Was Hayek a Panglossian evolutionary theorist? A reply to Whitman[1]

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Abstract

By means of a consideration of Whitman (1998) the present paper considers the meanings of 'Panglossianism' and the relation between group and individual levels in evolution. It establishes the connection between the Panglossian policy prescription of *laissez-faire* and the mistaken evolutionary theory of group selection. Analysis of the passages in Hayek cited by Whitman shows that, once these passages are taken in context, and once the appropriate meaning of the term 'Panglossian' has been clarified, they fail to defend Hayek from this charge, but, on the contrary, confirm that Hayek was, indeed, 'a Panglossian evolutionary theorist'.

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1 Introduction

This paper is a response to Whitman (1998) 'Hayek contra Pangloss on Evolutionary Systems', which seeks to exculpate Hayek from the charge of Panglossianism in his application of evolutionary theory to society. The present paper argues that Whitman has misunderstood the substance of the accusation of Panglossianism against Hayek[2]. He may have been indirectly influenced by Gould and Lewontin (1979), which is widely assumed to identify Panglossianism with Darwinian adaptationism. Prior to that paper, the term *Panglossian* in evolutionary theory referred to the group selectionist fallacy, that groups could be selected in which individuals behaved altruistically. Thereafter, however, it was – less appropriately – taken to refer to Darwinian adaptationism, the view that features of organisms could be understood by asking what function they would best carry out.

The paper begins by considering the meanings of the term 'Panglossian' and the relation between group and individual levels in evolution. It establishes the connection between the Panglossian policy prescription of *laissez-faire* and the mistaken evolutionary theory of group selection. Attention then turns to an analysis of the passages in Hayek cited by Whitman. The analysis shows that, once these passages are taken in context, and once the older, and more appropriate, meaning of the term *Panglossian* has been re-established, they do nothing to defend Hayek from this charge, but, on the contrary, provide compelling evidence that Hayek was, indeed, 'a Panglossian evolutionary theorist'. A final section summarises the findings of the paper.

2 The meaning of the term *Panglossian* in evolutionary theory

> "The phrase 'Pangloss's theorem' was first used in the debate about evolution … not as a criticism of adaptive explanations, but specifically as a criticism of 'group-selectionist', mean-fitness-maximising arguments" (John Maynard Smith cited in Dennett, 1995: 239).

Daniel Dennett (1995: 238-9) argues for a distinction between Leibnizian and Panglossian paradigms, which he identifies in biology with the standpoints of individual and group adaptationism, respectively. Dennett regards the Leibnizian standpoint as the source of the bulk of our understanding of the living world. To understand a biological structure or phenomenon, the most fruitful approach is to 'reverse-engineer' it, to ask what purpose the structure would best serve were it the result of deliberate invention. No understanding of the heart, for example, is possible except on the hypothesis that it is there for a specific purpose: to pump blood around the body; similarly, the chain of structures from lungs to mitochondria can only be understood on the basis of the rôle these structures play in respiration. Now adaptationism works well, though imperfectly, at the level of the individual organism. A major source of these imperfections is the fact that the replicators, in whose interest inherited characteristics should be understood as operating, are, not individual organisms, but those organisms' genes. Once the individual organism is understood as a *vehicle* of the underlying replicator, the gene (Dawkins, 1989b: 82), many of these imperfections vanish. Nevertheless, taking as a working hypothesis that the structure and behaviour of an organism is adaptive is a fruitful approach because all

parts of the organism share a common genotype – and hence a common interest – which they can best realise by cooperating. The 'selfish organism' is close to the 'selfish gene' (Dawkins, 1989a: 6).

Panglossianism, on the other hand, according to Dennett, is the assumption of group selection – 'the old Panglossian fallacy that natural selection favours adaptations that are good for the species as a whole, rather than acting at the level of the individual' (John Maynard Smith cited in Dennett, 1995: 239). The group selectionist argument has been succinctly expressed and criticised by Richard Dawkins:

> "A group, such as a species or a population within a species, whose individual members are prepared to sacrifice themselves for the welfare of the group, may be less likely to go extinct than a rival group whose individual members place their own selfish interests first. Therefore the world becomes populated mainly by groups consisting of self-sacrificing individuals. This is the theory of 'group selection' [expressed] in a famous book by V.C. Wynne-Edwards [*Animal Dispersion in Relation to Social Behaviour*]... [But if] there is just one selfish rebel, prepared to exploit the altruism of the rest, then he, by definition, is more likely than they are to survive and have children. Each of these children will tend to inherit his selfish traits. After several generations of natural selection, the 'altruistic group' will be over-run by selfish individuals, and will be indistinguishable from the selfish group." (Dawkins, 1989a: 7-8)

The members of a group, unlike the members of an organism, have diverse interests: each individual is set up to realise the interests of its *own* DNA, by getting that DNA copied as many times as it can into future generations, by using the structures, executing the behaviours and exemplifying the predispositions which have tended to achieve that goal in the past. The members of an organism share an interest in cooperation, those of a group, for lack of a shared interest, must, perforce, compete. Now, clearly, groups (populations, species) do die out, and whether a group happens to die out may depend on the behaviour of the individual members of that group. But for that fact to exert any evolutionary selective pressure, there must be a mechanism such that the behaviour, on the basis of which the group is to be selected, is actually in the interest of its members to carry out.

So, according to Dennett and Maynard Smith, *Panglossianism* in evolutionary theory originally referred to the 'group selectionist fallacy'. Then later Gould and Lewontin used the term to refer, in the words of the title of their article (1979: 581), to 'the adaptationist programme'. The Gould and Lewontin article has stirred considerable interest and controversy. Dennett's verdict on the paper is to read it as an attack on the *excesses* of adaptationism – adaptationism as ideology rather than heuristic – which has been massively misread as a *refutation* of adaptationism:

> "Gould and Lewontin memorably dubbed the *excesses* of adaptationism the 'Panglossian Paradigm,' and strove to ridicule it off the stage of serious science … The Gould and Lewontin article … is widely regarded … as some sort of *refutation of adaptationism*." (Dennett, 1995: 239)

Though not intending any direct reference to the Gould and Lewontin paper (Whitman, personal communication), it is in fact in this – mistaken – sense that Whitman responds to the charge of Panglossianism against Hayek. But it is in the other, the Maynard-Smithian, not the Gould-Lewontinian, sense that Hayek can sensibly be accused of Panglossianism. On this charge, Whitman's article does nothing to defend Hayek; on the contrary, Hayek's real Panglossianism is brought out clearly in the passages that Whitman cites.

The big question is this: given that it is individual humans who choose their behaviour in the context of their inherited predispositions and capacities, and the range of social norms and examples of behaviour presented to them, can behaviours be systematically selected which are beneficial for the group or society of humans but impose a cost on the individuals carrying out those behaviours? Hayek gives an unambiguous *yes*, he refers repeatedly and approvingly to 'group selection', and supports his argument with reference to the very book by Wynne-Edwards criticised by Dawkins in the passage cited above. Speaking of the rules of conduct in primitive human societies, he says that

> "the 'functions' which these rules serve we shall be able to discover only after we have reconstructed the overall order which is produced by actions in accordance with them ... all the individuals of the species which exist will behave in that manner because groups of individuals which have thus behaved have displaced those which did not do so." (Hayek, 1967: 70)

And in a footnote to this passage, Hayek refers the reader to the '[a]mple further illustrations of the kind of orders briefly sketched in this section ... in V.C. Wynne-Edwards, *Animal Dispersion in Relation to Social Behaviour*, Edinburgh, 1962' (Hayek, 1967: 70 n7).

When we act, what we do is describable, if sufficiently regular, by a rule. But the question is whether the rule is an epiphenomenon, like the arrow formation of geese flying in each others' slipstreams, a pattern which emerges from generalising a large number of instances of the particular action, or whether the individual actions are executed *because of* the rule. In the first case, the collective outcome is just what happens to result from the actions of many individuals each following their own interests. In the second case, the actions of individuals are functional for the purposes served by the rule. The use of the term 'functions' in the passage cited – albeit in quotation marks – only illustrates Hayek's functionalism. As Hodgson says,

> "Vanberg … is right to suggest that Hayek's argument has a functionalist quality; it assumes that the contribution of a rule to the maintenance of a system is sufficient to explain the existence of that rule. Absent in Hayek's argument is the specification of a process by which a rule that is advantageous to the system is sustained in operation within that system." (Hodgson, 1993: 168)

It is a basic *assumption* in Hayek that individual actions serve a 'function' for the collective, that is, that in carrying through one's own interest, one is simultaneously (and more importantly) carrying through the interest of society; that actions performed

by individuals are *automatically* **functional** for society. This is to assume all our problems – theoretical and practical – away.

So, to the question, whether behaviours can be systematically selected, which are beneficial for the group or society of humans but impose a cost on the individuals carrying out those behaviours, Hayek answers *yes*. But in reality the correct answer is *no*, and for exactly the same reasons as in the biological context. If a population or group of humans follows rules for altruistic behaviour, it may prosper and expand at the expense of a similar population following a different, more selfish rule. But if, in that altruistic population, a rebel adopts the selfish rule, the rule coding for the more selfish behaviour, then he will prosper relatively to the more altruistic members of the population. The rule for the selfish behaviour will tend to displace its altruistic allele: other members of the population will see its connection with personal success and wish to adopt it. Rules for socially desirable behaviour can only be successful to the extent that there is a mechanism giving individuals the incentive to engage in that behaviour. Wynne-Edwards group selection is as fallacious in the social as in the biological context, and for identical reasons. It is in this sense that Hayek can justly be criticised for 'Panglossianism'.

3 FA Hayek: No Panglossian?

The previous section presented the argument that what was wrong with Hayek's account of cultural evolution was that he applied to the social context the fallacious group selectionist theory of Wynne-Edwards. That is not how Whitman sees things, however. He defends Hayek, instead, against the charge of adaptationism, of Dennett's 'Leibnizian paradigm, and doesn't consider neither the differences between adaptationism applied at the level of the individual and the level of the group. One section of Whitman's article in particular is germane to the discussion: Section 2 'F. A. Hayek: No Panglossian' (47-49[3]) – the heart of Whitman's essay. Here Whitman cites four passages in which Hayek supposedly rejects Panglossianism. Each is worth considering in detail.

The first such passage (48) is a citation from *The Fatal Conceit*, where Hayek seems to show himself aware of the problem with potentially Panglossian interpretations, and dissociates himself from them:

> "I have no intention to commit what is often called the genetic or naturalistic fallacy. I do not claim that the results of group selection of traditions are necessarily "good" – any more than I claim that other things that have survived in the course of evolution, such as cockroaches, have moral value." (Hayek, 1988: 27).

The context of this passage is a polemic with AGN Flew over his 1967 booklet *Evolutionary Ethics*. Now, the notion of evolution deployed by Hayek was intended, I submit, not to provide a scientific understanding of the social order, warts and all, which has emerged from a blind, pitilessly indifferent evolutionary process (Dawkins, 1995: 155), but to present that order as something desirable, beyond the competence of humans to interfere with. The significance of *Evolutionary Ethics* here is that Flew

got the apologetic, role of evolution in this scheme of thought exactly right in his discussion of Social Darwinism:

> "many people are inclined to believe, that whatever is in any sense natural must be as such commendable, and that Nature is a deep repository of wisdom, [so] for many the process of evolution by natural selection becomes a secular surrogate for Divine Providence; and ... for some the possibility, or even the duty, of relying on this benign and mighty force presents itself as a decisive reason why positive social policies must be superfluous, and may be wrong – indeed almost blasphemous!" (Flew, 1967: 15)

So Hayek is responding to the charge, in *Evolutionary Ethics*, that those who thought along the lines actually adopted by himself were committing the 'naturalistic fallacy', deriving an *ought* from an *is*. Flew is clear that such a standpoint is Panglossian: if evolution leads to an institutional structure which has been selected for its beneficial influence on human societies, then certainly there will be excellent reason to leave that inherited institutional structure alone. Whitman cites the passage from *The Fatal Conceit* to support his view that Hayek rejects such Panglossianism.

A number of points can be made about Hayek's response here. Firstly, we have to be quite clear here that Hayek's statement about not committing the naturalistic fallacy is a *claim* on Hayek's part: it is not (necessarily) what he says, but what he *says* he says. Hayek himself points out that what scientists describe as their own procedure is not to be trusted: 'The scientist reflecting and theorizing about his procedure is not always a reliable guide' (Hayek, 1942, cited in Ransom, 1996). Hayek's claim here no more closes the matter, than the denial of a suspect that he robbed the bank must eliminate him as a suspect. And the fact that Hayek is *aware* of the naturalistic fallacy is, again, no more evidence against him committing it, than a suspected bank robber's agreement, that robbing banks is illegal, would be evidence of his innocence.

Secondly, what is truly significant here is that Hayek refers to the 'group selection of traditions', because – as we have seen, and whatever claims Hayek chooses to make on the subject – group selection, of the Wynne-Edwards variety, to which, as we have seen, Hayek explicitly refers his theory, *does* lead to Panglossian conclusions. Wynne-Edwardsian group selection, as Maynard Smith says, *is* 'the old Panglossian fallacy'.

And thirdly, taking the passage in the context in which it occurs, it is clear that Hayek *does* endow the products of cultural evolution with moral value: they are products of a process of selection according to human survival value, and the products of biological evolution, such as cockroaches, are not. The very next sentence after those cited by Whitman make this abundantly clear:

> "I do claim that … without the particular traditions I have mentioned, the extended order of civilization could not continue to exist (whereas, were cockroaches to disappear, the resulting ecological 'disaster' would perhaps not wreak permanent havoc on mankind); and that if we discard these traditions … we shall doom a large part of mankind to poverty and death." (Hayek, 1988: 27).

Whitman's second example is also from *The Fatal Conceit*:

> "It would be wrong to conclude, strictly from such evolutionary premises, that whatever rules have evolved are always or necessarily conducive to the survival and increase of the populations following them … Recognizing that rules generally tend to be selected, via competition, on the basis of their human survival-value certainly does not protect those rules from critical scrutiny" (Hayek, 1988: 20).

But, if 'human survival-value' is indeed the basis for selection, one may well wonder, on what basis this scrutiny is to be carried out? The assumption is that the basic process is a human-favourable one. One can only criticise it on the basis of details, not the fundamental processes involved. Whitman's gloss on this passage is that

> "Hayek believes that the cultural selection process selects for survival and reproduction of groups … yet *even by that criterion of efficiency*, the resulting rules cannot be assumed to be efficient. It would be particularly odd, then, for those rules to be efficient according to some other standard, such as neoclassical economic efficiency or classical liberal value judgements." (48)

Hence, again, the claim is that Hayek's standpoint is not Panglossian. But Hayek here is clearly saying that cultural rules *tend* to be selected for human survival-value – the outcome in each case, however, may for extraneous reasons be suboptimal on this score, and hence subject to critical scrutiny. Nevertheless, the *tendency* for selection according to human survival-value is in place and hence the critical scrutiny he alludes to can only be a matter of details, not of substance. The process itself is immune from such scrutiny. This is shown clearly if we look in more detail at the passage in *The Fatal Conceit* from which Whitman's extract is taken:

> "It would however be wrong to conclude, strictly from such evolutionary premises, that whatever rules have evolved are always or necessarily conducive to the survival and increase of the populations following them. *We need to show, with the help of economic analysis … how rules that emerge spontaneously tend to promote human survival.* Recognizing that rules generally tend to be selected, via competition, on the basis of their human survival-value certainly does not protect those rules from critical scrutiny. *This is so, if for no other reason, because there has so often been coercive interference in the process of cultural evolution.*" (Hayek, 1988: 20. Italics highlight the parts elided in Whitman's extract.)

Contrary to Whitman's interpretation, Hayek is clearly saying, that we can assume that *spontaneous* evolutionary forces will tend to lead to desirable outcomes. He is saying that we cannot assume desirable social outcomes from '*such* evolutionary premises', that is, those he had just been talking about, where vested interests often 'blocked the next step of evolution' (Hayek, 1988: 20) by the use of state power. Instead, he says, we must use economic analysis to show how *spontaneous* rules lead to desirable social outcomes – not, we should note, to *enquire whether* they do this,

but to *show that* they do so. That spontaneous processes lead to human-favourable outcomes is taken for granted. It is what 'we need to show'. That is Panglossianism.

Whitman is keen to point out that, in Hayek's view, the rules resulting from the evolutionary process are not exempt from critical scrutiny. This is supposed to show that spontaneous evolutionary processes are not assumed to lead to Panglossian results. But it actually shows the opposite, since the reason Hayek wants critical scrutiny of those rules is that they may be corrupted by an admixture of state influence ('coercive interference'). The spontaneous processes themselves are automatically benign, it is state intervention which spoils things.

Whitman's third example is from *The Constitution of Liberty*:

> "These considerations, of course, do not prove that all sets of moral beliefs which have grown up in a society will be beneficial. Just as a group may owe its rise to the morals which its members obey, … so may a group or nation destroy itself by the moral beliefs to which it adheres" (Hayek, 1960: 67).

Again, the point of the citation is to show that Hayek, far from embracing Panglossianism, is well aware of the possibility of suboptimal outcomes of the social evolutionary process. But to see the full meaning of the passage cited, we once again need to look at somewhat more of the passage in Hayek, from which Whitman's extract has been taken, than Whitman does. In *The Constitution of Liberty*, Hayek allows that the points he has previously made

> "do not prove that all the sets of moral beliefs which have grown up in a society will be beneficial .... [A] group or nation [may] destroy itself by the moral beliefs to which it adheres. Only the eventual results can show whether the ideals which guide a group are beneficial or destructive .... It may well be that a nation may destroy itself by following the teaching of what it regards as its best men .... There would be little danger of this in a society whose members were still free to choose their way of practical life, because in such a society such tendencies would be self-corrective: only groups guided by "impractical" ideals would decline, and others, less moral by current standards, would take their place. But this will happen only in a free society in which such ideals are not enforced on all." (Hayek, 1960: 67)

So, although Hayek admits that suboptimal systems may evolve, firstly, this can only be judged by 'eventual results': there is thus a presumption that it is impermissible for governments rationalistically to step in beforehand to avert the catastrophe. Secondly, he is able to assert that there would be 'little danger' of suboptimal results in a 'free society' – by appeal to an argument which *assumes* optimality: 'groups guided by "impractical" ideas would decline, and others … would take their place'. The assumption is that what is good for individuals is good for their group and what is good for the group is good for the nation. But of course the behaviour which is Nash for agents within a society (whether those agents themselves be individuals or groups), the behaviour, that is, which issues from the evolutionarily stable strategies which emerge from the evolutionary process (Smith, 1982: 10), cannot be assumed to

be optimal for the society as a whole. Individuals and groups do not achieve pre-eminence in a nation by following rules which it would be in the interest of the nation for everyone to follow, but by following rules which are well adapted for gaining power and influence within a nation's establishment. So, again, passages in Hayek which Whitman thinks point away from the charge of Panglossianism actually point towards it.

Whitman's own response to the passage he cites from *The Constitution of Liberty* is as follows:

> "Of course, this statement could be interpreted as merely a view of selection-in-progress, in that "bad" moral views are characterized as leading inevitably to their own demise. The point, however, is that Hayek does not perceive the process as finished: at any point in time including the present day, we may find undesirable rules and customs that have not been weeded out by selective forces, at least not yet." (48)

But it makes a very big difference to policy response to perceived sub-optimalities, whether they are believed to be (a) the intermediate result of a fundamentally human-favourable process which has not yet run its course, or (b) the result of a fundamentally human-indifferent process. The former conviction will tend to lead to a policy prescription of procrastination, gradualism and minor adjustment; the latter to one of more prompt and, potentially, radical reform. The passage is in keeping with the overall tenor of Hayek's work: spontaneous processes are optimal and are best left alone. Whitman seems unwilling to accept the simple message of Hayek's life work, that the policy prescription is one of *laissez-faire*:

> "Hayek never eschews the modification and reform of rules; he simply points out that any such revision of particular rules must necessarily take place in the context of a complex of other rules that are taken as given for the time being" (48).

Of course Hayek doesn't object to the of modification of rules: but he wants them to be modified to give greater play to spontaneous processes, not less. Whitman seems to misunderstand Hayek's desire to modify the policy framework, in order to bring it more into line with *laissez-faire*, as a step *away* from *laissez-faire*. Later in the paper, Whitman argues that Hayek's standpoint cannot be Panglossian because he argues for 'the occasional corrective reform, which would be unnecessary in a perfectly self-correcting (or instantaneously optimal) evolutionary system' (55). However, it is not the spontaneous evolutionary process which is imperfectly self-correcting, in Hayek's view, but interference with it on the part of authority. And it is not necessary for Hayek to regard his evolutionary system as 'instantaneously optimal' for us to see that it is Panglossian – what is required is that it tends to generate results which serve human purposes, not that it achieves those results perfectly and instantaneously. The essence of Pangloss's world view was that we live in the best of all possible worlds, not of all worlds whether possible or not: belief in 'instantaneous optimality' is not a sensible criterion for judging alleged instances of Panglossianism.

This theme, concerning whether perceived sub-optimalities are believed to be the intermediate result of a fundamentally human-favourable process which has not yet

run its course, or, on the contrary, the result of a fundamentally human-indifferent process, also arises in connection with Whitman's fourth example of Hayek rejecting Panglossianism:

> "The fact that law that has evolved in this way has certain desirable properties does not prove that it will always be good law or even that some of its rules may not be very bad. It therefore does not mean that we can altogether dispense with legislation" (Hayek, 1973: 88).

Again, we should do well to situate this passage in the context within which it appears in Hayek's writing. Hayek says that

> "The fact that all [spontaneously grown] law … will of necessity possess some desirable properties not necessarily possessed by the commands of a legislator does not mean that in other respects such law may not develop in very undesirable directions, and that when this happens correction by deliberate legislation may not be the only practicable way out. For a variety of reasons the spontaneous process of growth may lead into an impasse from which it cannot extricate itself by its own forces or which it will at least not correct quickly enough … The fact that law that has evolved in this way has certain desirable properties does not prove that it will always be good law or even that some of its rules may not be very bad. It therefore does not mean that we can altogether dispense with legislation … the most frequent cause is probably that the development of the law has lain in the hands of members of a particular class" (Hayek, 1973: 88-89)

We may note that the passage continues the theme we have already noted of focusing on the exceptional, bad outcomes of an essentially good process: law evolves in a desirable way, but some laws may be undesirable. As just mentioned, it also touches on the theme of undesirable outcomes resulting from an essentially benign process not yet having run its course. We should also note the last sentence of the passage cited by Whitman: 'It therefore does not mean that we can *altogether* dispense with legislation'. In the previous section Hayek had so praised the evolutionary process of common law that one might think legislation itself superfluous. Here he needs to step back from a position on legislation which many might regard as beyond the pale of extremity. The rôle of the passage cited is to take the extremist edge off an argument which might otherwise deny any scope at all for legislation. The *context* is a massive pre-supposition that *spontaneous* processes lead to optimal results. The major and 'most frequent' cause for radical change requiring legislation is the recognition that existing law was biased in favour of some group over-represented in the state. Again, the assumption is that spontaneous processes are essentially benign, and that it is state encroachments which induce suboptimality of outcomes[4]. So this passage, too, gives very little support to the notion that Hayek's attitude towards social evolutionary processes was not Panglossian.

4 Conclusion

This article has argued that, contrary to Whitman's defence, Hayek is indeed a Panglossian evolutionary theorist. Hayek's policy stance is a prescription of *laissez-*

faire, and his economic and evolutionary theory underpins that policy prescription. His evolutionary theory says that spontaneous processes tend towards optimal social outcomes. To the extent that they issue from such spontaneous processes, the institutions which we inherit are those which have been selected according to the benefits they have conferred on the societies adopting them. This is Panglossian in the social sense: the institutional structure we inherit tends strongly to be desirable and attempts to improve it by conscious collective action are very much to be avoided. And it is Panglossian in the technical, evolutionary sense of Wynne-Edwards's erroneous theory of group selection, a theory that Hayek explicitly endorses. In his consideration of biological evolutionary theory, Whitman fails to identify Panglossianism with Wynne-Edwards group selection. In the passage from biological to cultural evolution, Whitman fails to realise that the distinction between the individual and group retains its significance in full. Once we look closely at the passages in Hayek to which Whitman directs our attention, our verdict on Hayek's evolutionary theory can only be: 'Panglossian, as charged'.

Notes

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[2] Note that the issue is not whether Hayek is guilty of Panglossianism in the sense of believing that all is for the best in the world we inhabit, but whether his theory of cultural evolutionary *processes* is Panglossian. As the title of Whitman's article shows, and as we would expect of an Austrian economist, what is at issue is process not end state.

[3] Unqualified page numbers refer to Whitman (1998).

[4] It is also the case that there is a technical reason why legislation may be necessary: when *changes* in the law are required, this cannot be achieved by case law – it would be unjust to do so, as case law can only determine what was the law in the past, not what it will be in the future.

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