Lessons from Pension Reform in the Americas

EDITED BY

Stephen J. Kay and Tapen Sinha

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Chapter 7

Bounded Rationality in Latin-American Pension Reform

Kurt Weyland

From the late 1980s onward, a stunning wave of social security privatization began to sweep across Latin America. Nine countries—Argentina, Bolivia, Colombia, Costa Rica, the Dominican Republic, El Salvador, Mexico, Peru, and Uruguay—have implemented private pension systems inspired by the Chilean precedent. Three more nations—Ecuador, Nicaragua, and Venezuela—have passed reform laws but have stalled in their implementation (excellent analyses in Madrid 2003; Müller 2003; Brooks n.d.).

Were these momentous changes, with enormous economic, social, and political consequences for the adopting countries, the product of rational choices, as the advocates of social security privatization assume? Did governments make reform decisions in careful and systematic ways? Did they process the relevant information thoroughly, evaluate dispassionately the costs and benefits of the Chilean model, and assess its applicability to the specific circumstances of their own nation? Thus, did decision-making on social security privatization approximate the standards of comprehensive rationality?

Based on field research in Bolivia, Brazil, Costa Rica, El Salvador, and Peru, this chapter argues that many decisions on emulating the Chilean model did not follow the procedures of full, 'economic' rationality, but were profoundly shaped by the inferential shortcuts of *bounded* rationality. Instead of proactively scanning the international environment for the relevant information, experts and policymakers mostly reacted to information about an outstanding foreign model—Chilean-style privatization—that happened to be particularly available to them. And rather than conducting systematic, balanced, cost–benefit analyses of this innovation, many of them were overly impressed by the initial success of Chile's private pension funds and used associative reasoning in depicting social security privatization as the main cause for the dramatic increase in domestic savings and productive investment and the resulting growth boom experienced by this Southern Cone country. Furthermore, instead of thoroughly adapting the Chilean import to their own country's requirements, decision-makers in

a number of countries stayed strikingly close to the original; typically of boundedly rational decision-makers, they preferred imitation over innovation and redesign. Thus, these pension reformers did not apply the principles of comprehensive rationality, but displayed the three principal shortcuts documented by cognitive psychologists in innumerable experiments and field studies, namely the heuristics of *availability*, *representativeness*, and *anchoring*.[1]

The *availability* heuristic shapes memory recall and, as its basis, attention. This cognitive shortcut gives particularly vivid, drastic, and striking information a disproportionate impact that can distort judgments of frequency and significance. For instance, people tend to overestimate the risks of a plane crash compared to the dangers of car driving. Especially after a dramatic incident such as 9/11, many individuals were reluctant to fly, preferring long trips on busy highways and exposing themselves to the objectively greater risks of accidents (see in general Kahneman, Slovic, and Tversky 1982: chs. 1, 11–14, 33; Gilovich, Griffin, and Kahneman 2002: chs. 3–5). In this vein, Chile's bold model of radical pension privatization, transmitted by Chilean experts and consultants through personal contacts, captured the attention of decision-makers in Latin America and, in a logically problematic fashion, crowded out alternative sources of relevant information. As the Chilean blueprint monopolized the agenda, other innovations—such as the NDC scheme developed in Europe (Cichon 1999)—had great difficulty entering decision-makers' radar screen. Therefore, Latin America's pension reform debate during the 1990s focused singlemindedly on the pros and cons of the Chilean model.

The *representativeness* heuristic induces people to base judgments on logically irrelevant similarities. Accordingly, they overestimate the significance of patterns that appear in small samples and mistake short-term trends as proof of structural tendencies. They also resort to associative reasoning and attribute the characteristics of parts to wholes, and vice versa; thus, they see the components of successful systems as inherently good (Kahneman, Slovic, and Tversky 1982: chs. 1–6; Gilovich, Griffin, and Kahneman 2002: chs. 1–2). Applying this shortcut, many Latin-American experts and decision-makers inferred from the initially stellar rates of return of Chile's private pension funds that the new model was inherently superior to the old PAYGO system. They held privatization responsible for the rise in domestic savings and investment in Chile, which fueled sustained growth from 1985 onward.

Finally, the heuristic of *anchoring* induces people to base their judgments on any given clue, even a logically arbitrary hint. Although they adjust their inferences in light of additional information and experiences, they diverge from their starting point much less than full rationality would require. Like an anchor, it continues to tie down their judgments. For instance, people

estimate that the product of $8 \times 7 \times 6 \times 5 \times 4 \times 3 \times 2 \times 1$ is much larger than $1 \times 2 \times 3 \times 4 \times 5 \times 6 \times 7 \times 8$ (see in general Gilovich, Griffin, and Kahneman 2002: chs. 6–8). Accordingly, pension reformers in many Latin-American countries tried to follow the Chilean model closely; the initial projects were often copied from Chile. While political considerations and pressures in later stages of the decision-making process led to more or less profound changes in several nations, these modifications mostly affected the administration or range of applicability of pension privatization, rather than reshaping the core of the new scheme, namely the institution of private pension funds in the obligatory social security system. Since boundedly rational decision-makers shy away from the computational effort of a thorough restructuring, the new social security systems of many Latin-American countries retain great similarities to the Chilean original. Ironically, this is true especially in countries such as Bolivia and El Salvador, whose limited formal labor market and underdeveloped capital market differ most starkly from Chile's. Although it was unclear whether these countries fulfilled the preconditions for instituting a private pension system (cf. WB IEG 2006: 19–29), and although full rationality would therefore have advised caution, these countries demonstrated particular zeal in importing the Chilean model.

In fact, intensive field research on the decision-making process reveals that rationality was especially bounded in those countries that followed the Chilean model most closely, namely Bolivia, El Salvador, and Peru. Given their relative scarcity of domestic technical expertise, those nations relied most heavily on advice from Chilean consultants, who eagerly promoted their own innovation. Moreover, the institutional and political weakness of the established pension agencies in these countries meant that their pension reform teams were dominated by economic generalists who lacked training and experience in the specific issue area; social security experts were marginalized in the reform process. Since the pivotal decision-makers had little prior knowledge of social security,[2] they faced particularly great uncertainty in assessing a bold, unprecedented innovation such as Chilean pension privatization, which had a comparatively short track record and unclear economic and social effects. To cope with this uncertainty, they relied especially heavily on cognitive shortcuts. Since they lacked established connections to alternative sources of knowledge (such as that available from the ILO), they based their judgments primarily on the information that happened to be available, provided by the missionary efforts of Chilean consultants and, from the early 1990s onward, the promotional activities of the World Bank (see especially WB 1994).

The institutional weakness of the state, particularly in Bolivia, El Salvador, and Peru, and especially in the social policy arena (e.g. Morón and Sanborn 2004; interview with Flores 2002), further reinforced the propensity to

resort to cognitive shortcuts. Personnel turnover in the upper echelons is very high, not only at the ministerial level (cf. Corrales 2002), but also in lower-ranking policymaking and even technical positions. As a result, incoming decision-makers have a short time horizon; if they want to leave any mark and make a difference during their precarious tenure, they must launch projects quickly. Institutional weakness thus precludes a wide-ranging, proactive scanning of the international environment for relevant experiences and a systematic, careful assessment of their promise. Instead, the ticking clock compels decision-makers—and the technical personnel from whom they commission background studies and draft projects—to use expedient means to process information and design reform plans as fast as possible. Time constraints foreclose compliance with the demanding standards of comprehensive rationality and force hard-pressed decision-makers to apply cognitive shortcuts, especially the heuristics of availability, representativeness, and anchoring.

In short, those countries imitated the Chilean model most fully whose decision-making procedures diverged most starkly from the standards of comprehensive rationality. There is a clear correlation: the tighter the bounds of rationality, the more faithful the emulation of the Chilean original. Countries with lower technical capacity relied much more heavily on Chilean consultants, who sought to replicate their own innovation in other settings. By contrast, countries with a deeper pool of expertise—such as Costa Rica and Brazil—considered a wider range of evidence, undertook more careful cost–benefit analyses, and adapted structural pension reform more thoroughly to their own needs. As a result, they diverged much more clearly from the Chilean model than did Bolivia, El Salvador, and Peru.

As the correlation between decision-making processes and reform choices suggests, Chilean-style pension privatization spread in Latin America due to bounded rather than comprehensive rationality. Cognitive shortcuts that facilitate information processing but can cause significant distortions and biases strongly affected the diffusion of this policy innovation. However, the bounds of rationality were more or less tight, depending on the technical capacity and pool of expertise that different countries commanded. Thus, divergences from comprehensive rationality prevailed in all nations but were particularly severe in less developed countries than in more advanced nations with a longstanding tradition of welfare state development.

The present chapter substantiates these arguments through an analysis of the decision-making process in Bolivia, Brazil, Costa Rica, El Salvador, and Peru. The next section analyzes the need for social security reforms in Latin America during the 1990s. The subsequent three sections examine the operation of the three cognitive heuristics mentioned earlier. The final section draws conclusions from the investigation.

Demand and Supply Factors in the Initiation of Structural Pension Reform

Both comprehensive and bounded rationality arguments assume that decision-making proceeds in a goal-oriented fashion. Actors pursue fairly clear, fixed interests, in light of which they assess their environment and identify problems. To address these difficulties, they assess the promise of potential solutions. But the two approaches diverge on how decision-makers conduct these assessments. Advocates of rational choice, who apply comprehensive rationality assumptions to political analysis, assume that actors pursue their interests optimally: they analyze problems thoroughly, evaluate all possible solutions systematically, and adopt the option that has the greatest ratio of benefits over costs. Thus, where full rationality prevails, subjectivity plays no role; the objective needs raised by a problem trigger the best possible solution (Tsebelis 1990: ch. 2).

By contrast, bounded rationality arguments claim that information processing is limited by human reliance on cognitive shortcuts. Decision-makers consider only the information that—partly for arbitrary reasons—is available to them, and they evaluate it in unsystematic, distorted ways. Therefore, objective problems as such do not bring forth solutions; instead, cognitive and ideational factors influence decision processes and outputs as crucial intervening factors. They serve as filters that keep some options off decision-makers' radar screens and highlight some aspects of costs and benefits while de-emphasizing others. Due to these distortions and biases, the solutions adopted are often not the best possible means for attaining decision-makers' own interests (Jones 1999; Bendor 2003).

Deviations from full rationality are evident in the initiation of social security privatization in Latin America. Certainly, these reform efforts did respond to clear problems that had accumulated over the years and reached serious proportions in a number of countries and crisis levels in some. Above all, actuarial disequilibria and financial deficits had come to plague many social security systems, creating a need for determined remedies (Mesa-Lago 1989). But privatization was not necessarily the best possible response. In fact, the tremendous transition cost of this drastic change was bound to exacerbate fiscal problems for many years to come (cf. Matijascic and Kay 2006: 8–9). Relief lay far in the future, outside the attention span that political leaders subject to electoral constraints could afford to apply. Given the steep discount rates arising from democratic competition, a reform that was certain to cause significantly more financial costs than benefits in the short and medium term does not automatically look like the best possible option for fully rational decision-makers, especially politically calculating chief executives. By demonstrating the limited cognitive availability of reform options, bounded rationality arguments can

better account for the zeal with which many Latin-American governments pursued pension privatization.

Latin-American pension systems certainly suffered from difficulties that called for significant change. As experts of various ideological stripes emphasized, the region's pension schemes were on the 'ascent to bankruptcy' (Mesa-Lago 1989). In particular, rapid population aging undermined the actuarial and financial sustainability of established PAYGO systems. This problem had reached crisis levels in the mature social security systems of the Southern Cone. Unable to pay retirement benefits, Argentina, for instance, had to declare pension emergencies. Other nations faced less dire straits, but the need for fiscal subsidies was on the increase, or financial equilibrium depended on illegitimate expedients, such as the dramatic compression of real pension values through accelerating inflation. Even countries such as El Salvador, with young populations and recently created pension systems, saw problems looming on the horizon (Mesa-Lago, Córdova, and López 1994).

Undeniably, there was a need for change. The pension reform efforts of the 1990s responded to real problems. They did not result from symbolic fashions or the spread of new international norms but were triggered by clear, objective, widely perceived difficulties. This demand factor played an important role in setting in motion the wave of social security privatization.

However, the problem did not determine the solution. The actuarial and financial disequilibria afflicting the existing systems did not require full-scale privatization. Objective needs as such did not bring forth the reforms of the 1990s. In addition to these demand factors, supply factors played an independent role. The particular availability of the Chilean model of pension privatization in Latin America and the corresponding neglect of other reform options, such as the NDC scheme being developed in Europe, were also decisive. Because boundedly rational decision-makers did not proactively search for and process all the relevant information, but became captivated by a policy blueprint that happened to be especially available to them, cognitive and ideational factors deeply shaped Latin-American pension reform. The objective situation clearly did not determine outcomes; instead, subjective factors, namely the mental schemes and strategies for processing uncertain information that cognitive psychologists analyze, significantly affected the decision-making process.

The Special Availability of the Chilean Privatization Model

The relevance of Chilean-style privatization for the problems facing their social security systems became obvious to decision-makers in many

Latin-American countries not through a wide-ranging, systematic, proactive search, but through personal encounters with Chilean consultants promoting their own innovation. While experts and policymakers throughout Latin America had undoubtedly heard about Chile's radical departure from regional pension traditions, the significance of this blueprint for the difficulties confronting their own nations only 'clicked' because of face-to-face contacts. It suddenly dawned on them that Chile's bold experiment might offer the solution for which they had groped for years. The unease caused by mounting difficulties quickly gave way to the promise that the Chilean model could offer a way out.

In Bolivia, for instance, the pension privatization project had an unplanned origin. As Helga Salinas, then budget director of the finance ministry and later leader of the first reform team, reports, she had for a while searched for ways to stem the increasing fiscal drain caused by the social security system. The solution suddenly appeared when she attended a conference, organized by Bolivia's business peak association, which featured as a keynote speaker José Piñera, the father of Chile's privatization. His charismatic promotion of the Chilean model made things 'click' for Salinas: she came to see full-scale privatization as a definitive solution for the worsening difficulties plaguing Bolivia (interview with Salinas 2002; similar interview with Bonadona 2002). Thus, a personal encounter, the particularly vivid presentation of a bold, novel blueprint, and the subsequent intense contact with Piñera and other Chilean consultants impressed a new idea on the policy agenda of Bolivian decision-makers. The solution that they had searched for in vain ended up falling into their lap.

Similarly, El Salvador's established social security schemes faced increasing administrative and financial difficulties by the early 1990s. A loan from the Inter-American Development Bank (IDB) funded a reform project designed to make moderate changes inside the established PAYGO system. However, a Chilean consultant who was hired to offer advice for this limited purpose went beyond his narrow mandate and made the privatization model cognitively available. As this bold innovation attracted the attention of Salvadoran decision-makers, the reform project unexpectedly took a completely new turn, shifting from the elaboration of parametric modifications to a profound paradigmatic change (interviews with Ramírez 2004; Tamayo 2004; Proceso de Implementación n.d.).

Peru's pension privatization project emerged in a similarly serendipitous way. In the run-up to the 1990 presidential election, Chilean consultants advised market-oriented candidate Mario Vargas Llosa and helped his aides draw up a comprehensive program of profound market reforms that included a revamping of the social security system. When the populist Alberto Fujimori defeated Vargas Llosa, the new president unexpectedly adopted an orthodox adjustment plan along the lines proposed by his

opponent. In this context, a congressional deputy from Vargas Llosa's coalition, Mario Roggero, submitted the privatization project to Congress and lobbied the executive to embrace it. He even invited José Piñera, who in a lengthy conversation persuaded President Fujimori of the benefit of drastic reform (Roggero 1993: 88–92, 101–3; interview with De los Heros 2002). Economy Minister Carlos Boloña, a free-market enthusiast, then took charge of the project and pushed it through the decision-making process in 1991–2. Accordingly, personal contacts with Chilean experts played a crucial role in the advance of social security privatization in Peru.

These personal encounters, through which the bold, novel Chilean model made a striking, vivid impression on crucial decision-makers and so became particularly available, were facilitated by geographic proximity and historic and cultural affinities. By following these bonds of similarity, the availability heuristic bridged gulfs of socioeconomic difference; Bolivia, El Salvador, and Peru had far smaller formal labor markets and less developed capital markets than did Chile. From a fully rational perspective, it was far from clear that the Southern Cone country's innovation constituted a promising model for these relatively undeveloped nations to emulate. However, the special availability of Chilean-style privatization pushed these rational, functional considerations into the background and drew decision-makers' attention to considering this drastic change.

Geography and longstanding historical connections helped to make the Chilean model especially available in Bolivia and Peru. Interestingly, leading decision-makers in far-away El Salvador also perceived a special affinity with Chile, which prompted a wide range of learning efforts (CINDE 1994). As a former finance minister reported (interview with Daboub 2004), El Salvador has long seen itself as 'the Chile of Central America'—dynamic, world-open, and ready to face the challenges of global competition. In fact, the country has enacted the market reform program more faithfully than any of its neighbors. One reason was the threat from the revolutionary left that the governments of the 1980s faced and that triggered a market-oriented response—as in Chile during the 1970s and 1980s. These perceived affinities made Salvadoran government officials especially receptive to inspiration from Chile.

For these reasons, which are arbitrary in functional, rational terms, Chile's experience with privatization was especially available to decision-makers in Bolivia, El Salvador, and Peru. In fact, this outstanding experiment attracted so much attention that other important reform experiences remained in the background. As Chile's blueprint turned into the obligatory point of reference for friends and foes of pension privatization, Bolivian, Peruvian, and Salvadoran decision-makers showed surprisingly little interest in the reform projects pursued in Colombia, Argentina, and

other Latin-American countries. While Chile may have commanded the best technical knowledge on social security privatization, Argentina and Colombia could offer interesting lessons on the politics of enacting this reform under democracy. On the political regime dimension, Bolivia, El Salvador, and even Peru were certainly more similar to those nations than to Chile, which had imposed pension privatization under a brutal dictatorship. In general, fully rational actors would find it beneficial to study a variety of reform variants and options.

However, boundedly rational decision-makers followed the availability heuristic, concentrated their attention on a singular outstanding model, and neglected other information sources. Accordingly, members of the Bolivian, Peruvian, and Salvadoran reform teams uniformly report that they had little if any systematic contact with the Argentine and Colombian experts designing reform projects at the same time (e.g. interviews with Gottret 2002; Grandi 2002; Guevara 2002; Pantoja 2002; Vargas 2002). This omission is especially striking in the case of Bolivia, which had in the late 1980s hired Walter Schulthess, the leader of the Argentine team in the early 1990s, for a consulting job on social security. Although Bolivia had this personal contact with Argentina, the Bolivian team took its inspiration almost exclusively from Chile once the agenda had shifted to radical change.

Moreover, the availability heuristic focused Latin-American decision-makers' attention on the most outstanding experiment conducted in their home region, making them overlook important experiments on other continents. As the intraregional reform wave gathered steam in the mid-1990s, European countries designed a hybrid between full-scale privatization and the PAYGO system. Like the Chilean model, this NDC scheme tied pension benefits firmly to accumulated contributions, which were assigned to individuals in a virtual account. However, it financed benefit payments not out of these accumulated funds but out of current workers' social security taxes, as does the PAYGO system and avoided the enormous fiscal transition cost caused by full-scale privatization. From a rational perspective, this novel option certainly deserved study, but it did not enter the radar screen of Bolivian and Salvadoran decision-makers.[3] Under the spell of the availability heuristic, they focused their attention on an intraregional innovation and neglected the NDC scheme, as did their counterparts in most of Latin America (Brooks and Weaver 2005). In this way, bounded rationality limited information processing.

In sum, boundedly rational decision-makers in Bolivia, El Salvador, and Peru did not conduct a wideranging, proactive search for relevant information, but were captivated by a singularly bold experiment that became uniquely available through personal contacts with Chilean experts. These face-to-face encounters made information about the Chilean model particularly vivid and impressed upon decision-makers that this blueprint could

serve as a solution for their problems. Consequently, the significance and relevance of the Chilean precedent 'clicked'. Unplanned contacts then opened the door for an intense, longstanding import of information. In fact, the Bolivian and Salvadoran reform teams relied very heavily on Chilean consultants in elaborating privatization projects, and their Peruvian counterparts also learned a great deal from Chile (interviews with Bonadona 2002; Du Bois 2002; Galindo 2002; Gottret 2002; León 2002; Pantoja 2002; Romero 2002; Salinas 2002; Vargas 2002; Ramírez 2004; Solórzano 2004; Tamayo 2004).

Initially, this focus on Chile also prevailed in Brazil and Costa Rica. One of the first privatization proposals advanced in Brazil—elaborated by academic and government-linked experts for a free-market think tank financed by business—explicitly took its inspiration from Chile (IL 1991). Many government officials and pension specialists also saw the Chilean model as an obligatory point of reference (interview with Leite 1990). Even social-democratic Costa Rica sent a high-ranking delegation of governmental experts on a study mission to Chile in 1989. Representing economic agencies and the main social policy institution, this group assessed the strengths and weaknesses of the new private system (Comisión Técnica de Pensiones 1990). Availability accordingly guided a wide range of countries to pay special attention to the Chilean model.

Brazil and Costa Rica, however, commanded a much deeper pool of social security expertise than did Bolivia, El Salvador, and Peru. Their long-established welfare states had attracted well-qualified cadres that formed cohesive professional corps and enhanced the strength of the main institutions administering the pension system. These institutions in turn controlled voluminous fiscal resources and enjoyed considerable political power. Despite looming financial problems, the Brazilian and Costa Rican pension systems were not confronting urgent, acute fiscal crises. Due to this satisfactory performance, social security specialists retained a great deal of influence and were not displaced by economic generalists, as in Bolivia, El Salvador, and Peru, where the weakness of established institutions or severe financial problems led to a takeover by novices.

Longstanding specialists were less easily swayed by cognitive shortcuts such as the availability heuristic than were newcomers, the economic generalists. Thorough training and years of experience gave these experts a stock of knowledge and access to alternative sources of information. Consequently, they did not rely only on the ideas made available by Chile's promoters of pension privatization. Their background knowledge limited the impact of cognitive heuristics on their information processing and judgments.

Therefore, while the information made available by Chilean experts or study trips to Chile elicited considerable interest in Brazil and Costa Rica,

and while it stimulated drastic reform proposals and privatization efforts, it did not launch those countries on the same trajectory of change as in Bolivia, El Salvador, and Peru. The Chilean model certainly was an obligatory point of reference for discussions in Brazil and Costa Rica, but did not dominate the reform debate as much as in the other nations, nor monopolize the attention of experts and decision-makers, despite its availability. Brazil and Costa Rica's greater pool of specialized expertise reduced the impact of the availability heuristic.

Rather, Brazilian and Costa Rican pension reformers had and sought access to alternative sources of information and inspiration. They considered a wider range of reform options than their Bolivian, Peruvian, and Salvadoran counterparts, who remained fixated on the Chilean model. For instance, the ILO representative in Costa Rica helped the country's first change team establish contact with the main architect of the Uruguayan reform, a mixed public/private system that conformed much more to the social-democratic values prevailing in Costa Rica than the radical, free-market Chilean blueprint (interviews with Rodríguez 2004; Bonilla 2005). Similarly, Brazilian pension experts—even those who were advocates of a drastic transformation—examined a range of foreign experiences. In the early 1990s, when the pension reform debate heated up, the Social Security Ministry in cooperation with the UN Economic Commission for Latin America organized an international seminar that studied a variety of foreign models (MPS 1993–4). Thus, links to international organizations other than the World Bank, which from the early 1990s onward forcefully promoted the Chilean model, helped Brazilian and Costa Rican decision-makers broaden their view beyond the highly available intraregional model that enthralled the reform teams of other countries.

However, even in Brazil and Costa Rica the availability heuristic confined decision-makers' attention mostly to reform experiences inside their home region. European innovations such as the NDC scheme remained off their radar screen. Only after privatization efforts hit an insurmountable barrier in Brazil in the late 1990s did the World Bank make this innovation available to pension specialists, who quickly 'fell' for it, adapted it to local needs, and obtained congressional approval for this modified version (Pinheiro 2004).

In conclusion, the availability heuristic turned Chile's radical pension privatization into an outstanding reference point for reformers across Latin America. This cognitive shortcut operated with special force in those countries with limited pools of domestic expertise and technical capabilities, as Bolivia, El Salvador, and Peru, where rationality was tightly bounded and where the focus on Chile was disproportionately strong. The more decision-making deviated from the standards of comprehensive rationality, the more Chilean-style reform served as the predominant source of inspiration.

Efforts to emulate the Chilean model were a product of bounded rather than full rationality.

Overestimating the Promise of the Chilean Privatization Model

Once Chile's radical reform had become cognitively available as a potential solution to the pension problems plaguing Latin-American countries, specialists sought to assess its performance and promise. They did not try to emulate this foreign innovation simply for reasons of symbolic or normative legitimacy, but assessed its promise as a means for resolving difficulties they had identified as threats to their interests. Rather than falling prey to international fads and fashions, they proceeded in a goal-oriented way, as any minimally rational actor would do. They based their emulation decisions on indications that the Chilean model was yielding positive results and therefore held the promise of producing benefits for their own countries.

However, in assessing the payoffs of Chile's radical privatization, many reformers, especially in Bolivia, El Salvador, and Peru, did not conduct comprehensive, systematic cost–benefit analyses. Rather, they applied the representativeness heuristic, basing their judgments in a logically problematic way on the overinterpretation of similarities and other forms of associative reasoning. Recall that with representativeness, people extrapolate short trends and take them as evidence of lasting tendencies, thus drawing excessively firm conclusions from small samples. Similarly, they attribute the qualities of whole systems to their constituent parts, and vice versa. In all these ways, they jump to conclusions by overestimating the significance of similarities ('representativeness'; see in general Kahneman, Slovic, and Tversky 1982: chs. 1–6; Gilovich, Griffin, and Kahneman 2002: chs. 1–2).

Accordingly, most members of the Bolivian, Peruvian, and Salvadoran change teams and many advocates of pension privatization in Brazil and Costa Rica were impressed by the high rates of return that Chile's private pension funds initially achieved. Bolivia's former national pension secretary invoked the annual average yield on investments (not including administrative fees) of 14 percent attained in Chile until the mid-1990s—only to add that in subsequent years this performance had deteriorated significantly (interview with Peña Rueda 2002; similarly, Exposición de Motivos 1993: 1, and interviews with De los Heros 2002; Du Bois 2002; Tamayo 2004). Many pension reformers thus resorted to the representativeness heuristic in interpreting Chile's high returns in the 1980s as evidence for the inherent superiority of the private pension scheme. Based on this initial stretch of experience—a small sample—they inferred the quality of

the whole system. As a result, Chile's innovation quickly gained an aura of success and stimulated a rationally unjustified level of enthusiasm.

These sanguine assessments paid insufficient attention to two important issues. First, they underestimated the volatility of these initial rates of return and did not consider the possibility that chance factors may have boosted them. They did not take into account regression toward the mean. Because high success can result in part from nonsystemic factors that are subject to change, it tends to be followed by much more mediocre performance. In fact, after reaching 13.81 percent on average from 1981 to 1994, the rates of return of Chile's private pension funds amounted to only 6.37 percent from 1994 to 2003 (computed from SAFP 2004).

Second, privatization advocates extolling the rates of return did not consider the cost caused by the high fees that private pension fund administrators charged their affiliates. Considering this 'bite' by calculating returns over total contributions, not over the net deposits in affiliates' individual retirement accounts, yields significantly less impressive figures. 'In Chile [for instance] the return on capital between July 1981 and April 2000 was 11.1 percent, but once commissions are factored in, lower-income earners received a 7.34 percent return, and higher-income earners received a 7.69 percent real average return' (Kay and Kritzer 2001: 48). A comprehensive, fully rational assessment of the investment performance of private pension funds would have suggested more sober findings. The representativeness heuristic gave pension privatization a halo of success that does not withstand closer scrutiny.

A similar boundedly rational shortcut associated pension privatization with Chile's macroeconomic success from the mid-1980s onward. At the time that private pension fund administrators accumulated rapidly growing resources, Chile's savings rate rose significantly, productive investments increased, and economic growth accelerated to 6–7 percent per year for more than a decade. Based on this temporal coincidence, many observers jumped to conclusions, postulating a causal connection. Although the World Bank (1994: 92, 209, 307–10) expressed caution, Latin-American pension privatization supporters advertised this change as a crucial means for stimulating domestic savings, investment, and development (interviews with Mercado 1994: 10, 15–16; Ramírez 1994: 102–3; Comisión para la Reforma 1996: 22; Bonadona 1998: 69–70, 91; Bonadona 2002; De los Heros 2002; Du Bois 2002; Peñaranda 2002; Vargas 2002; Solórzano 2004). An associative inference from whole to part that is typical of the representativeness heuristic reinforced the aura of success attached to the Chilean model.

Interestingly, however, the savings argument has not withstood rigorous empirical examination; statistical investigations have yielded inconclusive results (Samwick 2000; Escobar and Nina 2004: ii, 17; interview

with Martínez Orellana 2004). Even the World Bank, which had forcefully advocated pension privatization in the 1990s, soon backed away from this claim. Remarkably, its chief economist, Joseph Stiglitz, in 1999 disqualified many promises invoked by the Bank as 'myths' that could not withstand rational scrutiny in light of experience (Orszag and Stiglitz 1999). Prominently among these myths figured the claims that 'individual accounts raise national saving' and that 'rates of return are higher under individual accounts' (Orszag and Stiglitz 1999: 8). The initial enthusiasm was eventually unveiled as a product of problematic inferences, such as the representativeness heuristic (see recently WB IEG 2006: 35 and *passim*).

Despite its lack of a firm basis, however, the savings argument crucially boosted political support for drastic pension reform because it attributed broad macroeconomic benefits to this change. As a result, a social sector that had for decades been the domain of specialists suddenly acquired major significance for economic generalists. While since the late 1970s, finance ministry officials had begun to worry about the actuarial disequilibria and financial deficits plaguing many Latin-American social security systems, now a wide range of economic generalists took a strong interest in pension reform. The privatization of the retirement system seemed to hold the key to putting the region, which had suffered a 'lost decade' of austerity and stagnation during the 1980s, back on an accelerated growth path. In depicting structural pension reform as a crucial instrument for high-salience development goals, the domestic savings argument broadened the range of actors that became involved in the issue area. Economic generalists started to push very hard for privatization and tried to overcome passive or active resistance from established pension experts and bureaucrats, who sought to defend the existing PAYGO system.

Above all, this unproven inference made the emulation of the Chilean model appealing to chief executives, who often lacked strong ideological commitment to market reform. As presidents hesitated to incur the political costs and risks of drastic institutional change, the macroeconomic benefits predicted by the representativeness heuristic proved decisive for tipping the balance. In Peru, for instance, President Fujimori was skeptical about the introduction of market principles into the social sectors, but the promise that social security privatization would fuel economic development finally clinched his support (interviews with De los Heros 2002; Du Bois 2002; Peñaranda 2002). Therefore, a judgment derived via the representativeness heuristic that lacked a firm scientific basis was crucial for importing the Chilean model to Peru, as with a number of other Latin-American countries.

While this associative inference attracted support from economic generalists and political leaders, it did not automatically carry the day. Out of conviction and interest, established social security specialists and bureaucrats,

together with societal interest groups such as trade unions, criticized the performance and promise of the Chilean model. Whereas privatization advocates extolled the presumed economic benefits of structural change, the critics pointed to the social deficits of this novel blueprint and the exorbitant fiscal transition costs that its adoption would entail. They stressed the limited population coverage of the private pension system, the social exclusion perpetuated by the lack of redistribution, and the gender inequality produced by a strictly contributive scheme. They also highlighted the fiscal problems caused by the channeling of pension contributions into private accounts—an issue that privatization advocates sought to downplay as the short-term cost required for long-term benefits.

Cognitive factors played an important role in the resolution of these debates. By associating privatization with great macroeconomic benefits, the representativeness heuristic motivated officials of powerful economic ministries to participate in pension policy, changing the very constellation of political actors in the issue area. Moreover, the postulated connection to increased savings, investment, and growth made structural pension reform especially appealing to the presidents of these countries. But the outcome of the reform debate also depended on political–institutional factors, especially the strength of the economic ministries in intrastate bargaining and the chief executive's clout in the legislative arena.

Where social security agencies suffered from financial deficits, administrative problems, and political weakness, they could not resist sustained pressure from the economic ministries, which are among the most powerful agencies of contemporary Latin-American states. For these reasons, privatization advocates defeated opponents inside the state in Bolivia, El Salvador, and Peru. In Brazil and Costa Rica, by contrast, existing welfare schemes had attained a reasonably good performance and were not suffering from severe financial difficulties, and the agencies administering them commanded considerable expertise, bureaucratic institutionalization, and political strength. As a result, they managed to hold their own against the economic ministries, which determinedly promoted pension privatization in both countries and actually launched several reform efforts in Brazil (interviews with Carvalho 1992; Moraes 2003; Aguilar 2004). When the Brazilian Social Security Ministry lost out in intrastate conflicts, it could count on opposition to radical change in Congress, opposition that some of its officials helped to stimulate and mobilize (interviews with Carvalho 1992; Gabriel 1992). Disagreements inside the state spilled over into the legislative arena.

The president's clout with Congress obviously affected the prospects of pension privatization throughout Latin America (Madrid 2003: 56–8). In contrast to Chile, where a brutal dictatorship imposed the reform, functioning democracies required parliamentary approval for this major

institutional change—giving the many opponents among party politicians and societal interest groups access to decision-making. To counter the promises of fiscal and macroeconomic benefits that economic generalists derived from the representativeness heuristic, opponents invoked the social limitations of the private social security system and defended sectors that would lose from privatization.

In Brazil and Costa Rica, Congress has considerable autonomy and clout; presidents cannot push their projects through Parliament. The consensual decision-making style institutionalized in Central America's model democracy privileges negotiation and compromise and precludes dramatic transformations such as radical social security privatization (Jiménez 2000). The firm commitment of most party politicians, congressional deputies, and many state officials to social-democratic values also limited the depth of market-oriented reform (interviews with Aguilar and Durán 1996: 138, 140–1; Rodríguez 1996: 1, 6–9; Aguilar 2004; Carrillo 2004; Céspedes 2004; Durán 2004; Jiménez 2004; Rodríguez 2004). In Brazil, entrenched statist convictions prevented free-market ideas from gaining ideological hegemony (interview with Bornhausen 2003), and the prevalence of clientelism made many congressional deputies reluctant to pass market reforms, which threatened to diminish their access to patronage. Moreover, pronounced party fragmentation made it difficult for chief executives to win solid support for their projects, especially constitutional amendments, which were required for enacting pension privatization because the 1988 charter gave many details of the existing social security system constitutional protection. For these political–institutional reasons, the advocacy of market-oriented social security reform, motivated by the enthusiastic assessments of the Chilean model derived via the representativeness heuristic, found only limited support in Brazil and Costa Rica. As a result, Costa Rica adopted a very moderate mixed public/private system, whereas Brazil rejected privatization and reformed the existing PAYGO scheme (Pinheiro 2004).

In Bolivia and El Salvador, by contrast, the presidents managed to assemble a more stable legislative coalition that guaranteed them majority support. Their own parties held a larger share of congressional seats than in Brazil, and they found reliable allies. Also, the more adversarial nature of party politics in both countries allowed these majorities to push through their will against the opposition. In fact, the governments eventually rammed privatization bills through Congress; their supporters closed ranks and marginalized the opposition. In a more autocratic fashion, Peru's Fujimori took advantage of the closing of Congress after his self-coup of April 1992 to impose drastic social security reform by decree-law. Thus, the political predominance of these countries' presidents allowed the reform projects inspired by the representativeness heuristic to go forward. Due to

favorable political–institutional conditions, cognitive shortcuts managed to shape decision outputs in Bolivia, El Salvador, and Peru.

Anchoring and the Imitation of the Chilean Model

Countries that decided to adopt Chilean-style pension privatization often copied much of the original blueprint and introduced only limited modifications to meet their own specific needs. Paradoxically, less developed nations with particularly small formal labor markets and underdeveloped capital markets remained especially faithful to the original. Although the Chilean model did not seem to fit their socioeconomic structures,[4] they followed this precedent closely. The heuristic of anchoring, which induces decision-makers to base their judgments on given clues, helps account for this paradox. To save computational effort, boundedly rational decision-makers typically preferred imitation over innovation; they did not rethink or consider redesigning the foreign model, as comprehensive rationality would require.

Given the limitations of domestic technical capacity, this tendency to imitate the Chilean model prevailed especially in Bolivia, El Salvador, and Peru. Leading reform team members in all three countries stressed that they had largely copied Chile: 'We took 90 percent [of the new system] directly from Chile' (interview with Du Bois 2002;[5] similar interviews with Bonadona 2002; Galindo 2002; Gottret 2002; León 2002; Pantoja 2002; Romero 2002; Salinas 2002; Vargas 2002; Ramírez 2004; Solórzano 2004; Tamayo 2004).

Imitation prevailed, especially in the early stages of the privatization project, conducted by technical experts. The heuristic of anchoring induced economic generalists to stay very close to the Chilean model and rely heavily on Chilean consultants. Indeed, José Piñera and his associates designed the outlines of the Bolivian and Salvadoran reform proposals, elaborated many specific rules and regulations (e.g. on the supervision of private pension funds), and conducted the initial simulations of fiscal transition costs (Price Waterhouse 1993: bibliography; Proceso de Implementación n.d.). Although Peru drew up its reform with more autonomy, it imitated the Chilean system in many aspects and brought in specialists from its southern neighbor to help at crucial steps. Consequently, the draft bills that technical reform teams presented to the political leadership were very similar to the Chilean blueprint.

Political calculations and requirements prompted some modifications, however. As numerous psychological experiments show, the heuristic of anchoring ties down people's judgments and limits departures from initial clues, but by no means does it preclude such departures. Rather, it leaves

some room for adjustments (Epley and Gilovich 2002), and so political considerations led to adaptations of the Chilean model. Nonetheless, anchoring confined these modifications mostly to rules stipulating the privatization scheme's range of application while keeping its core intact: Bolivia, El Salvador, and Peru created privately managed individual retirement accounts in the obligatory pension system. They all emulated the central features of the Chilean blueprint.

To make the new system of social protection more equitable, counter criticism of the exclusionary nature of 'neoliberal' privatization, and boost his future electoral fortunes, Bolivian president Gonzalo Sánchez de Lozada (1993–7) insisted on complementing pension privatization with a novel scheme of basic, universalistic old-age support. His government created a 'solidarity bond' (Bono de Solidaridad, or BONOSOL) that guaranteed every citizen older than 65 years an annual payment of US$248 (Graham 1998: 151–67; Müller 2004). Similarly, Costa Rica and Argentina maintained the established public social security system to guarantee all affiliates a basic level of income support (actually quite generous in Costa Rica); the new private pension funds offered additional benefits or replaced only part of the old PAYGO system (Demarco 2004). In these cases, the principles of the Chilean model governed only a segment of affiliates' social security contributions. Nevertheless, while these modifications restricted the range of the private pension system, anchoring safeguarded its core.

Likewise, Peru's Fujimori instituted a parallel scheme, giving affiliates a choice between the old PAYGO system and the new private pension funds. In this way, he sought to preserve the established social security institute, which was making great strides in overcoming its administrative and financial problems and therefore had greater political clout than its counterparts in Bolivia and El Salvador (Ausejo 1995). Although this political decision drew ferocious criticism from market-oriented government officials and their Chilean advisors, it was actually more faithful to the maxim of freedom of choice and was framed in these terms by its advocates (Roggero 1993). In some sense, this deviation from the Chilean model was 'more Catholic than the Pope'.

By contrast, Bolivia temporarily suspended the principle of free competition in its new private pension system due to the exceptionally small size of its formal labor market. Since there were few affiliates, admitting numerous pension fund companies threatened to preclude economies of scale and further increase the administrative costs of the new scheme. In fact, Bolivians' low per capita incomes made the reform team concerned about the high fees that pension fund companies in fully competitive markets such as Chile charged. Even Chilean consultants stressed that a large share of these fees paid for expensive marketing campaigns with which companies tried

to steal away affiliates from their competitors (Claro y Asociados 1994: 6–8; see also Vittas and Iglesias 1992: 5, 9, 22–4, 35). Due to governmental regulations, different companies had similar investment portfolios and rates of return; therefore, competition focused not on financial performance but on peripheral aspects, such as glossy promotional materials and the good looks of sales agents.

Effectively, competition was not fulfilling its economic rationale by guaranteeing consumers greater financial benefits, and its costs—high administrative fees—ate up a good part of affiliates' contributions. For the first five years of the new system, the Bolivian government therefore allowed only two private pension fund companies to enter and made each responsible for half the population (Guérard and Kelly 1997: 103–23; Mercado 1998: 152, 168). While this temporary suspension of free competition deviated from free-market principles, Chilean consultants 'authorized' it as a necessary step towards making privatization feasible in an exceptionally small market.

Importing the Chilean model with few modifications and confining these adjustments mostly to peripheral aspects relieved the cognitive and computational burden on decision-makers who had limited expertise in social security. Enacting a major institutional change such as pension privatization constitutes a monumental task. Copying a foreign blueprint and relying heavily on external advice greatly facilitates this task for boundedly rational policymakers. To save information-processing effort, the Bolivian, Peruvian, and Salvadoran reform teams followed the Chilean original very closely. Applying the heuristic of anchoring, they introduced only those alterations that crucial political considerations or pressing technical needs seemed to require. And these modifications affected mostly peripheral aspects such as the range of application of pension privatization—they left the core of the Chilean model untouched, namely the institution of privately managed individual retirement accounts in the obligatory social security system. Due to the heuristic of anchoring, the wave of diffusion that swept across Latin America therefore produced a good deal of convergence. As countries of diverse characteristics imitated the basic outlines of the Chilean model, similarity spread amid diversity.

Like the other cognitive shortcuts, anchoring had most force in countries that lacked strong domestic expertise in social security. Where the crises of established pension institutions allowed economic generalists to dominate decision-making, copying from the Chilean original was especially pronounced. By contrast, the higher the level of specialized domestic knowledge and the political clout of established pension agencies, the greater and more significant were the modifications that Latin-American countries introduced. Accordingly, Costa Rica, with its longstanding experience in

social protection, its wealth of domestic expertise, and its powerful welfare state institutions, adopted a privatization scheme that differed greatly from Chile's. It ended up not relying much on advice from the originating country but rather seeking out other sources of inspiration more in line with its firm commitment to social-democratic values.

Initially, Costa Rican pension reformers followed the availability heuristic and commissioned a reform plan from a leading administrator of Chile's private pension system, namely the head of the pension superintendency, Julio Bustamante. However, this proposal was strikingly similar to the free-market Chilean scheme (Bustamante 1995: 20, 23) and diverged starkly from the norms of social solidarity and broad citizen coverage that Costa Rica's consensual political culture held in high esteem and that the existing pension agency was determined to defend. The Costa Rican team therefore rejected Bustamante's proposal out of hand and looked instead for a reform model that conformed more closely to national preferences (interviews with Durán 2004; Valverde 2004). Through the intermediation of the ILO, the team consulted Rodolfo Saldain, the main architect of Uruguay's moderate, mixed system, which maintained an important public pillar and combined it with a private scheme (interviews with Rodríguez 2004; Bonilla 2005). Indeed, Saldain made a crucial contribution in helping to design the outline of the Costa Rican reform plan: private pension funds became compensation mechanisms for the gradual reduction of income replacement rates in the public scheme that increasing actuarial and financial pressures seemed to require. Thus, as PAYGO benefit levels gradually fell, the accumulation of individual retirement funds in privately managed accounts would fill the gap. This slow substitution would remain limited; however, the public scheme would continue to guarantee a high level of social protection for all affiliates (Saldain 1996; interviews with Aguilar 2004; Carrillo 2004; Durán 2004; Rodríguez 2004; Bonilla 2005; Saldain 2006). In fact, a crucial part of the Costa Rican reform was a concerted effort to increase the rate of affiliation, which has stagnated in most privatized pension systems. Consequently, from early on, the moderate Costa Rican plan diverged clearly from the radical Chilean precedent.

Political pressures during the lengthy process of concertation and negotiation that the proposal underwent in Costa Rica's consensual political system produced further changes. Above all, state and societal providers—not only private companies—were allowed to administer individual retirement accounts. In fact, a state institution became the default option for affiliates who did not select a pension fund administrator. Consequently, more than 80 percent of affiliates are vested in public institutions (Martínez Franzoni and Mesa-Lago 2003: 27). Costa Rica's new social security system thus differs greatly from the Chilean original. Due to the country's impressive

level of technical expertise, the heuristic of anchoring did not hold much sway.

Conclusion

The spread of pension privatization in Latin America resulted more from bounded than from comprehensive rationality. Cognitive shortcuts shaped decision-making and its outputs. The *availability* heuristic induced most social security specialists, economic generalists, and policymakers to pay disproportionate attention to the Chilean model of radical restructuring while neglecting other promising reform experiences inside the region and beyond. The *representativeness* heuristic suggested to economic generalists, in particular, the inherent superiority of the private scheme over the PAYGO system due to its high rates of return and the macroeconomic benefits associated with it. The heuristic of *anchoring* led decision-makers to prefer imitation over innovation and redesign, especially in less developed countries. Therefore, Bolivia, El Salvador, and Peru followed the Chilean original very closely and confined modifications to specific, mostly peripheral aspects.

Cognitive heuristics had special force and impact in countries with limited domestic expertise, as in Bolivia, El Salvador, and Peru. Since those nations had a small pool of social security specialists, they were strongly influenced by external inputs. Moreover, the institutional weakness of established pension agencies and the serious actuarial disequilibria or financial problems plaguing them allowed economic generalists to push aside social security specialists and dominate reform teams. Without specialized training and longstanding expertise in the issue area, these novices were especially prone to using cognitive shortcuts to make sense of abundant yet uncertain information about a highly complex subject matter. As a result, they were strongly drawn to the Chilean model and relied heavily on advice from Chilean consultants, though they lacked the background to crosscheck this advice and the network and connections to gain access to other sources of inspiration.

The absence in these countries of Weberian bureaucracies—that is, firmly institutionalized public agencies staffed by well trained, meritocratically recruited, and hierarchically supervised experts (see in general Rauch and Evans 2000)—reinforced the reliance on cognitive shortcuts. High personnel turnover led appointees to initiate reforms quickly to have any chance of success. A systematic proactive search for relevant international experiences and a thorough analysis of their costs and benefits were out of the question. Instead, time constraints forced political decision-makers and their technical advisors to use such shortcuts as availability and

representativeness to identify and assess external sources of inspiration. This institutional factor helped bounded rationality prevail over comprehensive rationality.

By contrast, Brazil and especially Costa Rica had more solid bureaucratic institutions and a strong pool of domestic social security expertise. Appointees therefore did not face high time pressures and could draw on specialized knowledge to assess the inferences suggested by cognitive shortcuts. Certainly, the heuristics of availability and representativeness played a role, as is evident in Costa Rica's commissioning of its first pension reform plan from a Chilean consultant and the repeated advocacy of privatization projects by Brazil's economic ministries. But these heuristics did not carry the day because established pension specialists had access to alternative sources of knowledge that allowed them to criticize the inferences derived from cognitive heuristics. Moreover, their social security institutions commanded a good deal of political clout, which they used to defend the public PAYGO scheme. For these reasons, Brazil refused to institute Chilean-style privatization and Costa Rica adopted a profoundly modified version of the original model.

In summary, the more strongly experts and policymakers deviated from the norms of comprehensive rationality and relied on the cognitive shortcuts of bounded rationality, the more closely did they follow the Chilean model of radical pension privatization. To a considerable extent, the dramatic spread of this bold blueprint thus resulted from suboptimal information processing and rash conclusions, and was not fully rational.

Notes

[1] The present chapter draws heavily on material and arguments advanced in my book manuscript, Bounded Rationality and Policy Diffusion: Social Sector Reform in Latin America (2007), but develops these arguments in a new fashion.

[2] A number of pension reform team members, especially in Bolivia, El Salvador, and Peru, and even in Costa Rica, told me in interviews that they lacked professional training or administrative background in social security when they started to elaborate pension reforms.

[3] Peru privatized its pension system in 1992–3, before Sweden enacted an NDC scheme.

[4] For instance, the small size of the formal labor market keeps effective social security coverage in countries such as Bolivia and El Salvador particularly low. Since many workers move back and forth between the formal and informal sectors, they fail to accumulate substantial individual retirement accounts with which they could accrue pensions of reasonable value. Even in Chile, only '40 percent of workers affiliated with the private pension system are likely to accumulate sufficient funds for a benefit above the minimum pension' (Matijascic and Kay 2006: 8). In Bolivia and El Salvador, this percentage is much lower, leaving many workers excluded from

social insurance benefits in old age (cf. Borzutzky 2002: 228; Holzmann and Hinz 2005: 11, 81, 95–8).

[5] Du Bois was one of two interviewees who argued that their country would have privatized its pension system even without the Chilean precedent because this reform was part of the broader neoliberal program. It is interesting to note, however, that the connection of pension privatization to other market reforms was not very tight. Peru, for instance, enacted this change within two years of drastic orthodox adjustment, whereas in Bolivia more than eleven years passed (and in Costa Rica approximately eighteen years).

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