NATURAL RIGHTS, DISEQUILIBRIUM, AND THE LIMITS OF HUMAN KNOWLEDGE: AN APPRECIATION FOR SURI RATNAPALA

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In his essay, *The Jurisprudence of Friedrich A. Hayek*,[1] Suri Ratnapala gives a lucid exposition of an approach to law that he and Hayek share. As is common in Hayek's writing about most major areas, the centerpiece of analysis is the role that the limits of human knowledge should play in the organisation of human affairs. As Ratnapala writes:

> His [Hayek's] views on law and justice arise from the same epistemology that informs his economic theory, namely, critical rationalism that recognises the irremediable limitations of human knowledge. According to this view, the rule of law is not simply a moral claim but a necessity for coping with the human condition in a world that is in permanent disequilibrium.[2]

From this basic premise arise some of the key components of a just world order according to the views developed by Hayek and championed by Ratnapala. One key element of this system is that many of society's best laws are not generated by a direct command from the sovereign, as strong positivists such as Jeremy Bentham have often insisted, but instead often gradually arise out of customary practices through a pattern of slow and consistent evolution, in which social trial-and-error operates as the analogue to Darwinian natural selection. This bottom-up fashion of making law works well in most cases, even if in some instances it does not respond adequately to social change.

The decisive advantage of this system is that it promotes decentralized decision-making, so that no one person or small group can make the decisions on which the lives of others depend. This decentralized control, moreover, is only possible when the law both allows and facilitates voluntary exchanges between persons, which in turn allows for the division of labor that can then be traded for mutual advantage. Thus in a world without trade, all individuals have to become jacks-of-all-trades, which means that they become the master of none. But with exchange, specialisation allows individuals, operating either alone or in firms, to acquire vast amounts of knowledge in a given field, precisely because they can now recover the cost of their extensive investment in human capital by selling their services to large numbers of individuals who in turn need not invest their time and energy in deploying an inferior version of that same set of skills. One unappreciated advantage of the private law of contract is that it allows for the voluntary sorting of individuals on a transaction-by-transaction basis, rather than requiring complete knowledge of the entire marketplace. As Ratnapala elegantly puts the point: 'We observe, for example, that there is a general practice of exchange whereby individuals obtain the goods and services they need or

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1 Suri Ratnapala, 'The Jurisprudence of Friedrich A. Hayek' in Oliver Hartwich (ed), *The Multi-Layered Hayek* (Centre for Independent Studies, 2010) 45–59.

2 Ibid 45.

desire. Yet, no one has knowledge of the individual needs and preferences of persons, the value that they place upon them, and what they are prepared to exchange.'[3] It is also the case that trade agreements do not always specify all the terms and conditions on which they rest. There is no perfect solution for filling the omitted term, but a useful guide to the question is the joint intentions of the parties, uncoloured by the imposition of whatever arrangements a judge thinks desirable. 'The question that the judge must decide is "not whether the parties have obeyed anybody's will, but whether their actions have conformed to expectations which other parties have reasonably formed because they correspond to the practices on which everyday conduct of the members of the group was based."'[4]

Fortunately, the judicial enforcement of voluntary private transactions, whether by informal or formal means, does not depend on a public demonstration of the benefits and burdens that each side derives. Private parties instead allocate those benefits and burdens between themselves by contract. The legal system then looks at the external signs of agreement, and enforces it as written. To be sure, this basic description does not take into account the difficulties of force, fraud, and incapacity that on occasions can upset the happy universe of voluntary transactions. But these issues are rightly raised in legal proceedings as affirmative defences, with the burden of proof heavily on the parties who want to assert them.

In terms of overall system integrity, the key design feature relates to those defences against the enforcement of contractual promises that are *not* admitted into the legal system. In this context, innocent mistake at the time of formation, the most common source of ex post regret, is not grounds to set aside a transaction, except in very rare cases.[5] Whatever the moral doubts, the legal rule is driven by the fear that admitting this defense in one case is to invite it in virtually all cases where a deal has gone sour. Determining whether the defense is justified requires a detailed examination of internal mental states. This constant inquiry would necessarily slow down the velocity of transactions which is so critical to the overall success of any market, whose efficiency is measured by an increase in the ratio of gains from trade divided by the transaction costs needed to achieve them.

In contrast, the willingness to accept defenses based on duress and fraud are permitted because in these cases the wrong of one contracting party undermines the success of the other. Duress is the most dangerous of these behaviors, for it totally disrupts the prospects of mutual gains from voluntary transactions. Fortunately, in well-functioning systems, that abuse is relatively uncommon. Given its external manifestations, it is also the easiest to police, and thus, paradoxically, is the least important in day-to-day affairs. Fraud differs critically from unilateral mistake because there is now some behavior on one side of the transaction that is publicly observable and thus capable of control. In general, the decision to allow actions against fraud (where an element of business prudence goes a long way) is a tougher call than is duress, but I agree with the well-nigh universal judgment that fraud (and in some cases deliberate nondisclosure) is still worth combatting legally. Socially, however, the best form of control is often ex ante, through inspections and reviews before parties enter into major deals, which is one reason why many large transactions contain explicit clauses, whereby both sides agree in advance to waive their fraud claims against the

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[3] Ibid 50.

[4] Ibid 50 (quoting Friedrich A. Hayek, *Law, Legislation and Liberty* (Routledge, 1982) 96).

[5] For discussion, *see Smith v. Hughes* (1871) LR 6 QB 597; *Bell v. Lever Brothers Ltd.* [1932] AC 161.

other.[6] The statement represents an implicit judgment that the ex ante constraints work well enough that the hazards of ex post litigation are best avoided.

I do not want to belabour these issues here. Nor do I think that either Hayek or Ratnapala would take issue with how this brief discussion reveals the relative strength of market institutions. Even though these problems are likely to arise in litigated cases, the proper perspective for understanding contract as a social practice is never the tiny subset of cases that make their way to litigation, but the far larger group of successful transactions that are never the subject of litigation at all. Indeed, the point can be made still stronger: once parties identify an institutional flaw that disrupts a standardized transaction, they often refashion the transactions in ways that provide an ex ante fix to obviate the underlying problem in future transactions.

There is no reason, moreover, why any contract has to be limited to a regime of barter. A contract for services or the sale of goods often results in a transfer of cash that can be used to transact with individuals who were unrelated to the initial transaction.[7] In this case, specialisation and free contract expand the circle of individuals who gain from the overall operation of the system, which in turn accounts for the success of markets everywhere. There is, I think, nothing that can be said to falsify the basic insights contained in this simple but durable account of human nature. The concerns that I have with this approach to market behavior do not relate to its intrinsic desirability, but to the way in which it fits into Hayek's larger metaphysical and epistemological framework. So in this short essay, I shall examine what I think to be some clarifications and qualifications that should be offered to the basic system. In part I, I shall examine some of the difficulties associated with the conception of natural law and natural reason as they are developed in Hayek's work. In part II, I shall examine closely the question of whether, and if so how, to think of markets in a state of permanent disequilibrium. In my view, there are very different processes at work in the constant and incremental adjustment in prices and quantities of goods in standard market transactions and in the more profound changes in the system of property rights that require coercive action from some government power, be it the courts or the legislature. In part III I shall then take a closer look at the *rate* of change that takes place through various social mechanisms, including prices, customs and legal rules. The Hayekian tradition often includes a celebration of the importance of 'gradual' change. Again in the words of Ratnapala, 'As Hume observed, "rules of justice, like other conventional things, such as language and currency, arise gradually, and acquire force by a slow progression, and by our repeated experience of the inconvenience of transgressing it."'[8] In many key ways, this proposition is false, with variations both within and across these categories. The purpose of this essay is to offer some preliminary explanation as to why rates of change are often near-instantaneous in markets, rapid in custom, and slow in basic legal property regimes.

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6 See *Danann Realty Corp. v. Harris*, 157 N.E.2d 597, 599 (1959) ('[P]laintiff has in the plainest language announced and stipulated that it is not relying on any representations as to the very matter as to which it now claims it was defrauded. Such a specific disclaimer destroys the allegations in plaintiff's complaint that the agreement was executed in reliance upon these contrary oral representations.').

7 The point is an old one. See Paulus, Digest, 18.1.1.

8 Ratnapala, above n 1, 51 (quoting David Hume, *Enquiries Concerning Human Understanding and Concerning the Principles of Morals* (Oxford University Press, first published 1739, 1975 ed) 490).

I NATURAL LAW

There is little doubt that appeal to the natural law is both tempting and dangerous to people who work within the Hayekian tradition. On the positive side of the ledger, the notion of natural law is attractive because it presupposes a system in which there is law prior to and independent of the state. At this point, the body of rules in question should be relatively free of the high levels of political intrigue that normally accompany legislation. Natural law is thus exempt from most scepticism of the legislative process outlined in Bruno Leoni's *Freedom and the Law*.[9]

Ratnapala, for his part, exhibits an uneasy affection for the idea of natural law. At one point he writes that natural law 'does not help us identify the laws we must observe. It is unhelpful to the scientific understanding of the way laws emerge and change over time.'[10] In general, I think that he is wrong about the first point, as the natural law tradition is quite clear in the rules that it adopts for the acquisition of property, the prohibition against the use of force, and the importance of keeping promises, all of which rate high in the Hayekian tradition. He is correct, however, that the natural law does not offer a theory of its own evolution, other than noting its own durability over time and widespread adoption across different cultures as tests for natural law, both of which are largely true.

Perhaps the most elusive and attractive feature of traditional legal thought is as follows: '[t]he central idea of natural law theory is that a higher law exists independent of human authorship.'[11] I think that there is a certain ambiguity in this sentence. The idea of a law without human authorship could take one of two forms. The first is that the laws themselves are of divine origin, so that it is incumbent on all individuals to use their reason to discover the content of these laws and to apply them in their daily lives. That inquiry in many cases can deal with the acquisition of knowledge through the reading of scripture, as well as through reason. Indeed, in the opening passages to 'Of Property' found in the Second Treatise of Government, Locke covers both his bases by noting that 'natural *reason*' and '*revelation*' point in the same direction.[12]

The second account of authorship is equally instructive. To say that a rule or a practice arises without authorship is to indicate that it arises from group practices that are not controlled by particular actors. This issue is similar to one that arises in modern copyright law, where the question is whether various groups can claim authorship over traditional songs and prayers that evolved through the combined actions of many human agents, none of whom could claim to be the author of the whole.[13]

This sense of communal authorship dovetails nicely with Hayek's own view of the 'spontaneous' efforts of 'accumulated human experience'[14] that lack any strong direction from the centre. It is worth adding that in the famous account of natural law given by Gaius in Book I of his Institutes, he does not choose between these various sources of natural law, but is content to note that natural law rests upon a combination of reason (which has at most weak divine origins), custom, and widespread adoption across cultures.[15] I see no reason to fault that particular account of natural law, because

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[9] Bruno Leoni, *Freedom and the Law* (Liberty Fund, 1961) 97–113. I take a more differentiated view of legislation, thinking it appropriate in many cases, in my introductory critique of Leoni, Richard A. Epstein 'Introduction' in Carlo Lottieri (ed), *Law, Liberty and the Competitive Market – Essays of Bruno Leoni* (Transaction Publishers, 2009) ix.

[10] Ratnapala, above n 1, 46.

[11] Ibid.

[12] John Locke, *A Second Treatise of Government* (1689) § 25 (emphasis in original).

[13] For discussion, see Bryan Bachner, *Facing the Music: Traditional Knowledge and Copyright* (2005) <http://www.wcl.american.edu/hrbrief/12/3bachner.pdf>.

[14] *See* Ratnapala, above n 1, 48.

[15] *Institutes of Gaius*, Book I, ¶ 1.

ideally all three elements should point in the same direction. What differs among them is the mode of validation, for it is possible to champion laws on the basis of tradition and custom, without having to explain rationally why they work. Indeed, with Hayek's own (unduly) pessimistic account of human knowledge, custom tends to get a high priority for precisely this reason. It avoids the so-called constructivist fallacy, which 'is to treat all successful institutions as purpose built and to think that things like morals, markets and legal systems can be engineered to our satisfaction without too many repercussions.'[16] It is surely incorrect to think that all such systems can indeed be 'engineered' from the centre. But it is not too much of a stretch to indicate that there are often times where some degree of central planning is required to execute certain arrangements that cannot be achieved by the incrementalist means that Hayek championed.

In dealing with this point, it is important to note that there is a real question of just how much centralization should be done in private firms that face the strong pressure of competitive markets. On this score, as I have argued elsewhere,[17] Hayek made a serious confusion when he equated decentralisation with the use of intuitive techniques in his justly famous essay, *The Use of Knowledge in Society*.[18] But the two notions are distinct. Decentralization simply requires independent actors to make separate choices, after which market forces determine their success or failure. Intuition says that these actors rely on their local (i.e. experiential knowledge), which decentralised actors are in fact free to accept or reject as they see fit. It may have been at one time that intuitive players could beat computers. But in games that have a rigorous mathematical form, the assertion is ludicrous today when computers routinely beat even the best of human players. So too the captain of a tramp steamer in 1945 might have had an excellent sense of how to schedule his various port stops, but the modern algorithm today renders those skills largely obsolete, precisely because of the amenability of these operational tasks to definitive technical solutions.

Surely, the same relationship between intuition and systematic knowledge applies in the political arena, as will become clear.[19] In political entities, the incentive structures are more complex than those that arise in any firm, which itself has a fair share of internal conflicts of interest. But it hardly follows that legislative design will always fall short. It is easy to point to statutes like the Statute of Frauds from 1677,[20] which are part and parcel of the law today, precisely because they improve the security of private transactions in a way no private mechanism could achieve. But the gains from formal intervention are often every bit as important in the design of governance. The United States Constitution, for all its flaws, still remains a supreme achievement – and it is the essence of a planned document that arose when there was scant time for a more gradual evolution of government structures. It is for this reason that one should juxtapose the Hayekian preference for constitutional gradualism with the clarion call that Alexander Hamilton issued in Federalist Number 1:

> It has been frequently remarked that it seems to have been reserved to the people of this country, by their conduct and example, to decide the important question, whether societies of men are really capable or not of establishing good government from

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16 Ratnapala, above n 1, 51.

17 Richard A. Epstein, 'The Uses and Limits of Local Knowledge: A Cautionary Note on Hayek' (2005) 1 *NYU Journal of Law and Liberty* 205.

18 Friedrich Hayek, 'The Use of Knowledge in Society' (1945) 35 *American Economic Review* 519.

19 For my discussion, see Richard A. Epstein, 'Intuition, Custom, and Protocol: How To Make Sound Decisions With Limited Knowledge' (2006) 2(1) *NYU Journal of Law and Liberty* 1.

20 *The Statute of Frauds* (29 Car 2 c 3) (1677).

> reflection and choice, or whether they are forever destined to depend for their political constitutions on accident and force.

Indeed, as I have argued elsewhere,[21] the strength of the United States Constitution has ebbed, not because its key provisions are unfit for modern times, but because the justices of the Supreme Court have largely construed it in light of the progressive theories that praised the modern administrative state, which Hayek stoutly rejected. The sad point, worth noting, is that judges are no more immune from the general influences of the dominant intellectual *Zeitgeist* than are legislators. It is an overstated credo of the legal realist movement of the twentieth century that judges should not cast a blind eye to changes in circumstances, but should adopt their legal rules to the exigencies of the time.

In this regard, it is useful to contrast with Hayek's views those of Roscoe Pound when he wrote in 1908: 'Scientific law is a reasoned body of principles for the administration of justice, and its antithesis is a system of enforcing magisterial caprice, however honest, and however much disguised under the name of justice or equity or natural law.'[22] There is nothing that spares judges the hubris that is attributable to legislators, so the challenge is often to find a better way to decide which changes should be made at the centre and which from the bottom up. In order to answer that question, it is now necessary to turn to our next issue and ask whether, in thinking about the role of legal rules and institutions, we have to ask whether prices themselves constantly adjust (which is true) or if the law itself is in a state of permanent disequilibrium (which is false).

II PERMANENT DISEQUILIBRIUM

In general, I think that the insistence on permanent disequilibrium overstates the difficulty in making sound judgments about the overall effectiveness of the legal system. The initial point here is that the rules that Ratnapala describes are of very ancient origin, and have for the most part remained constant over very long periods of time. It seems odd to think about a system of general disequilibrium in the face of constant legal rules that have proven their general durability. The point here is that for a huge number of transactions the same rules that were developed with sophistication by Roman jurists work very well today in vastly different social circumstances, which could not be possible if permanent disequilibrium were the universal lot of all humankind – hence my earlier defense of 'The Static Conception of the Common Law.[23] In order to see both the uses and limits of this static conception, it is critical to draw a distinction between two sources of disequilibrium: that which is attributable to changes in relative prices, and that which is a function of an external shock to the overall system, from either political or natural sources.

Starting with the first, it is indeed correct to say that the prices of various goods and services will tend to shift with respect to changed conditions in supply and demand. But these shifts do not take place all the time. In many markets, prices remain quite stable over long periods, and everyone welcomes that state of affairs to the extent that it reduces or eliminates one element of uncertainty that could otherwise slow down the velocity of private transactions. But it is important to stress, as Hayek and Ratnapala

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21 Richard A. Epstein, *How Progressives Rewrote the Constitution* (Cato Institute, 2006); Richard A. Epstein, *The Classical Liberal Constitution: The Uncertain Quest for Limited Government* (Harvard University Press, 2014).

22 Roscoe Pound, 'Mechanical Jurisprudence' (1908) 8 *Columbia Law Review* 605, 605.

23 Richard A. Epstein, 'The Static Conception of the Common Law' (1980) 9 *Journal of Legal Studies* 253.

do, that the prices are stable solely because of the way in which supply and demand are matched, and not because of a government or external decree mandating that form of price stability. In the latter situation lies the huge risk that the mandated fixing by decree of one set of prices will produce huge social dislocations, which cannot be easily overcome when extrinsic circumstances introduce a large gap between the regulated and market prices. The introduction of general systems of price controls can have just that effect because they block the price adjustments that are needed to bring the market back into equilibrium. The situation becomes painfully evident in markets that are subject to rigid rent or wage controls, where the result can be systematic shortages of housing or high levels of unemployment if rents and wages are no longer subject to variation.

The genius of markets is that a *stable* set of practices – price and wage changes – within a *constant* form of voluntary transactions offer a time-tested way to deal with the new information on relative scarcity as it enters into the economic system. We need not say, however, that prices and quantities are in permanent disequilibrium, because often they are not. It is enough to say that the flexibility of a market system is so great that it can make multiple private adjustments in both quantities and price to respond to these changes when and if they take place. We can make the further claim that in general, private actors will have better knowledge than any central planner about whether the market is in fact in disequilibrium. This is of course Hayek's main point: that a host of incremental private changes are generally far easier to absorb socially than the infrequent, tardy, and erratic intervention of government that mainly causes huge distortions.

The second form of disequilibrium, external shocks to the system as a whole, often does require some collective response such as the redefinition of property rights. Two canonical examples indicate some cases where simple price adjustments do not work well to clear markets. Harold Demsetz gives an example of how property rights change in response to extrinsic demands in his classic 1967 article, 'Toward a Theory of Property Rights.'[24] The famous case study that drives his analysis is Eleanor Leacock's account of 'The Montagnes "Hunting Territories" and the Fur Trade.'[25] The basic story is as follows. The Montagnes had stable practices for hunting fur-bearing animals that worked well so long as the furs in question were restricted to tribal use only. But the situation changed radically with the arrival of the French, who radically expanded the demand for furs, and thus bid up their price. That price increase prompted more extensive hunting in violation of the traditional practices, which would have resulted in the extinction of these fur-bearing animals unless some way was found to constrain the catch. In response to that threat, the Indian tribes instituted a system of territories, which gave each territory owner the incentive not to overhunt in his particular area, thus averting the problem of premature extinction by overhunting.

It is important to note that in this instance, there is no shift of prices and quantities in the private market that could have averted the tragedy of the premature extinction of common pool assets. The common pool arises precisely because the uncoordinated action of individual hunters takes place under conditions of perpetual imbalance. Each hunter internalises all the gains from hunting, but only bears a fraction of the cost from the destruction of the wildlife stock. Voluntary coordination among the hunters is a lost cause because the number of parties involved is too great for them to agree on the two key determinants of a newly successful system: reduction

[24] Harold Demsetz, 'Toward a Theory of Property Rights' (1967) 57 (2) *American Economic Review* 347.

[25] Eleanor Burke Leacock, *The Montagnais 'Hunting Territories' and Fur Trade* (American Anthropological Association, 1954) 78.

in the total catch and an acceptable allocation of that reduction in catch among the various players.

The creation of territories, however, only works when any proposed agreement over the management of the common territory fails to be formed. But it is also the case that territories are not a universal solution to the problem of overhunting, because the same dangers arise with respect to wildlife that do not live in any confined territory. At this point, the only controls that could potentially be successful are those that cover extensive territories, which are often under the control of different, sometimes rival, national and state governments, adding an additional institutional difficulty to the problem of wildlife protection. It follows, therefore, that it is not possible to generalise a solution from the one case that Demsetz discusses to other problems like migratory birds[26] and the capture of whales,[27] which will only respond to some type of governmental solution such as treaties.

What is instructive is the incorrect way in which Demsetz characterizes the problem. He speaks of the territorial solution as 'The Emergence of Property Rights,' arguing that 'property rights develop to internalize externalities when the gains of internalization become larger than the cost of internalization.'[28] These brief passages go a long way to define a field, but they elide some of the issues associated with the messy *transition* between property rights regimes. Thus the arc that Demsetz described was in fact the substitution of one property rights system for a preexisting system of entitlements, whose existence he only fleetingly acknowledges. Prior to the perceived shortages in the fur trade, the operative property rule was the traditional Roman and English rule of capture.[29] He who trapped the fur-bearing animal was its owner. That system had real advantages because, by assigning a particular owner to a given animal, it allowed for the emergence of a regime that specified use rights in the first instance and allowed for the orderly emergence of a market in the other: the knowledge that X owns the fur that he purports to sell creates the security of exchange so critical for voluntary markets.

That rule of ownership by capture did not address the common pool problem that the institution of territories solved. But it is a mistake to think that the result in question was some happy process of the 'internalisation of externalities' whose only effect was that the same actor got all the costs and benefits of the hunting.[30] The process of using territories in this fashion does not answer the question of how the territories are to be drawn or who is to get them. It does not answer the question of what, if anything, should be done if the number of viable territories is smaller than the number of hunters who have fair claims to them. Nor does it answer whether the process is one that is done by political action that could easily result in winners and losers, or by conflict that could add death and bodily harm into the mix. If there are in fact some former trappers who are cut out of the system, are they entitled to receive partial interests in the territories that are run by others, or compensation for their loss of trade? If compensation is awarded, from whom should it come and why?

The better approach to Demsetz's externality question is to reframe it as follows. Do not just ask whether the transformation in question internalised externalities, which

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26 See, e.g., *Missouri v. Holland*, 252 U.S. 416 (1920) (upholding the validity of Migratory Bird Treaty Act of 1918, which enforced a 1916 treaty between the United States and Great Britain).

27 See *International Convention for the Regulation of Whaling* of 1946 as discussed in *Japan Whaling Ass'n v. Catacean Society*, 478 U.S. 221 (1986) (discussing possible sanctions under U.S. law against Japan for its violation of the treaty's terms).

28 Demsetz, above n 24, 350.

29 For discussion, see Richard A. Epstein, 'Possession as the Root of Title' (1979) 13 *Georgia Law Review* 1221.

30 Demsetz, above n 24, 348.

it surely did in some dimensions, but not in others. Rather, ask whether the transformation in question created some kind of a Kaldor-Hicks or Pareto improvement. The difference between these two standards offers some clue to the question of whether *all* externalities are internalised by the shift in legal regimes. Under Kaldor-Hicks, the transition should survive so long as the winners in question are able to compensate the losers, and still leave themselves better off than they were before, even if no compensation is in fact paid over. Given the aggregate gains from the conservation of furs, it seems clear that this standard was met. But so long as there are some individuals who are left worse off by being shut out of the trade, there are still the externalities of the disappointed trappers that have to be reckoned with, so that all the questions set out above need to be answered in a systematic way that pays as much attention to the institutions for transformation as to the transformation itself.

The same uneasy answer does not apply if the transformation scheme itself is able to accommodate all trappers, so that no one perceives himself to be left worse off than before. Nor is it true that if the state could arrange for some compensation, either in cash or in-kind (e.g., trapping rights elsewhere), that would force the winners to make sufficient payments to the losers. In either case, there is a Pareto improvement that truly does (at least for this limited population) internalise all the externalities for all parties, which should help tamp down some of the serious political pressures that will arise from the transitional efforts if the losers are left systematically worse off. One reason why the notion of externality is so 'ambiguous,' as Demsetz notes, is that on his account it addresses only a slice of the overall problem, without taking into account the full range of issues wrought by the change in property rights.

None of these transitional costs, however, is treated in detail by Demsetz, whose sole concern is the increase in stability of the fur trade by the creation of territories. But this long list of queries should surely be addressed in any complete account of the transitional process, just as it is addressed in other legal regimes that shift property rights from a system of capture to a system of territories. It is therefore instructive to contrast the territorial system of which Leacock and Demsetz speak with the major transition in the legal regimes for oil and gas that took place in the late nineteenth century and early twentieth century[31] The problem there is that whenever oil and gas fields are discovered under private property, the optimal size of the field for development is far larger than the size of the farms located on the surface. It is also the case that it is only these surface owners that have access to the fields that lie below, which then are allowed only to access them without crossing underground boundary lines. In the early stages, when production is low, this regime achieved two objects. First, by the rule of capture it gives each barrel of oil an owner when it reaches the surface, and thus facilitates the creation of a voluntary market in oil and oil derivatives. Second, by its insistence on the prohibition against underground trespass, it prevents slant drilling, whereby one landowner sends its well under the land of another. Nonetheless, as drilling becomes more intensive, uncoordinated private actions threaten to destroy the oil field by excessive and counterproductive drilling, which often takes place along the boundary lines. The consolidation of territories proceeds in high stakes fashion, and gives rise to major questions of property, constitutional, and administrative law, precisely because the simple territorial fix was not possible for oil and gas fields that lay below land.[32]

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[31] For a nice exposition, see Charles Donohue, Thomas Kauper & Peter W. Martin, *Property: Introduction to the Concept and the Institution* (West Academic Publishing, 2005).

[32] For some of the complications, see Richard A. Epstein, 'The Modern Uses of Ancient Law' (1997) 48 *South Carolina Law Review* 243, 254-58, discussing *Ohio Oil Co. v. Indiana (No.1)*, 177 U.S. 190 (1900).

A similar issue arises in connection with the limitations imposed on the famous *ad coelum* rule, which says that each landowner owns from the center of the earth to the outer reaches of the universe. That rule (which is not of Roman origin[33]) causes no visible inconvenience, at least until the arrival of the airplane, at which point it creates a set of tollgates that would prevent navigation. As with the case of oil and gas, there is a profound mismatch between the optimal configuration of airspace and the optimal configuration of the land below it. Once again, the forced redistribution of property rights could not be achieved by voluntary means. Yet by the same token, the transformation was easily created by just one or two decisions that announced that the upper airspace was now a common, only to be regulated, if at all, by the various aviation authorities.[34]

It is worth reflecting briefly why this legal transition was far easier to accomplish than that for either furs or oil and gas. The first point is that the size of the aggregate benefits, which is substantial for both furs in Quebec and for oil and gas everywhere else, are simply enormous with respect to aviation. Second, the costs of implementation are exceptionally low because there is no need to introduce specific territories or any other form of oversight. Third, there is no question of giving compensation to aggrieved individual landowners, all of whom receive, as a form of implicit in-kind compensation,[35] the huge social benefits from air transportation even without a dime of cash compensation, which could only be raised by imposing inordinate taxes on the class of potential beneficiaries. Put in other terms, the gains from getting rid of the *ad coelum* rule are broadly diffuse so that it becomes impossible to identify any systematic losers from the use of the upper airspace. The rule is thus highly robust. If each person were asked to vote all in or all out, they would all opt into the system, no matter how selfish their individual motives. The same point is not true at airports, where great noise from take offs and landings requires explicit compensation for the disproportionate burden for those who are disproportionately impacted. Complex institutional mechanisms are necessary to define the level of permissible noise, to identify the landowners entitled to compensation for the loss of their lands, and the compensation that is appropriate to the case.[36]

Turning to the second canonical example, there is yet one other permutation that should be mentioned, which arises in those cases in which private parties have to form property rights when their actions are not constrained by any preexisting system of property rights. Perhaps the most famous illustration of the formation of customary property regimes involves the work of John Umbeck in explaining how California miners managed to calibrate property rights in the California gold fields without the intervention of a centralised authority, allowing them to make the necessary private investments to mine the gold.[37] Ironically, all these developments took place on federal lands, where the miners were technically trespassers. Nonetheless, the federal position was that among themselves the miners could develop whatever regime they saw fit in order to answer such key questions as how to create mineral claims and the water rights associated with their development. As Umbeck notes, in this closed community

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[33] *Harvard Legal Essays, Written in Honor of and Presented to John Henry Beale and Samuel Williston* (Harvard University Press, 1934) 522. The maxim is now attributed to one Accursius of Bologna, a thirteenth century commentator, who later worked in the English court of Edward I (1272-1307). See Clement Bouvé, 'Private Ownership of Airspace' (1930) 1 *Air Law Review* 232, 246-8.

[34] See, e.g., *Swetland v. Curtiss Airports Corp.*, 41 F.2d 929 (N.D. Ohio 1930).

[35] For discussion, see generally Richard A, Epstein, *Takings: Private Property and the Power of Eminent Domain* (Harvard University Press, 1985) ch 14.

[36] Ibid 235.

[37] See, e.g., John Umbeck, 'The California Gold Rush: A Study of Emerging Property Rights' (1977) 14 *Explorations in Economic History* 197.

with high stakes, the miners quickly did reach a solution that was far better than a free-for-all in which no sensible investments could be made.[38] One reason for the rapid movement was that they did not have to dislodge any existing claims, so that the blockade issue (where the taking is not allowed because it is not for public use) and the compensation problem (where the taking is allowed upon payment of full compensation) could both be avoided.

The moral of this story is that when the need arises for major changes in systems of property rights, no market, however ingeniously conceived, is able to supply the answer. Therefore the only question is what coercive means will be used to execute the necessary change. At these points in time the overall system would be in profound disequilibrium, for which simple movements in the prices and quantities of goods and services sold provide only the most feeble of answers. These cases also explain that each of the transitional stories is different from one another.[39] Ultimately, permanent disequilibrium is an odd way to describe the need for transformation in property rights regimes, if only because that phrase suggests that no permanent fix is ever possible. To be sure, there is nothing that guarantees that the first fix of a system of property rights will last through the next generation of technological changes. But by the same token, these systems are stable for long periods of time, and if they do switch, it is not through the incremental adjustments that mark the operation of a price system, but through the same kinds of discontinuous changes that resulted in the first discontinuous shift in property regimes.

III THE RATE OF CHANGE

The last key issue in dealing with these various transitions concerns the rate of change. This problem is not unique to social systems. Indeed, it is one of the central challenges in modern evolutionary theory: how is it possible to get good estimates of the rate of change that has accounted for the huge proliferation of species over a relatively short span of time? The primary takeaway from this difficult inquiry is that there is no reason at all to assume that there is one constant rate of change that covers the full range of events. In biology, the theory of 'punctuated equilibrium' suggests that for most species, rapid change is concentrated within a relatively narrow band of time, which punctuates the otherwise stable set of circumstances.[40]

It is no part of my business to answer all the questions raised by this hypothesis: how widespread is the phenomenon? Are the rates uniform across all species and times? What are the implications for other fields? But it is important to note that, to the extent that theories of spontaneous evolution arise in social contexts, the question of rate of change cannot be ignored. Through analogy, this theory calls into question the basic assumption that market and customary changes are gradual and roughly uniform in nature.

The first point of difficulty with that contention is that it presupposes that all external shocks are of the same frequency and severity. That assumption need not hold

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38 Ibid.

39 Although there is no time to go into this here, there is a similar account of legal transitions in rights to water and minerals, both of which more closely resemble the difficulties in the oil and gas case, with water being the most difficult resource to control. See, e.g., *Coffin v. Left Hand Ditch Co., 6 Colo.* (1882) and *Pennsylvania Coal v. Mahon*, 260 U.S. 393 (1923), respectively. For instructive commentary see William Fischel, *Regulatory Takings: Law, Economics and Politics* (Harvard University Press, 1996).

40 The fundamental paper is Niles Eldredge & Stephen Jay Gould, 'Punctuated Equilibria: An Alternative to Phyletic Gradualism' in Thomas J.M. Schopf (ed) *Models in Paleobiology* (Doubleday, 1972) 82.

here any more than it does in biological systems. Quite the contrary, we should expect over time that most changes will be small, but some vital few will be far larger. To push the evolutionary metaphor one step further, changes in background economic conditions could be a precursor to firm extinction, just as in biological settings they can be the precursor to species extinction. The sensible prediction in these extreme cases of rate change is that we should expect two factors to be conjoined. First, a very rapid rate of response by those affected by the change. The costs (risk included) of moving relative to the costs of staying put are suddenly far lower than in stationary environments. Second, and in consequence of the first, we should expect to see far higher rates of failure. There is no uniform direction in which these changes can be made. Instead there will be diverse responses, some of which will work and some of which will not. The same patterns of response, and the same high rates of failure, should be expected in the context of technological innovations manufacturing, commerce, and trade as well. But the huge successes of the few key innovations should dwarf the effects of the many failures, as the progress of technology over the past 150 years demonstrates. There is no reason to assume that gradual change is the sole order of the day. Variable rates and discontinuous changes should be part of the overall picture.

In the same fashion, we should not assume that the rates of change are the same for the three types of responses mentioned earlier: market shifts, customary shifts, and transitions in legal regimes. As to the first, much depends on the nature of the type of markets in question. Constant rates are standard for many types of professional services. But the same is not true for transactions over a stock or options exchange, where the theory of efficient markets predicts that new public information will be rapidly incorporated into price transactions the moment it becomes available. The very fact that these option and stock prices are traced from minute to minute offers striking confirmation of this result, assuming that such was required in the first place. In these markets, the rates of change in prices over time can vary from gradual to rapid, depending on the changes in the external environment. The key point for the basic theory is that the strength of markets lies in the ability of traders to decide whether fast or slow changes are needed in response to external circumstances.

The markets for customary practice are somewhat different, but even here there is no reason to think that customary changes are always slow, even though frequently that is the case.[41] The key point to note is that customary practices emerge out of large numbers of interactions among individuals who occupy the same market space. The importance of the custom is that it reduces the cost of transacting within the closed community governed by the practice. In an efficient market, the patterns of interaction are not likely to be random. To be sure, some people will have steady customers and long-term suppliers. Yet the constant shift in market participants from exit to entrance makes it likely that given people will do business with a large number of trading partners. In these settings, the ability to establish by constant interaction some background focal norms reduces the need to customise each individual transaction. The existence of standard terms and standard practices also makes it possible to increase the velocity of trade when B buys from A and in turn sells to C.

Given the high number of repeat interactions, it should be relatively easy to change customs in response to external stimuli. There is no centralised government process to slow the task down, and there is a strong incentive on the part of all players in the system to develop the background norms that will allow them to work well. There is of course always the risk of some common mode error bringing down the entire system, which may well be exacerbated by a central planning system that

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[41] For my fuller discussion of some of these issues, see Richard A. Epstein, 'The Path to the T.J. Hooper: Of Custom and Due Care' (1992) 21 *Journal of Legal Studies* 1.

imposes a dangerous standardisation of market processes, especially since government figures are often insulated from the financial costs of their own mistaken judgment. In addition, it is probably the case that the new rules will emerge more quickly in those cases where all affected parties play relevant roles. Thus, by way of example, in a market of traders that both buy and sell, the new custom is likely to take hold more rapidly than in one (such as distribution chains running from manufacturers to consumers) where one side is always seller and the other always buyer. Nonetheless, even here both sides prefer efficient background norms, even if each has reason to be wary that the actors on the other side of the market may have concealed some special advantage from the transaction.

Last, it is worth noting that in markets with rapid change it is possible to see other devices step in. In some cases, meta-customs, or customs about customs as it were, are likely to emerge. Once discontinuous changes become frequent, people in the relevant trade or profession start to treat the unusual as the routine, and put into place institutional structures to deal with these transitions. In many cases, these devices take on a somewhat centralised form, as various voluntary committees will develop when needed to establish a set of 'best practices' equal to the overall challenges that the industry faces. In some cases these changes could be quite modest. Brian Simpson recounted how the cotton industry in England instituted a system of numerical registration for ships carrying cotton from India, after the famous dispute over identification of the two ships Peerless in *Raffles v. Wichelhaus*.[42] After the fact, when prices dropped, it made sense for this buyer to repudiate the contract on the grounds of a common mistake over the ship. But from the ex ante perspective, the ex post uncertainty is an unambiguous cost shared equally by all traders – after all, the price could have gone up or down. The system of ship registration by number avoids these difficulties at modest cost, whether it is done by private arrangement or by general statute.

Indeed, the key institutional point is to make sure that all parties within a given trade know the rules of the game so that experienced traders do not have to suffer when new entrants do not know the rules of the game.[43] To put the point another way, rapid customary movements can lead to a systematic departure from custom in favor of a more institutionalized arrangement by which various advances are collected by some voluntary organisation and dispersed quickly throughout the profession, often at rates far more rapid than those which are done by government agencies. That surely happens with voluntary organisations in the medical profession, such as the National Comprehensive Cancer Network,[44] which rapidly organizes new information from domestic and foreign sources, and makes and updates recommendations on the sequence and combination of various anti-cancer drugs far more nimbly than the Federal Food and Drug Administration.[45]

Any discussion about rates of change cannot ignore those claims that the common law generates some inherent pressure to produce efficient rules. The so-called Rubin/Priest hypothesis[46] takes the view that efficient rules are less likely to be

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[42] *Raffles v. Wichelhaus*, 159 Eng. Rep. 375 (Ex. 1864). For discussion, see AW Brian Simpson, 'Contracts for Cotton to Arrive: The Case of the Two Ships Peerless' (1989) 11 *Cardozo Law Review* 287.

[43] See, e.g., *Flower City Painting, v. Gumina Const. Co.*, 591 F.2d 162 (2d Cir. 1979) (wrongly insulating new entrant from the customary rules in the construction trade).

[44] National Comprehensive Cancer Network, online at <http://www.nccn.org>.

[45] For discussion, Richard A. Epstein, 'Against Permititis: Why Voluntary Organizations Should Regulate the Use of Cancer Drugs' (2009) 94(1) *Minnesota Law Review* 1.

[46] Paul H. Rubin, 'Why Is the Common Law Efficient?' (1977) 6 *Journal of Legal Studies* 51; George Priest, 'The Common Law Process and the Selection of Efficient Rules' (1977) 6 *Journal of Legal Studies* 65. The original thesis that the common law was efficient is most

relitigated than inefficient ones, so that over time there should be a tendency for the common law to reach the appropriate end.

There are two insuperable objections to this hypothesis. The first is that rules are made by judges who work under incentives that are vastly different from those that apply to market actors who face direct feedback from the decisions they make. Let these judges take positions similar to that urged by Roscoe Pound, and their incentives to remain in tune with the times will make them far more anticontractual, moving the law in inefficient directions, as happened with the expansion of product liability starting in the 1960s, with the explicit repudiation of contractual solutions to product-related losses.[47] There is no reason to think that judges will actually move matters in the right direction.

But even if these judges had a strong grasp of legal theory, they still could not effectuate legal changes in a systematic fashion. Relitigation takes place infrequently, so the process can often take years for precedents to move. The individual circumstances of particular cases make it hard to distill a single issue for resolution, so that later cases often muddy the waters from the earlier cases. This situation could not be more different from the immediate short-term effect of price changes in well-organized markets, or from customary changes, which also move at a far greater pace.

IV Conclusion

After this review, the ultimate question to ask is this: what weight should be accorded to these three qualifications on the basic rules of the Hayekian tradition. In my view, these are friendly criticisms that should be acceptable to anyone who starts with the basic Hayekian temperament. The qualifications in fact work to strengthen Hayek's overall views by answering some objections that might otherwise receive greater weight than they ought. But looked at carefully, it appears that none of these insights falsifies the basic Hayekian proposition about the importance of custom in the organisation of human affairs, but rather indicates that the paths through which it operates are far more complex than the unitary gradualist account presupposes.

It takes relatively little to rehabilitate some of the principles of natural law insofar as they support a system of strong property rights, customary practices, and freedom of contract. The area in which the Hayekian system works least well is in connection with legal transitions from one property rights system to another. In some instances, these can be organized rapidly, but typically those quick adjustments will occur in new communities where there are no preexisting systems of property rights that give their holders claims against the community at large. But these transitional problems are more acute when they occur in any strong property rights legal system where preexisting property rights may only be changed with the consent of those whose rights are taken or abridged. They are somewhat less acute when vested property rights in

closely associated with Richard A. Posner, who raised that claim in Richard A. Posner, 'A Theory of Negligence' (1972) 1 *Journal of Legal Studies* 29, in connection with the Hand formula. Oddly enough, there is no reason to think that Posner was correct relative to a rule of strict liability, at least in stranger cases. And his own account misses the wide range of different rules that are used in specialised consensual arrangements like bailments, medical malpractice, occupier's liability, and industrial accidents. For discussion, see Richard A. Epstein, 'The Many Faces of Fault in Contract Law: Or How to Do Economics Right, Without Really Trying' (2009) 107 *Michigan Law Review* 1461.

[47] The two major cases are *Henningsen v. Bloomfield Motors, Inc.*, 161 A.2d 69 (N.J. 1960) (disregarding explicit warranty limitations); *Greenman v. Yuba Power Products, Inc.*, 377 P.2d 897 (Cal. 1963) (rejecting contractual disclaimers in products cases).

their weak form block the taking unless just compensation is made, so that what would otherwise be a Kaldor-Hicks improvement now becomes a Pareto improvement.

Yet, as is the case with the Demsetz example about the Montagnais fur territories, there is no reason to think system-wide transitions of this magnitude will take place with equal speed in all contexts. It is for good reason that the rate of change was far more rapid with upper air space than it was with oil and gas, where major institutional support was required for making the change.

All this has to leave someone up in the air, so to speak, as to where best to place the final sovereign power, given the tendency for both courts and legislatures to make major mistakes on these matters. The solution, such as it is, to these challenges, always has two parts. The first deals with the constant question of relative institutional competence. Is it judges or legislators that should oversee the process? The answer is often divided because of the clear limits of private ordering. But where it can take hold, the judges and the legislators do best to defend it from external control. But in many situations, markets cannot induce large-scale market transformations that promise large net gains, leading to the second question of which branch of government is best able to grasp the nettle. In those cases where private compensation is not needed – think of the rules with upper airspace – courts can do just fine. But otherwise the legislature will have to intervene to establish the schemes in question, which are then subject to oversight and perhaps constitutional challenge in the courts.

Taken as a whole, there is no simple answer to these issues of allocation, and I shall not attempt any here. But it is clear that the entire operation will be done far more effectively if *both* legislatures and courts (not to mention their administrative agencies) are tuned into the right political theory. If they are, their mistakes will be correctable. If not, we can expect no improvement in social welfare no matter how the powers are divided. It is here where we can see the importance of scholars like Suri Ratnapala. The only way in which the problems of legal administration can be solved is for the participants at all levels of government to be sensitive to the matters of political theory that have occupied Suri Ratnapala throughout his distinguished academic career. May others learn from his fine judgement.