2} new employees, offering them stock options for $1/2^m$ share of the company's profits. This means that each new hire in period m is offered $1/2^{2m-2}$ share of all profits.

It is easy to see that this company's profits will double each period. Since each employee gets a fixed share of the profits, each employee's profit income will also double each period. And the entrepreneur earns a steady income of (v-w)/2 dollars in each period. This is a camouflaged Ponzi, which will ultimately crash, with the firm declaring bankruptcy, since it requires an infinite supply of workers. The rise of the Brazilian oil firm OGX, run by Eike Batista, came quite close to this. OGX's rise was spectacular, as was its collapse in October 2013. One of the strategies OGX used was to poach talented employees from other companies, by giving them lavish stock options. This continued for a while, with the debt building up, and then it crashed, leaving employees and investors broke.

This example shows that the use of stock options should come under greater scrutiny than happens currently. But camouflaged Ponzis are harder to handle than standard financial fraud, because a firm that indulges in such practices may, somewhere along the way, end up innovating and creating more valuable products, which makes the employment of workers possible even without the stock options. Further, it is entirely possible that those indulging in these practices do not even realize the malignancy involved. They may treat this as a way to raise money to make good investments eventually.

Another example of financial misdemeanor where it is harder to pin fault than *Phishing for Phools* makes it out to be has to do with a practice regarding collateralized debt obligations (CDOs). Pooling mortgages of different risk or going a step further and pooling CDOs into higherorder CDOs (called CDO^2) complicates matters. The practice caused some of the problems of the financial crisis of 2008, but to treat this as a deliberate act may be misplaced.

An interesting feature of structured finance is that, in earlier times, credit ratings by rating agencies, such as Standard and Poor’s or Fitch, rated whole companies or even nations. So when debt issued by some company was given a rating AA+, the lender knew that the company’s quality rating was somewhere in the interval from AA+ to just below AAA. Once CDOs and structured finance came into vogue, investment banks started creating new combination assets that were deliberately aimed at certain ratings. This tranche will be A-, this one AAA, and so on. This mixing, matching, and splicing allows the creation of assets that only just make the mark of a certain rating. Indeed, since the demand for these CDOs depends on the ratings, it is never worthwhile to create tranches that lie in the middle or upper end of a “rating interval.” In other words, these new securities are almost invariably clustered at the bottom cut-off of each interval.

It is arguable that many agents buying these assets failed to recognize the change that had occurred as a consequence of structured finance. They were used to treating an AA+ asset as an asset somewhere between the start of AA+ and just below AAA. But with the arrival of CDOs that was no longer the case. The average quality of assets in each rate category was invariably at the bottom end of the interval. In other words, there was “rate inflation,” the way some universities have had grade inflation. And just as happened in the early days of grade inflation, buyers of these assets were deceived.[31] In the world of finance, a small mistake per asset of this kind can amplify into big errors, as happened in 2007 and 2008. The CDO problem, which was indeed at the root of the sub-prime crisis in the United States, ”" not a case of deception and manipulation, but a problem stemming from the fact that ratings by rating agencies are not granular enough. It is easy to see if investments are rated over a continuum, say any number in the interval [0, 10], then the bundling of mortgages could not lead to a rate inflation.

Standard and Poor’s recently introduced a new rating system specially designed for East Asian nations, with the aim of helping the growth of regional investment and credit markets. One significant change in this new rating system is the introduction of greater “granularity” in the ratings. This should go some distance in rectifying the problem, since there will now be less space within each rating category, and so less room for rate inflation.

6. The Agenda Ahead

George Akerlof and Robert Shiller’s new book persuades, cajoles, and, ultimately, convinces, with the artful stringing of tales from real life, that a lot of mainstream neoclassical economics is flawed. The book mounts this criticism while at the same time reminding us that there is a lot in the mainstream’s method that is valuable and deserves to be retained. But the

[31] As Lin (2008, p. 7) writes, “… these new securitized financial products with layers of underlying assets were revealed to be far riskier than their credit ratings indicated.”

book leaves an unfinished agenda. If the flaws of the market are as the authors point out, what should we do to amend them? At one level the problem seems hopeless. While some people get tricked and manipulated, it is not clear how this can be amended, because the regulator can also extort and exploit in the name of providing protection and support.

To complete the project laid out so persuasively in the book, the agenda has to be to ask the policy question: What can we do to guard against the dangers outlined in this book? Mainstream neoclassical economics, for instance, gave rise to public finance—a theory of taxes and subsidies to correct for externalities and the distortions stemming from them. The mainstream also reminded us about the dangers of collusion among firms and the distortions that come from oligopoly and monopoly. This gave rise to the large literature on industrial organization and the actual enactment of laws, such as the Sherman Act in 1890 in the United States, to promote competition.

To be able to develop policy ideas for the new economics that this book aims to create, we will need to formalize some of its main ideas, and then use the formalization to develop new kinds of policy intervention. I scratched the surface of such a project in this review. There is a substantial task ahead.

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