REVIEWS

The Legacy of Scholasticism in Economic Thought: Antecedents of Choice and Power, Odd Langholm. Cambridge University Press, 1998, ix + 215 pages.

We are always intrigued by investigations of past thought that examine controversies in terms of their own cultural milieux and conceptual frameworks. It is equally enriching when the researcher has the erudition to correlate the issues of the past with the evolution of contemporary formulations of economic and political theory. Langholm has invested over twenty years studying medieval manuscripts and commentaries from Berlin and Vienna to the Vatican, Paris, and Oxford, comparing and analyzing their orientations and distinctions. His past work on the economic nuances in medieval Aristotelian commentaries, monetary thought, and the usury debates, were published by his Norwegian university press, and his massive compendium, *Economics in the Medieval Schools*, 1992, was published by E. J. Brill. All of these volumes were sold out and unavailable within a year or so of their publication. This contribution under review is, therefore, the fruit of mature generalization and reflection that brings us the author's further exploration of medieval legal concepts – canon and Roman – that interacted with Aristotelian philosophy to structure the economically relevant thought of that age.

The essence of Langholm's current study is the continuum between Aristotle's philosophical concern with the dichotomy between free will and compulsion, the Roman law concern with voluntarism and duress or fraud, and the medieval moral objections to coercion as a degradation of justice in various facets of exchange. These conceptual tensions resurface in Weberian concerns with *power* as a degradative phenomenon in modern social interactions and freedom of choice in both the new and the old institutionalist economics. The tenor of Roman law and Scholastic thought was that free or voluntary choice permitted a perfectible rationality to function. It was not until the naturalistic premise of the eighteenth century became enshrined as a ruling

121

paradigm that the assumption of perfectible free markets could support the ideal of inherent rationality in neoclassical or mainstream economics in the early twentieth century. As Langholm understands it, however, the Scholastics had no such illusion when discussing the nuances of compulsion or coercion in market relations. Characterizing these discussions as purely ethical debate is, in part, a retrospective evaluation based on modern projections of the proper scope of theological discourse. It also reflects a failure to appreciate that the formulative outlet for medieval policy discussions was in the schools of theology and law.

It will be interesting to go back earlier than Langholm's initial formulation of Aristotle's concern with voluntarism and compulsion in order to get a fuller grasp of the profundity of the emphasis on volition. We may also explore an instance of a fundamental analytic concept being developed in a specific context and then having its presumptive cogency transferred to a somewhat different relationship. The analytic form in question is the ancient solution to the problem of fair division. This insight is most widely known from Hesiod's account in the *Theognis* of a mythical division of an ox between Zeus, the king of the gods, and Prometheus, the titan who protected the interests of mankind. In this prototypical distribution, Zeus and Prometheus were to share an ox. Prometheus skinned the ox and divided the meat into two piles laid out on the skin. Zeus then got to choose the pile he preferred. This structure gives both parties the opportunity to make a pure volitional choice; one to make the two piles of meat so equal that he is indifferent as to which one will be left, and the other to make a pure volitional choice as to which pile he will take. With the opportunity for inspection, fraud can be eliminated and both parties are locked into a distributive settlement that they cannot challenge without impugning their own capacity to make a self-interested choice. Of course, there are some implicit opportunities for exchange in such a process since the cuts of meat can be sorted with known preferences in mind, but the essential principle of volitional endorsement of the fairness of the division still operates (Lowry, 1987, Chapter 5; 1991, and Brams and Taylor, 1996). This system of allocation was used for dividing booty after joint military ventures, the proceeds of the hunt, and shares of an estate among the heirs. It mediated relationships between individuals who stood on an equal footing with one another in the distribution of property before market exchange became a major social concern. In his *Commonwealth of Oceania* (1656), James Harrington developed a utopian system of political organization built around the inherent fairness of this system. Brams and Taylor (1996) have studied the modern political science relevance of this tradition and the mathematics of multiple distributions. They use the traditional illustration of 'two little girls dividing a cake' or 'cake-cutting',

introduced by Harrington, that has come to designate this process in current mathematics.

The Greeks made a general principle of the doctrine that persons could not be defined as having been unjust to themselves. At a time when individuals were considered strictly liable for any injury (injustice) caused by their actions even when non-negligent, Pericles and Protagoras allegedly argued all day over the question. In the case at hand a boy voluntarily ran out into the field where a javelin thrower was practicing and was struck and killed. Was there any injustice done to the boy and if not, was there any injustice to be attributed to the non-negligent javelin thrower?

What we can see is that when Aristotle took this issue up in reference to the jettisoning of goods to save the ship in a storm, and when Greek and Roman law held that a voluntarily entered into bargain was, by definition, fair and just, they were borrowing a principle from distributive fairness and applying it in a new type of relationship fraught with layers of pressure and dependence. Initially, Aristotle discusses exchange in the *Politics* as the barter of surpluses that each individual values less for the other's goods that each individual values more. This creates a 'sum-sum game' with a resulting increase in total subjective use value. Once individuals specialize and are dependent on exchange for necessities, nuances of relative dependence and power confound the purity of volition. This is where Langholm picks up the story, from Aristotle's concern with physical compulsion and the will, through Roman law, the Scholastics, Weber, and modern institutionalism.

Of course, the Weberian recognition of power in economic relationships was anticipated in one of Aesop's fables where the lion, the ass, and the fox had completed a joint hunt. The lion told the ass to divide the meat into three shares. When the ass divided the meat into three nearly equal portions, the lion became enraged and killed the ass. He then ordered the fox to divide the meat. The fox divided the meat into one huge portion and one very small one. On being asked by the lion where he had learned to divide so fairly, the fox replies, 'I learned it from the ass!' This corruption of the divide-and-choose system was the source of the adage, 'The lion's share'!

As Langholm recognizes, Plato developed the principle that no person would voluntarily do an injustice to him or herself into a theory of elite responsibility. To elaborate, where justice encompassed the administrative order and efficiency of the rationally perfectible state, the ruler, who identified the inner order or balance of his own soul with the order and justice of the state, would not knowingly commit an injustice that would damage his own soul by an irrational administration of the state. If an error were committed, it need only be pointed out to the ruler

and it would be corrected. This outlook equated rationality with both a natural moral force and a politico-economic process.

The Scholastic doctors, however, found the problems of their day more relational and participative. They were more influenced, as Langholm illustrates, by the Roman law and Protagoras' ideas that were passed on by Aristotle into the Roman law as well as directly to the Scholastics. On the Aristotelian influence on the Roman law, Donald R. Kelley's book, *The Human Measure* (1990), is an important contribution.

It was Protagoras who said, 'Man is the measure of all things', and the best laws for a city are those that the people work out for themselves. It was this participative tension that Aristotle transmitted to Roman law, It was developed to cope with complicated administrative problems by the jurisconsults – the unofficial social scientists and scholars of their time. Therefore, when Langholm's Scholastic doctors deal with the participative tension between usurious lender and needy consumer, they recognize that both volition and need play a part in the alleged free will arrangement. The tension between physical need, or social coercion and voluntary exchange shows up between buyers and sellers with different pressures to sell or buy, and between employees and employers in wage contracts. Roman law based the enforceability of contract on the principle that both parties voluntarily entered into the bargain, so it was, therefore, just. Aside from exceptions for fraud and duress, the Romans did, however, have an escape clause, namely, the recognition of 'unconscionable contract'. These were contracts that were patently unfair and not enforceable. As Langholm pictures it, it was not that the Scholastic doctors were so tied up with ethical considerations that they failed to fully appreciate the justice implicit in the market process – the essence of modern mainstream economics. The basic definition of the market as a self-regulating just system was adequately articulated in the Roman law principles of contract that hold that a mutually beneficial voluntarily arranged agreement is, by definition, just. It was also clear that an increasingly active trade among the commercial towns of the medieval period was generating a new economic system and supporting a cultural renaissance. Without the uniformity of more developed markets and the eighteenth century obsession with natural law, the Scholastics focused on the institutional structures influencing individual market situations and the varying conditions that influenced the tensions between coercive pressures and voluntarism. In that sense, their economic analyses have affinities with Weberian and the old and the new institutionalism of the present. They should not be discounted as falling short of the broad rationalistic generalizations that provide the framework for nineteenth and early twentieth century economics.

An interesting digression in Langholm's exposition is his treatment of Hobbes. With an acceptance of choice as an essential element in political

and legal process, Hobbes, as Langholm shows, insisted that rational choice would lead all individuals to accept the benefits of sovereign authority. Furthermore, all free will exists within various degrees of constraint. Therefore, the act of a shipmaster, jettisoning cargo to save the ship would be an act of free will, thus rejecting Aristotle's illustration of physical coercion. The same could be said of the act of handing over one's money to a highwayman in order to save one's life. In such a case, one has a clear choice to be freely exercised. In this context, Hobbes's embrace of the Roman law with its adage, *volenti non fit injuria* (no voluntary injustice), became an authoritarian administrative doctrine offering no foundation for a concept of individual justice. For Hobbes, then, justice was the law as rationally deduced from a sovereign mandate. The parallels between Hobbes and Plato deserve more attention.

This ancient God-king or philosopher-king perspective on sovereignty was the background against which justice was viewed as something administered from above. Langholm does not bring out this aspect of legal thought in the Middle Ages. Magistrates and officials had a duty to their superiors to do justice to the citizens, and ultimately the sovereign had a duty to God. This was, however, a one-way street and neither lesser officials, citizens, or slaves, had any claim or right to justice that could be asserted against superiors. They could only ask that wrong-doers perform their duties as owed to their superior. This point is brought out in reference to New Testament thought by Nitsch (1998) and in reference to Patristic thought by Firey (1998). While C. B. Macpherson (1985) has argued that there was no concept of an assertable right to justice against superiors until the industrial revolution, Adelson (1995) brings out some earlier indications of such a sense of assertable rights that were perpetuated by the Stoic tradition.

Stoicism provided a reference base for a natural rights tradition that ultimately came into its own in seventeenth- and eighteenth-century thought. Langholm discusses this development in his Chapter 9, 'The Economics of Natural Law'. I would contend, however, that the issue of an individual claim to justice goes back to the participative tradition – the divide-and-choose system of distribution between equals.

The principle for dividing the benefits of the hunt or booty from a raid – an accepted form of entrepreneurship in antiquity – was based on a structured equality of rights. With the proliferation of colonies in the eastern Mediterranean in the eighth and seventh centuries B.C., the distributions of land and the political organization of the state seem to have been influenced by these participative institutions. Protagoras, Pericles' philosophic confidant, accepted a tradition of responsibility to offer leadership on the part of the elite, but simultaneously insisted on a subjective and participative source of natural law and truth. Natural law was that which people had worked out for themselves in rational

discourse rather than that which a rational sovereign had perfected and benignly imposed on his people. This view of assertable rights is clearly demonstrated in the law of partnership and contract where both parties are presumed to have equal claims on the arrangement based on volitional commitments. Of course, private commercial activity had a unique semi-independent status in earlier agriculturally based states. It appears that most commercial ventures in the Mediterranean throughout the Middle Ages were organized as partnerships or a *commendam* arrangement where one party put up all or most of the capital and the other party carried out the physical trading venture. This was a partnership and the profits were divided equally or in an agreed ratio. In such a setting, it is understandable that most loans at interest were related to emergencies or consumer crises and usury was morally suspect. The sense of justice in commercial relations, however, is illustrated by the principle enunciated by Gerard Malynes in his Lex Mercatoria or *Law Merchant* of 1622. He tells us that among merchants, if a contracted price for a good deviates more than 20% from a well-established market price, the injured merchant can repudiate the transaction as being unjust. Fraud or duress was not the issue. A fair market price was a recognized right. It is my contention that this 'two-party participative tradition' that dates from antiquity has continually provided a rational reference base for egalitarian justice. Despite the force of authoritarian institutions from patriarchal family to empire, the right to volitional choice has often been extended to multiparty political relationships.

The issue of the formal analysis of interparty relationships suggests a conundrum in intellectual history that I cannot resist raising here. In a sense, it is the inverse of the issue raised at the beginning of this essay. In Book V of his *Nicomachean Ethics*, Aristotle divided 'particular justice' into three categories, distributive, corrective and reciprocal. The third category dealt with exchange and was at the heart of the many Scholastic commentaries on Aristotle's *Ethics* that Langholm has analyzed in previous writings. Aristotle indicated that appropriate proportions were used to analyze these systems of justice, the geometric, the arithmetic, and some other! There was a third proportion, the harmonic, recognized in antiquity but only a few economists and almost no classicists find it relevant to Aristotle's analysis of exchange. No one seems to carry the problem into the medieval commentaries.

Boethius, a 6th century A.D. Roman, provided a widely dispersed literary influence on Scholastic education. He was responsible for the basic organization of academic training into the *quadrivium* and the *trivium*. He also wrote a book on mathematics, *De Institutione Arithmetica* (Masi, 1983), that was the basis for medieval arithmetic. In Part IV of that book, he specifically said that Aristotle and other ancient philosophers used three proportions to analyze relationships, geometric, arithmetic,

and harmonic. What is this harmonic proportion? One of Boethius' examples of the harmonic mean is 16 as the mean term between 10 and 40. Sixteen is 60% of 10(6), greater than 10 and 60% of 40(24), less than 40. Such a formulation of a mean term that is defined by a proportion, where the ratio is subjectively applied to each extreme term, reciprocally focusing on the mean term, has subtle suggestions for economists analyzing a fair bargain in exchange. The parties are balancing subjectively defined costs or benefits and bargaining to equate subjective ratios. The question for the intellectual historian is, did the Scholastic commentators on Aristotle's analysis of exchange fail to grasp the subtleties of the harmonic proportion and cavalierly ignore it? Alternatively, did the modern interpreters of Scholastic thought, who were initially theologians, establish an overwhelming tradition of ignoring a mathematical concept that was a bit obscure? This could have led subsequent scholars to brush aside references to a third proportion. One could argue that the analyses of exchange by Olivi suggest a sensitivity to the harmonic proportion. A scholar such as Buridan, who formulated the dilemma of the ass that got caught equidistant between two equally choice piles of hay and starved to death in a state of rational equilibrium, would surely be capable of recognizing the implications of the harmonic proportion.

The issue is, then, why did this neat mathematical illustration of the mutual subjectively defined point of exchange get dropped from the literature either by the Scholastics or the moderns? This is a problem for those competent in medieval Latin. It should also be mentioned that Joel Kaye's recent book, *Economy and Nature in the Fourteenth Century: Money, Market Exchange, and the Emergence of Scientific Thought* (1998), appearing simultaneously with Langholm's book, offers us nothing on this issue. Kaye's book does, however, dovetail into Langholm's earlier and present work. In personal correspondence (July 10, 1999), Langholm commented on my recent review of Kaye's book where this problem was also raised. He suggested that it was possibly the influence of Albertus Magnus that led discussion away from subjectivist analysis, but agreed that the issue deserves more study.

I trust that the somewhat discursive aspects of this commentary on Langholm's research into medieval economic thought will be accepted as an expression of hope that more scholars will find this area, broadly defined, to be provocative and intriguing enough to promote their own or their students' interest. In particular, further interdisciplinary and economically oriented research into the way ideas twist and turn as they are passed down through the ages always has current relevance.

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REFERENCES

Adelson, H. L. 1995. 'The Origins of a Concept of Social Justice'. In *The Concept of Social Justice in the Ancient World*, pp. 25–38. K. D. Irani and Morris Silver (eds.). Greenwood Press

Brams, S. J. and A. D. Taylor. 1996. *Fair Division: From Cake-Cutting to Dispute Resolution.* Cambridge University Press

Firey, A. 1998. '"For I Was Hungry and You Fed Me"': Social Justice and Economic Thought in the Latin Patristic and Medieval Christian Tradition'. In *Ancient and Medieval Economic Ideas and Concepts of Social Justice*, pp. 333–70. S. T. Lowry and B. Gordon (eds.). E. J. Brill

Kaye, J. 1998. *Economy and Nature in the Fourteenth Century: Money, Market Exchange, and the Emergence of Scientific Thought.* Cambridge University Press

Kelley, Donald R. 1990. *The Human Measure: Social Thought in the Western Legal Tradition.* Harvard University Press

Lowry, S. T. 1987. *The Archaeology of Economic Ideas: The Classical Greek Tradition*, Duke University Press

Lowry, S. T. 1991. 'Distributive Economics and the Promethean Meat Division: Myth, Folktale and Legal Precedent'. In *Ancient Economy in Mythology: East and West*, pp. 45–58. Morris Silver (ed.). Rowman and Littlefield Publishers, Inc.

Macpherson, C. B. 1985. *The Rise and Fall of Economic Justice and Other Essays.* Oxford University Press

Masi, M. 1983. *Boethian Number Theory: A Translation of the De Institutione Arithmetica.* Editions Rodopi

Nitsch, T. O. 1998. 'Social Justice: The New-Testament Perspective'. In *Ancient and Medieval Economic Ideas and Concepts of Social Justice*, pp. 147–62. S. T. Lowry and B. Gordon (eds.). E. J. Brill

Alchemies of the Mind: Rationality and the Emotions, JON ELSTER. Cambridge University Press, 1999, ix + 416 pages.

Jon Elster needs no introduction to the readers of this journal. He is an outstanding social scientist who has had a great impact on the work of many in the field. He has done pioneering work in rational choice theory and social and political theory. Moreover, Elster is one of the most prolific writers in the intersection of philosophy and the social sciences. In the previous decade alone he has written five monographs, edited eight volumes and published over 70 articles on various topics. Elster's numerous contributions are often original and inspiring. However, given the sheer volume of his publications repetitions are inevitable.

Alchemies of the Mind, Elster's contribution to the theory of emotions falls into this category. Those already familiar with Elster's work will find that some of the themes and observations in this book are more or less the same as those that he dealt with in the 'seventies and 'eighties in such landmark monographs as *Explaining Technological Change, Ulysses and the Sirens*, and *Sour Grapes*. This does not mean that there is nothing

new or worthwhile in this book. On the contrary, there are many interesting points and passages. I will discuss some of them below.

The book consists of five chapters and a coda in which Elster sums up the lessons that can be learned from *Alchemies of the Mind*. Chapter 1, entitled 'A Plea for Mechanisms', restates the position that Elster advocated in *Nuts and Bolts for the Social Sciences* (with some slight modifications) and elsewhere. His claim is that explanation in the social sciences should not be conducted by quoting law-like statements that subsume the explanandum under a general principle of the form 'if A than always B'. There are two related reasons for this. First, there are no principles of this form with a sufficient degree of generality that qualify as a real explanation (p. 2). Secondly, many of the proposed 'laws' in the social sciences are statistical correlations. These correlations cannot predict or explain in individual cases. Consider the following example that Elster borrows from Carl Hempel (p. 44):

    (1a) If the barometer is falling, it almost certainly will rain.
    (2a) The barometer is falling.
    (3a) It almost certainly will rain
    (1b) If the sky is red at night, it almost certainly will not rain.
    (2b) The sky is red tonight.
    (3b) It almost certainly will not rain

All four premises may be true in a particular case, but the conclusions cannot both be true.

Because of these reasons, Elster is sceptical that there could ever be acceptable law-like explanations in the social sciences. Instead, he opts for explanations using *mechanisms*. Mechanisms are low-level '. . . causal patterns that are triggered under generally unknown conditions or with indeterminate consequences' (p. 1). In individual cases, one of several, mutually exclusive, mechanisms may be triggered by the initial conditions. For example, a losing streak in a game of roulette can cause some people to increase their bets because they believe that the chance of winning the next game goes up (the so-called *gambler's fallacy*). However, one can also observe the reverse effect. A losing streak can cause people to reduce their bets (p. 7). These two incompatible tendencies are triggered by the same initial conditions, thus making the result unpredictable. Alternatively, the initial conditions might trigger several non-exclusive mechanisms, which may have opposite effects. An example is the following. A high marginal tax rate lowers the opportunity cost of leisure. Therefore, it creates an incentive to consume more leisure and work less. On the other hand, a high tax rate lowers one's disposable income, thus creating an incentive to work more to generate more income. Which of these two incentives will be the greater depends on the strength of both mechanisms (p. 7). Elster believes that many, if

not all, social and emotional phenomena are determined by clusters of such mechanisms. Hence, it is useless to look for broad, general explanations. Instead, we should aim at identifying the mechanisms that determine the explanandum. This sets a modest but feasible research agenda for the social sciences that merits further thought if not emulation. Note that one implication of this quest for mechanisms rather than laws is that one gives up on the idea that social science can generate predictions. All it can do is explain after the fact.

The scepticism about prediction sets the stage for the remainder of the book. According to Elster, emotions are both the result of mechanisms and can trigger mechanisms. Emotions are discernible, often occurring causal patterns that are indeterminate in their triggering conditions or their consequences. Given this indetermination, it is at best extremely difficult to establish the existence of such emotional mechanisms in laboratory experiments let alone in real life. Therefore, Elster suggests, we should look not just at the work of psychologists but also (perhaps more so) at other sources of knowledge of human nature. In particular, we should take to heart the observations of philosophers and literary authors.

Chapters 2 and 3 are entitled 'Emotions Before Psychology' and 'Social Emotions in Historic Context' respectively. These chapters form the bulk of the book and they are an application of the mechanism approach. Elster discusses in detail the opinions and observations of many authors, among whom are Aristotle, Montaigne, Pascal, La Rochefoucauld and La Bruyère, as well as Shakespeare, Racine, Mme de Lafayette, Jane Austen, Stendhal and George Elliott. In these chapters, Elster illustrates the many subtle connections between the emotions, actions and beliefs.

Chapter 3 deals with the social emotions of shame, envy and honour. Elster pays a lot of attention to the historical context in which these authors made their observations in order to infer the relative historical importance of these emotions.

The example of envy is particularly interesting in this respect. It demonstrates both the many subtle and sometimes irrational effects *of* the emotions as well as the effects of a particular social and cultural environment *on* the emotions. For example, suppose you have something that I desire. This might cause me to envy you – a belief together with a relevant desire triggers an emotion. However, this emotion itself might trigger another emotion. In contemporary society, there are strong social norms against such envy. Consequently, I might be ashamed about my envy. This second-order emotion of shame can be very painful. Therefore, it might cause some changes in my beliefs. I may come to believe that you do not really deserve that enviable object. An emotion affects a belief. This then might lead me to be righteously angry with you, which

is not shameful at all. My beliefs have changed my original emotion into one that attracts less shame.

However, under different social and cultural circumstances very different effects might be observed. According to Elster, the ancient Greeks were in general not ashamed of envious emotions. Aristotle, for example, only discusses the effect of envy on action. He seems unaware that envy might trigger other emotions. According to Aristotle, the envious person will try to destroy the object that he envies. Elster adds that such a person might also revise her beliefs (e.g., coming to believe that the desired object really is an inferior product), thus reducing the pain of envy. The emotional dialectic of envy and shame is typical for our modern society where there are strong norms against envy.

Chapter 4, 'Rationality and the Emotions', deals with the relation between rationality and the emotions. It starts out with two sections on the nature of the emotions, which draw from the observations made in Chapters 2 and 3. Elster argues, quite convincingly as far as I can judge, that there is no plausible theory that covers every emotion. The phenomena we label as 'emotions' share resemblances of analogy, rather than resemblances of kind (p. 239ff.). Elster attempts to list some general characteristics of occurrent emotions (as opposed to dispositional emotions, such as irascibility) but acknowledges in the same pages that these characteristics do not hold for all emotions, especially aesthetic emotions. In doing so, he debunks several prominent theories of the emotions. For example, the appraisal theory of emotions claims that all emotions are triggered by a cognitive appraisal of the situation (pp. 245, 269). However, Elster observes that this theory is at a loss to explain the joy one experiences when listening to a joyful piece of music. The emotional response to such music is instantaneous and unmediated by a belief that this is a joyous piece of music. In fact, if there is such a belief it usually follows from the emotion, not the other way around.

At one point in this chapter, Elster considers the claim that emotions are rational in the sense that they can contribute to making a rational choice in cases of indeterminacy. Ronald de Sousa in his *Rationality and the Emotions* has advocated this view. The idea is that emotions are 'gut-feelings' that make us go for one of two or more indeterminate options. Emotions assist rationality in situations where rationality alone would result in indeterminacy

Elster is sceptical of this claim. He argues that indeterminacy of rational choice is the result of either indifference or incommensurability of the options. This seems incomplete to me, as I will explain below. Elster endorses a test that Joseph Raz and others have proposed for establishing whether two options are indifferent or incommensurable (p. 288). Suppose an agent cannot make up her mind between A and B. She is indifferent between A and B, according to this test, if she would

prefer A^+, a more attractive but otherwise similar version of A to B. (Think of A^+ as A plus a sum of money). If she still cannot make up her mind, A and B must be incommensurable. I believe this test is inadequate. By proving that A^+ is preferred to A and A^+ preferred to B you still do not have conclusive evidence about the nature of the relation between A and B. (My thanks to Jurriaan de Haan of University of Amsterdam for pointing this out).

Consider the following example. Suppose you have two equally smart and deserving children, A and B, who have both been admitted to a top-notch university. Unfortunately, you only have money for one of them. Suppose you cannot make up your mind – which seems only natural because this situation seems very much like a tragic choice given the overall importance of good university education for success in later life. Suppose that now you are presented with opportunity A^+ where A goes to a top ten university and you have enough money left to send B the next year as well. Clearly A^+ is preferable to both A and B. However, this does not imply that you were indifferent between A and B in the first place. It is clear, however, that this test assumes that indifference and incommensurability are aspects of the relation between the *values* of rival options.

Elster subsequently argues that true indifference is at best rare in real life. Incommensurability is far more prominent. His examples of (types of) incommensurability come from Boswell's *Life of Doctor Johnson*. In one example Dr. Johnson explains that our limited cognitive capabilities never enable us to make the ideally rational choice for a certain kind of life because we can never assemble sufficient information. In another example, Dr. Johnson disapproves of marrying late in life because the opportunity costs of collecting sufficient information, that is, waiting for the right person who might or might not come along, are too high. Both examples are off the mark given the test. The test for incommensurability assumes, after all, that indifference and incommensurability hold between the *values* of the options of choice. Elster's examples on the other hand deal with *knowledge* of the options. Therefore, indeterminacy is not exhausted by indifference and incommensurability. One should distinguish a third category of epistemic indeterminacy (with all its subclasses).

This has consequences for the view that emotions assist rational choice in settling problems of indeterminacy. Elster finds this claim implausible, arguing that it makes a straw man of rational choice. I agree with Elster that this is the case where it is assumed that a rational agent could not deal with indeterminacies of value. However, I am not so sure the same is true of indeterminacies of knowledge. It is true that there is an opportunity cost to assembling more information for most difficult decisions in life. The magnitude of that cost is in most cases unknown to

the agent. Therefore, it seems rational to find out how much effort it would cost to get more information. However, there are opportunity costs related to such an inquiry as well. In short, there is a regress here. The rational agent could never be in a position in which she knows that further inquiry is too costly. I do not really see how a plausible account of *rational* choice, even a *satisficing* one, could avoid it. If there is radical indeterminacy of knowledge as exemplified in the examples of Dr. Johnson, rationality is at a loss. The only recommendation it could give is to find out what the opportunity costs are, but at the same time, it is recognized that doing so may be too costly. It is, therefore, plausible to assume that the emotions play a key role in minimizing the costs of such otherwise rational inquiries by simply prompting the agent to choose.

The title chapter, Chapter 5, is Elster at his best. Here he applies some of the observations made in earlier chapters. It deals with mechanisms of *transmutation* and *misrepresentation* of the real motivations of agents. The basic idea is as simple as it is pervasive. Just as it is sometimes undesirable or shameful to represent one's real motives to others, it is often similarly undesirable to be honest to oneself about one's motivations. Nobody likes to think of himself as an egoist. Blatant self-interest might be misrepresented to others as concern for the general good. Similarly, it can be transmuted for oneself into such a concern. Another example is the dialectic of envy discussed above. Since envy is shameful, it is attractive to misrepresent one's envy as righteous anger to others. Moreover, if the feeling of shame results in the formation of the belief that the other did not deserve his good fortune, the envy might transmute into genuine righteous anger.

In this context, Elster discusses the role of reason, understood as an impartial constraint on the sort of arguments and claims one can put forward. For example, an argument to the effect that a policy should be accepted because it serves my interests is not an argument at all. One should at least represent one's arguments in a more impartial way. Arguing, for example, that the policy will be good for everybody is far more convincing, even if other parties realize that you are motivated by your own interests. Elster gives beautiful examples of forms of misrepresentation and transmutation in the political arena, ranging from speeches by Greek envoys, to recent trade union negotiations in Norway. The phenomena of misrepresentation and transmutation, although quite well-known, have never attracted the attention of theorists in a systematic way. There are no plausible theories that explain exactly how misrepresentation and transmutation work. Moreover, many of the underlying mechanisms are poorly understood at best. Given their pervasive importance in politics, there is significant work to be done. For example, misrepresentation and transmutation put stress on the feasibility of ideals of deliberative democracy.

The final part of the book, entitled 'Coda', tries to draw some general conclusions from the entire enterprise. It is clearly written as an afterthought. Here Elster repeats the themes that kept coming up in the previous chapters. He argues for what he calls 'historical psychology'. Such an approach to the emotions would study the social-historical influences on the emotions as well as the effects of emotions in a broader framework than could be done in either the laboratory or the social sciences alone. It would include neurophysiology, psychological experiment, but also social science, history, literature and philosophy as its sources of information. *Alchemies of the Mind* gives us a glimpse of the possible results of such a study.

While reading this book, I could not shake off the impression that it had been written too hastily. The chapters are more or less independent in spite of many cross-references and are rather mixed in quality. Chapters 2, 3 and 4 contain long, well-organized lists of phenomena illustrated by beautiful anecdotes and then move on to the next topic without showing readers the broader picture. Only Chapter 5 contains a clear focus. This is partly due to the subject matter: the human emotions are too complex and too diverse to be compressed into a neat, simple theoretical framework. It is also partly due to Elster's scientific approach. The stress on mechanisms has many implications for the form of this work. Elster sees his main task as pointing out the indeterminate emotional mechanisms. The resulting overall picture is inevitably as complex as the clusters of mechanisms one could distinguish.

This will not come as a surprise to those who are familiar with Elster's other writings. Elster often gives you the impression that there is a beautiful necklace of important ideas in his books. He provides you with the beads: invariably interesting conceptions and well chosen examples. However, when you start looking for the thread you find that there is not one long enough or strong enough to make the necklace. This might be disappointing to some, but, ah, those pretty beads . . .!

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Modeling Bounded Rationality, ARIEL RUBINSTEIN. MIT Press, 1998, xii + 208 pages.

Most of economic theory presumes that decision-makers are rational: they correctly conceive of a well-defined set of alternatives, have well-

defined preferences over these alternatives, and choose a best alternative. Evidence from many sources – experiments, interviews, field studies, introspection – indicates that such an idealistic picture in many cases does not accurately describe behavior. The reason is that decision-makers simplify, misunderstand, lack ability, miscalculate, forget, and make evaluations of alternatives that depend on seemingly irrelevant details about how a problem is framed. A leading figure in calling economists' attention to these matters is Herbert Simon, who in 1978 received the Nobel Memorial Prize for his contributions. He introduced the term 'bounded rationality' which refers to a decision procedure by which humans deliberate and arrive at decisions.

Usually the work of Nobel laureates has had a profound effect on research practice. However, in his Nobel Lecture (published in the *American Economic Review* in 1979) Simon noted that ideas about bounded rationality had made little mark on mainstream economic theory. Twenty years later not much has changed, as explained by Reinhard Selten, also a Nobel laureate, in his 1997 Presidential Address to the *European Economic Association* (published in the *European Economic Review* in 1998): 'The picture of rational decision making underlying most of contemporary economic theory is far away from observed behavior. It is therefore necessary to develop theories of bounded rationality'.[1] The appearance of Ariel Rubinstein's book is a signal that this is starting to happen. The author explains that his goal is modest: 'This book is not intended to be a triumphal march of a field of research but a journey into the dilemmas faced by economic theorists attempting to expand the scope of the theory in the direction of bounded rationality' (p. 5).

Rubinstein argues that to analyze bounded rationality, details regarding *how* decision-makers deliberate and arrive at decisions must be taken into account. In Chapter 1, he presents a model of rational choice, as a benchmark of comparison for what follows. He formally shows that some forms of boundedly rational behavior can be alternatively understood 'as if' they were rational. In particular, this is the case with Simon's famous *satisficing procedure*, where a decision-maker does not pick a best alternative but rather looks around until he finds one that is good enough. As Simon himself showed in the mid-fifties, that

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[1] Selten shared the 1994 Nobel Memorial Prize in economics with John Harsanyi and John Nash, 'for their pioneering analysis of equilibrium in the theory of non-cooperative games'. Over the past two decades, non-cooperative game theory has become an increasingly important part of mainstream economics. Selten's award-winning contribution was to develop the concept of (subgame) perfect equilibrium, which is a cornerstone of game theory and many economic models. It is interesting to note that he seems to view this contribution as a philosophical inquiry with no a-priori relevance for describing human economic behavior.

procedure can alternatively be viewed as an optimization endeavor, if search costs are taken into account. To Simon, this result shows how an interesting conclusion can be derived with more realistic (and parsimonious) assumptions than those of rationality. To many (traditional) economists it provides a justification for using rationality assumptions, since these may do the trick even if the decision-maker does not consciously optimize. Rubinstein notes that besides satisficing there are not many procedures that admit a description in terms of 'as if rationality', and he suggests that the study of bounded rationality should consider other forms of behavior.

Rubinstein's approach is to selectively relax a feature of the standard rationality assumptions, and to see what behavior is implied. Chapters 2 to 6 concern situations with single decision-makers. What happens if a person simplifies decision problems where alternatives are similar? What if he makes imperfect inferences, or if he has limited memory? What if his ability to process information is limited? And what if the decision-maker is an organization, restricted in some way by its internal communication structure? In Chapters 7 to 10 the analysis deals with strategic interaction, situations where the decisions of multiple agents interact. How can the notion of equilibrium be developed in games where the players follow certain boundedly rational procedures? What happens if they cannot do backward induction, or if they are concerned with reducing the complexity of the strategies they choose? What if the players are Turing machines that condition their strategic choices on some description of the other players? Rubinstein treats these issues using a variety of rather different models, developed by himself and others. The presentation is always crisp and clear. In each case Rubinstein explains how the model with bounded rationality differs from some benchmark with rational decision-makers. Each chapter ends with a set of 'projects', a rich collection of challenging exercises and suggested readings. The reader who studies the material carefully is bound to discover many interesting research topics.

Here is an example of a model covered in the book. In Section 7.3, a new equilibrium concept for 'procedurally rational' play in games, developed by Rubinstein and Martin Osborne, is presented. One feasible interpretation of this equilibrium concept is the following: There is a population of individuals and every now and then a small group of individuals gets matched and play a given game. If the game is asymmetric, then a given individual always takes the same player position in the game. Sometimes a newcomer will enter the population. The first few times (as many times as his total number of pure strategies) this fellow plays the game, he tries out each of his possible pure strategies once and records and remembers his payoff. He then clings forever to the strategy that led to the best result in these trials (if there

was more than one best strategy, he selects one of these with equal probability). The equilibrium probability assigned to strategy x is the probability with which an individual entering the population (in the relevant position) ends up using strategy x. This probability is also equal to the fraction of the population (in the relevant position) that uses strategy x.

The interpretation of this new equilibrium is quite special. The interacting individuals are boundedly rational in that they follow a certain procedure that is not conceptualized as an optimization effort. An individual must correctly perceive his own realized payoffs, but he need not realize that he interacts strategically with others. By contrast, the usual interpretation of the well-known game theoretic concept of Nash equilibrium entails that the players understand the full game, and even have correct expectations concerning the behavior of other players.

The new concept is easy to apply. Imagine some kind of economic exchange where two individuals simultaneously choose activities R or S. Each individual's payoff equals the total productivity of the exchange *plus* the intrinsic satisfaction the individual derives from his chosen activity. Assume that there are gains to specialization, so the total productivity is 3 if the individuals choose different activities, but only 1 if they choose the same activity. Assume that the row player's intrinsic satisfaction is 1 from activity R and 0 from activity S. The column player's intrinsic satisfaction is 0 from activity R and 1 from activity S. The situation is described by the following game:

	R	S
R	2, 1	4, 4
S	3, 3	1, 2

To find all equilibria, suppose that in some equilibrium the proportion of column players choosing R is p. Now consider the behavior of a newcomer who plays in the row player's position. He first tries out his strategy R, and then his strategy S. If on both these occasions the column player chooses R, then the resulting payoffs for the row player will be 2 when he tries out R and 3 when he tries out S. Since 3 is greater than 2, the row player will subsequently choose S forever. However, if the column player's choices follow any other pattern, then the resulting payoff for the row player will be higher when he tries out R than when he tries out S. (For example, if the column player chooses S when the row player tries out R, and R when the row player tries out S, then the resulting payoffs for the row player will be 4 and 3 respectively. Since 4 is greater than 3, the row player will subsequently choose R forever.)

Hence the probability that a newcomer who plays in the row player's position ends up choosing S forever equals the probability that the column player chooses R in both the trial rounds. This probability is $p \cdot p = p^2$, since on each of the two trial rounds the probability that the column player chooses R is p. Thus, in equilibrium, p^2 is also the proportion of row players choosing S. By analogous reasoning, one sees that a newcomer who plays in the column player's position would end up using strategy R with probability $(p^2)^2 = p^4$. In equilibrium the proportion of column players choosing R equals the probability that a newcomer who plays in the column player's position would end up using strategy R, so $p = p^4$. This can only hold if $p = 0$ or if $p = 1$. One sees that the game has two equilibria in pure strategies, (R,S) and (S,R), but no equilibrium in mixed strategies. By contrast, there exists a Nash equilibrium also in (non-degenerate) mixed strategies, so the example shows that the new equilibrium concept differs mathematically, not only in its interpretation, from that of Nash equilibrium.

In motivating the new equilibrium notion, Rubinstein does not refer to any empirical evidence that shows that the particular form of behavior assumed fits the facts of the world. It is clear that he finds the assumptions intuitive and interesting, and given this he is happy to work through the theory. Rubinstein's attitude towards the other models presented in the book is similar, although he stresses that the assumptions that go into a theoretical exercise should not be completely detached from reality. He writes: 'I have to agree that an understanding of the procedural aspects of decision making should rest on an empirical or experimental exploration of the algorithms of decision. Too many routes diverge from the rational man paradigm, and the input of experimentation may offer some guides for moving onward' (p. 16). Rubinstein cites some experimental findings from which he takes inspiration.

One might think that Simon would welcome Rubinstein's initiative to write a book on bounded rationality. I wonder what Rubinstein thought while he was writing. He sent an early version to Simon who responded with very critical comments, calling Rubinstein's research methodology into question. Simon objects to the rather loose connection between the assumptions Rubinstein makes about boundedly rational behavior, and empirical findings about the behavior of humans. In the final chapter Rubinstein quotes from Simon's letters. Simon writes: 'Aside from the use you make of the Tversky–Kahneman experiments, for which I applaud you and them, almost the only reference to empirical matters I detect in your pages is occasional statements like "a casual observation" and "the phenomenon exhibited here is quite common". . . . [C]asual empiricism does not provide a firm foundation for the theories that fit the facts of the world. Facts do not come from the

armchair, but from careful observation and experimentation. . . . Using the rubric of ''bounded rationality'' to expand the arena of speculation misses the intent of my nagging at the economics profession. At the moment we don't need more models; we need evidence that will tell us what models are worth building and testing'. Simon furthermore charges Rubinstein with neglecting work in artificial intelligence and cognitive psychology that succeeds in describing human behavior quite well. He mentions formal theories that take the 'form of computer programs that demonstrably simulate in considerable detail . . . a wide range of both simple and complex human behaviors. Little of the behavior that has been studied is explicitly economic, but that provides no excuse for ignoring its relevance to economic analysis'. (All quotes here come from Chapter 11.)

Rubinstein answers that his goal is not to predict and he writes: 'The models are perceived as patterns of views adopted about the world. . . . [W]e try to examine the logic of a variety of principles that guide decision makers. . . . We are interested in a model only if it refers to concepts and considerations that make sense in the context of social interactions. . . . A model with this approach does not have to be verifiable in the way models in the sciences must be'. Rubinstein draws an analogy from a theory that does not presume bounded rationality: 'From Hotelling's ''main street'' model, we learn that the desire to attain as large a share of the market as possible is a force that pushes vendors (or political parties, or the makers of soft drinks) towards positioning themselves or their products in the center. In real life, the many other motives that influence a vendor's choice will cause him sometimes not to be located at the center. It is nonetheless insightful to identify the exact logic that leads an economist to the conclusion that the desire to maximize the share of the market leads a vendor to be located in the center'. Rubinstein explains that clear insights of this nature are not delivered by those complicated models in the artificial intelligence literature which Simon favours: 'Those models may be capable of producing imitations of human behavior, but they are not convenient components for analytical work'. (All quotes here come from Chapter 11.)

I find that the methodologies of Rubinstein and Simon are best viewed as complementary. Simon points to interesting tools developed by researchers in other fields that can be usefully incorporated into economics, with the aim of developing good descriptive theories. In his Presidential Address, mentioned above, Selten reports several experimental results that he argues may be useful for developing an empirical-based microeconomic theory. The methodology Simon and Selten favor seems viable and valuable. I cannot, however, see that this in any way diminishes the value of Rubinstein's approach. In the introduction to his forthcoming book *Economics and Language*, Rubinstein explains that 'all

my academic research has been motivated by my childhood desire to understand the way that people argue. . . . I continued to explore formal models of game theory and economic theory, though not in the hope of predicting human behavior . . . and without any illusion about the ability of capturing all of reality in one simple model'. I think this is fine. Rubinstein's work is always intriguing and refreshing. It is full of insights about how to model and understand complicated social phenomena. Moreover, Rubinstein's methodological bent leads him to explicitly interpret and philosophize about the theories he considers, and his discussions are always thought-provoking and interesting.

In the end, I wonder if not the specific game I invented above does not indeed summarize rather well the interaction between people like Rubinstein and people like Simon. Consider a population of two sorts of researchers who have different opinions on which research methodology is best, R or S. These fellows get matched and argue, defending a particular methodology. With Rubinstein as a row player, and Simon as a column player, I think they have coordinated on the (R,S) equilibrium. Given the payoffs I proposed, this seems like a happy state of affairs. I wonder if the players involved would agree with the payoffs I have given them though. In Simon's case, I see that this cannot be the case. He is clearly trying to make researchers move to the profile (S,S), which would not make sense for the given payoffs. With Rubinstein, however, I am not so sure. It seems clear that he enjoys his own methodology the most. Rubinstein writes: 'The crowning point of making microeconomic models is the discovery of simple and striking connections between concepts . . . that initially appear remote' (p. 191). Moreover, he does not reject others' methodologies altogether, stating that '[t]he economics profession has several legitimate goals' (p. 194).

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The New Social Question: Rethinking the Welfare State, Pierre Rosanvallon. Translated by Barbara Harshav. Princeton University Press, 2000, xii + 139 pages.

This is an attractive little book in all sorts of ways. Little it is, though, at 108 pages of text (with another 20 pages of notes annoyingly collected at the end). The writing is jaunty and the translation so fluent that one forgets it is a translation (until occcasionally puzzling over phrases like

'John Rawls's . . . ''principle of difference''' the penny drops that that is just the 'difference principle' translated into French and back again). Although obviously written for an audience more *au courant* with recent developments in French politics and social policy than many of its Anglophone readers are likely to be, the allusions are usually sufficiently elaborated for the uninitiated nonetheless to catch the drift if not the detail.

This already slender book is further divided into two roughly equal parts. The second concerns French approaches to 'social exclusion', setting contemporary policies of 'social insertion' in the context of older discourses linking 'public charity' and duties to work. Although there are some delightful historical touches, all that material is broadly familiar to anyone who has been following 'workfare' debates worldwide. The subject of the first and more fascinating half of the book, upon which I shall concentrate here, is 'social insurance as an instrument of solidarity', both as a historic idea in French social thought and as an increasingly threatened practice in French social policy.

Although Rosanvallon never quite puts it in these Durkheimian terms, the solidarity manifested by insurance is 'mechanical' rather than 'organic'. To coin a phrase, it is 'solidarity without sentiment'. In a system of mutual insurance, everyone's premiums are collected together and used to pay off those to whom the insured-against Bad Thing has happened. In such circumstances, we say that risks have been 'pooled'. Everyone who has pooled their risks are in that sense 'all in it together'.

Mutual insurance is solidaristic in this sense: after all the insurance premiums have been collected and payouts made, everyone suffers exactly the same fate. (That assumes insurance payouts can perfectly compensate for what has been lost, of course, which is controversial in all sorts of contexts, but minimally so with the sort of earnings-replacement payments that are the bread-and-butter of social insurance schemes.) But although solidarity is thus an upshot of insurance, it is not at all its impetus. That is to say, you do not need any affective ties to someone else to want to pool your risks with hers. All it takes for the solidarity implicit in mutual insurance to prove motivationally compelling is for you to think that you would be better off having someone else help to share your risks.

Of course, the terms on which you share each other's risks are up for negotiation. In principle, there are various things that might be on the table, among them how much each of you pays in premiums and how much each of you would get if the Bad Thing happened to you. But to keep the story simple, let us assume that everyone in the insurance pool will pay the same premium and everyone will receive the same payout if the Bad Thing happens to them; and the only thing left to choose is with whom your risks are to be pooled.

Now, assuming egoism is what underlies insurance, each person would prefer to pool her own risks with those of people who are less at risk than herself. But since everyone is looking at it the same way, no one wants to admit people with worse risks than their own into their risk pool. Thus it is ordinarily said that the natural outcome would be for people to end up pooling risks only with those who are (or who are, for all they know) running the same risks as themselves.

That is the sense in which ignorance is said to facilitate mutual insurance. Behind Rawls's veil of ignorance (or, anyway, Harsanyi's equivalent), principles of insufficient reason lead everyone to assume that they are as much at risk as anyone else; and everyone agrees to pool their risks with one another's on equal terms, in consequence. Knowing more about the particulars of the risks you run, compared to others', undermines that logic, leading either them (or you) to want to reconfigure the risk pool so as to purge the 'bad risks'. Rosnavallon worries that individualized risk information is undermining the solidarity of the social risk pool in just this way.

But there is no reason to believe people should want to pool their risks only with others who are running exactly the same risks. No sane underwriter wants to insure all the ships in the same flotilla; neither do any sane shipowners organizing a mutual insurance scheme want to pool their risks only with owners of other ships that are likely to sink in the same squall. The diversification of risk that is so crucial to the effectiveness of mutual insurance thus militates against pooling your risks only with others who are running exactly the same risks.

What you really want to do is to pool your risks with others who are running risks that are different and independent from your own, and, ideally, of less or equal magnitude to yours. Economists worried about the viability of voluntary insurance schemes fear 'adverse selection', whereby good risks opt out and leave only bad risks remaining in the pool. But to say adverse selection undermines insurance is, in effect, to say: risk-pooling is only viable if good risks cross-subsidize bad ones; if the risk pool contained only lots of equally bad risks, transforming the risk into the certainty of the statistically expected loss would leave them all paying enough to bankrupt them. One can easily see why people with bad risks would not want that to happen. But it is not easy to see why that would worry other people running fewer risks and whose interest in solidaridistic risk-pooling is purely egoistic would care. From their point of view, bad risks *should* be excluded from their pool and put into one of their own. If that pool as a whole goes under, then so be it.

That is the spectre Rosanvallon envisages, in response to individualization of risk information and the disintegration of solidaristic risk-pooling. There is yet another twist in the tail, however. Among the many insurance policies we would each like to buy, one surely is insurance

against becoming uninsurable. That is a *very* Bad Thing, from our egoistic point of view. As more and more information emerges, first about one of us and then another, that threatens in highly unpredictable ways to make us unattractive partners in a risk pool. We would each want to insure against that eventuality. Compulsory, universal insurance is valuable to each of us, with our being compelled to remain in the risk pool constituting the price (the insurance premium) each of us pays for being assured of never ourselves being excluded from the risk pool. And the compulsion which is so evidently crucial to the success of that scheme marks out an ineliminable role for the state (that is to say, '*social* insurance').

The crisis of social insurance is in part a crisis of the fracturing of the risk pool into ever smaller sub-pools, and in part a crisis of the 'contributory' basis of the financing of social insurance. Typically, social insurance schemes (unemployment insurance, disability insurance, sickness insurance and so on) are financed by mandatory 'contributions' extracted from workers and their employers. Social insurance premiums thus constitute a 'tax on employment', increasing the on-costs of labour. That in turn decreases demand for labour and leads to higher levels of unemployment and non-employment. That is not only a social problem in its own right. It is also, more particularly, a financial problem for the social insurance scheme, which presupposes large numbers of employees contributing their social insurance premiums to make the scheme financially viable.

The obvious solution is for social transfers which are rationalized on the basis of 'insurance' (or meta-insurance, insuring your insurance) logic to be financed, nonetheless, out of general tax revenues. That avoids the risk of higher contributory taxes reducing the number of employees available to contribute. It also avoids the other great risk of mutual insurance: that during some common crisis that strikes all alike (a general depression, for example) total payouts might exceed total premiums and reserves, thereby bankrupting the scheme. Where social transfers are financed out of general taxes, that is no great drama: it is just an occasion to raise taxes or, perhaps more appropriately during a general depression, for more deficit spending.

In the stylized model of social insurance I have been presenting, I have been assuming that everyone pays the same premium and everyone gets the same payout if the Bad Thing happens, and the only 'control variable' is who is and who is not inside the pool within which risks are shared. But much of the action in social-insurance reform lies in varying the terms on which people are insured, tailoring either premiums or payouts to more individualized risk assessments.

The older tradition of social insurance is said to be 'solidaristic', in the sense it is based on 'community rating'. The terms of insurance were

the same for everyone: everyone paid the same premium and received the same payout as everyone else; and those terms reflected the average risk being run across the entire community. That is how social insurance used to work. It is even how private medical insurance, by statute, is largely required to work in Australia (different premiums can be charged for lone individuals and for families, but no greater premium can be charged for large families than small ones).

To see how that is unravelling, take the simplest case: old-age pension reform. The old tradition was to assure everyone of a 'defined benefit'. Everyone received a certain sum of money (flat rate or earnings-related, depending on the country) every month from the time of reaching a set age (usually 65) until they died; and this was 'earned' by social security taxes levied on the person throughout her previous working life (though typically it is actually paid for by similar taxes on the next generation under 'pay as you go' arrangements). The present push, from the World Bank and others, is towards a 'defined contribution' scheme, whereby everyone puts aside money for their own old age in a private pension plan. A novel variation introduced in Sweden and Italy is a 'notional defined contribution' scheme, whereby the state predicates a lump sum to the individual upon retirement, which is then annuitized in the same way as in a private scheme to generate a monthly income flow until one dies.

Now the details of all this vary, but it is the basic pattern that concerns me. Under a defined benefit scheme, everyone received the same pension in old age. Under a defined contribution scheme of either sort, they do not. And that is not only because people might have put less money into their pension account through their working lives. More interestingly, it is also because upon retirement people have to transform their lump sum into an annuity which will pay them a constant income stream for the rest of their lives; and in calculating that annuity, people's varying life expectancies are naturally taken into account. Someone who can expect to live a long time will realize a lower monthly income stream out of the same size lump sum as someone who can expect to live only a short time.

One way of putting the question that drives Rosanvallon's book is thus: how individualized do we think those life-expectancy calculations should be? Or, rather, on what sort of sub-group bases is it decent to make those calculations?

Private insurers in a genuine 'defined contribution' scheme, of course, individualize just as much as they possibly can. Should the state do the same, in 'notional defined contribution' schemes? To date, neither Sweden nor Italy have done so. In both countries the lump sum notionally assigned to each individual is converted to an annuity in a way that simply reflects the *average* life expectancy of each age cohort as it retires.

In truth, of course, different groups within that cohort have different life expectancies. Women live longer than men. Should their monthly pensions be two-thirds (or whatever is appropriate) those of men, in consequence? Individualized risk-rating says yes; solidarity says no.

We have known the facts of differential male and female life expectancy for a long time. We could have arranged even traditional pensions to reflect those gender differences. Is it merely for fear of the electoral consequences of alienating so large a proportion of the electorate that we have not implemented the recommendations of individualization before – and hesitate to do so even now that we are in other respects putting pensions on a 'sounder' actuarial basis? More likely, it seems that there is more 'sentimental solidarity' underlying social insurance than is reflected in the strictly egoistic logic of insurance as preached by the World Bank and which is feared by Rosanvallon.

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