I join many other philosophers in welcoming the interest that scientists from many fields are showing in human nature. I very much admire work on the chemistry and the neural substrates of emotions, including such important emotional syndromes as pair bonding and the emergence of trust. I do not doubt that clinical evidence and neurological evidence are useful in understanding various emotional and cognitive disorders, or that anthropological evidence, perhaps gathered from web surveys, may testify to one or another uniformity, or one or another dissimilarity, among human beings, just as history manifests. Some of these results may be surprising, and others may generate new insights into who we are and what we are like. I also am persuaded that plausible models of cognitive processing in general, such as the value of distributed models in connection with pattern-recognition and the generation of similarity spaces, is a fertile help in understanding many neural substrates of cognitive and moral education.\(^1\) They give us insight into the processes that do, or that might, subsume our actual cognitions and motivations.

As a long-time, card-carrying Humean, I must also accept gratefully that empirically based work has always tended to accentuate the continuities between our moral repertoires, and other emotional, cognitive, and motivational powers and forces. It is less likely to put up with a Platonic or even Kantian dualism of “mere” attitude on the one hand, and magical or divine principle on the other. And this is a good sign. Whether such work could ever be assimilated, for instance by Kantians or modern “intuitionists”, I must leave to them to consider.

Against this background of admiration, I do however wish to put one doubt on the table. I very much doubt whether enough is known about the journey from genes to proteins to structures in the brain, and about the myriad and interacting ways in which that journey is influenced by epigenetic factors, to even begin to see human nature as

\(^1\) The writings of Paul and Patricia Churchland on this theme are well-known.
more than a function, or perhaps a loose population of many functions, from combinations of endowments and environments to psychological traits, with it still unknown (and in view of the lurking combinatorial explosions, perhaps unknowable) even which features of each make up the definitive field of the functions.

We now know, for example, that genes are not fate. In rats maternal licking and grooming resulted in offspring which were calmer and less nervous than rats deprived of this comfort, through having better-developed hippocampi, which in turn released less of the stress hormone cortisol when the rats were subsequently startled. If such ‘cultural’ or environmental or epigenetic facts as maternal care can effect such changes in rats, I do not doubt the same is true of us. But it is important to recognize that the relation between grooming and behaviour could have been noticed independently of the chemical mechanism, and it is only the behaviour of the resulting rats that entitles us to describe the difference as one of relative calm or nervousness: brain writing is no easier to interpret than animal doings, and its calibration needs a prior interpretation of those same doings. This might prompt a very pessimistic thought indeed about what it could ever add to hermeneutic or interpretative disciplines. It is one thing for the science to give us stories about how we come to be as we are. It is another very different thing for it to tell us ‘what we are like’ in ways that supplant or change the interpretations that have long been familiar to historians, lawyers, writers and philosophers, and we must be especially careful about the border between empirical science, and the interpretations that belong to the ideology of particular scientists. Biology has a particularly chequered history in this respect but I shall not dwell upon that in what follows.

2 Weaver et al. 2004.

3 This is confirmed by work on the chemistry of the brain of some maternally deprived children. Although the chemistry seems trickier than sometimes suggested. See http://www.springerlink.com/content/n730533146503g37/fulltext.pdf?page=1

4 In fact, I am not entirely pessimistic. Views about what we are doing can in principle be affected by evidence of how we do some of the things that we unquestionably do. But for a reaction to overexuberant use of supposed biological data, see my review of Stephen
Against those general views, I now turn to the current lecture. The particular source of insight that Professor Hauser is commending to us is given by the analogy between a Chomskian account of our language faculty and our capacity for moral judgment. I take it that the particular stimulus to this parallel is that large-scale questionnaires, of a range and scale that the web has only recently made possible, reveal a remarkable uniformity in quite fine sensitivities to differences between act and omission, intentions of agents, and other factors in determining peoples’ judgments about permissibility and culpability, as they apply in classic problems surrounding the redirection of threats, and their juicy variants. People turn out, almost uniformly, to be sensitive to the difference between acting and omitting to act; between intending a harm and merely accepting it as an inevitable side-effect, and to proximity or contact with anyone disadvantaged by an action. It is these uniformities that bespeak, in Professor Hauser’s view, an innate grammar giving us principles of behaviour. Culture and learning at best set “parameters” or values for the variables in these principles.

I have always supposed that the lynchpin “poverty of stimulus” argument for universal native endowments or grammars depends very much on confidence that the stimulus is indeed impoverished. Philosophers including Putnam, Ryle, and Goodman queried a long time ago whether this was true: Ryle scoffed at the “Mowgli in Babel” picture of a baby’s plight that, it seemed to him, lay behind the argument. He reminded us instead of the way the infant is “helped, encouraged, guided, taught and trained” and above all reminded us of the way in which the infant learns actively, by modelling his actions and sayings on others, imitating, practising, rehearsing, discarding and inventing. However this kind of point may affect the argument in linguistics, it seems to me very powerful indeed in its application to moral and emotional learning.\(^5\) The emotional and

Pinker’s *The Blank Slate*, originally in the *New Republic*, at http://www.phil.cam.ac.uk/~swb24/reviews/Pinker.htm.

moral environment in which children grow up is pervasive and many-faceted, carefully engineered by their caregivers, replete with soap operas, stories, sagas and gossip full of villains and heroes, retailed with smiles and frowns and abundant signs of esteem and dislike, and gradually entered by practise, imitation, correction, and refinement.

This leads me to make one remark about uniformity as a guide to there being a genetically encoded module ready to give a particular output or kind of output, more or less independently of any learning environment. Any long, socially embedded, induction into the practices of ethics need also to conform itself to the infant’s developing ‘theory of mind’. At the point where she knows something of what she is doing, she may be far from deploying the more complex idea of someone doing nothing when they should have been doing something, for example, in which case it should not be surprising that errors of action are more salient, better fitted to act as exemplars and paradigms, and hence more significant than errors of not acting, that is, errors of omission. This is of course a matter for specialists in child development, but it at least seems possible that a child who early on gets dissuaded from pulling her sister’s hair may only later, and usually a good deal less securely, learn that she was also at fault for doing nothing when she could have prevented her brother from doing the same (indeed this may be very hard to learn, since it is frequently denied: in the vocabulary of Anglo-American law, her brother’s trespass was an intervening cause, which entirely absolves her from liability). Similar remarks will affect the other two components of world-wide morality, the salience of intention and the importance of proximity. The central cases of wrongdoing are surely identified for children in terms of intention, and in terms of nearby and directly attributable harms: it is not for nothing that each of mens rea and causal proximity are so prominent in the law.

If this is right, then even world-wide uniformity about these things needs no particular morally-shaped native module to explain its arrival. Nor is it particularly surprising that in some cultural circumstances, and perhaps some kinds of small-group living, an insistence on cooperation can make omissions of prevention begin to attract something of the same obloquy as harmful intervention. My doubts here can crystallize around Professor Hauser’s seventh point in favour of his linguistic analogy. Whereas he
speculates that our innate moral faculty ‘constrains the range of both possible and stable ethical systems’ I would suggest instead that very often other exigencies of human life constrain the range perfectly well by themselves.

Furthermore, it seems to me that if we are to press the analogy with language, rather than relying on more general capacities for guided pattern-recognition, we might need to think further about various apparent differences as well. Our abilities to parse syntax, like our visual abilities, need to be very fast, since our short-term memory of utterances is typically quite poor.\(^6\) As a result in the mature native language user they are sub-personal, inflexible, and in the case of language notoriously they resist articulation – we do not know which features determine the grammatical construction of our own sentences. ‘It sounds right/wrong to me’ is about as far as discussion of such a matter can easily go outside the professional linguistics department. The capacities are also prodigious in their output: we can interpret immediately and are certain of the syntax and semantics of any of a huge, if finite, number of sentences of our native language, and this certainty arrives within a very restricted developmental space.

Little of this is evidently true of our moral verdicts. These can take time: we do not always come to snap decisions, and we often mistrust those who do. We are typically aware of juggling different factors in thinking about them. They are not inflexible. They are not insulated or modular in the sense of delivering outputs like the grammatical and visual systems do, which are impervious to input from collateral sources. They are subject to discursive pressure, and they can change: moral education can go on for a lifetime. In our own times attitudes to homosexuality, race, gender, and greed have significantly shifted, the first three for the better, the last, at any rate until last week, for the worse. Finally there are very very few that are certain in the way that our syntactic verdicts are. So to sum up they are apparently not abundant, not instant, not inarticulate, not inflexible and not certain. Any similarity to language processing is therefore on the

\(^6\) I am indebted here, and more generally to an unpublished paper (‘Moral Nativism: A Sceptical Response’) by Kim Sterelny.
face of it quite slight, and so, I fear, may be the prospects for diving down to find hidden principles constraining them. 7

Even in the rarefied world of deflection of threat problems (trolley problems), there have been literally centuries of legal argument, not mainly conducted in their despised armchairs by professional philosophers, but hammered out of long experience of judges, juries, and legislators, attempting to discover defensible principles connecting such notions as intention, action, omission, responsibility, causation— which alone explodes into difficult notions such as overdetermination, proximate causation, double prevention, intervening causation, enabling conditions, counterfactuals, probability, and causal apportionment just for starters—harm, risk, liability, accomplice liability, and excuse.8

The principles to follow in these areas do not shout at us from a hidden module, and few philosophers expect to excogitate them from the armchair without a stack of diachronic legal and philosophical resources to compare and build upon. They have changed over time, and all their changes took arguments and persuasions involving different areas of judgement, some moral, some pragmatic, some metaphysical, some in the philosophy of mind, others in the philosophy of language.

This may be a useful place to pause and offer an incidental remark about the scientists’ contempt of the armchair, and philosophers’ anxiety to embrace experimental technique. Offered a choice between an armchair placed beside, say, a stack of books detailing and excogitating the work I have just mentioned, and one sitting beside the results of a web questionnaire, as a philosopher interested in responsibility, causation and the rest, I would tend to take the former, although I also do not see that they are in

7 In the Tanner lectures in Princeton in November 2008, Professor Hauser showed some willingness to concede much of this, while still maintaining that the Chomskian analogy provided a fertile heuristic for experimenters like himself. I am pleased that this is so, and have no wish to take that status away from it.

competition. The folk who answer the questionnaire may be superior in number and in geographical and linguistic range. But they are very unlikely to be, on the whole, better at thinking about causation, intention and the rest, than Learned Hand, Cardozo, Hart, Honoré, von Kries, Hume or Mill. Of course, if I were not a philosopher interested in what to think about these things, but only a sociologist interested in what people seem to think about these things, then I might have more reason to want the survey and to ignore the refinements that generations of experience have thrown up. It all depends on what questions we want to tackle. I would however only suppose that the survey might throw something into the scales of theory if I had confidence that uncultivated nature had given the innocent mind an uncorrupted access to what is to be thought about these things—an optimistic resurrection of the idea of the primitive nobility that must owe more to ideology than to genuine science.9 Whatever we think about this, we should avoid supposing that only one armchair is “scientific”, supposing therefore that a distillation of the accumulated experience of centuries of human affairs is not.

This also opens space for reflection on the socially embedded nature of morality: its presence in interpersonal settings, as well as conventions, customs, habits, and law. The question of whether each of two persons is insisting upon, or banning, the same conduct is one of what they say and then what they do to show that they are in earnest, and they may each pass these tests in the same way although one is huffing and puffing about it while for the other it is a matter of everyday routine and nothing to get excited about. It is noteworthy that the prominent modern research tools are resolutely individualistic: the solitary questionnaire and the brain scan. Morality is very largely not.

Professor Hauser emphasizes the kind of work done by Daniel Kahnemann, in which parameters affecting our judgements are indeed unknown: a situation familiar from the neighbouring sphere of aesthetic judgement. In morals, by contrast, the aspects of situations that prompt our verdicts are generally identifiable, if only vaguely, and can be defended and disputed, socially weighed and agreed or rejected. This is not incidental. Our moralizing is done for a purpose, and the purpose often selects people for better or worse  

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treatment. So the factors which set us off need public identification, since otherwise we risk injustice. If a factor such as proximity to the person on whom we are inflicting disadvantage is shown to affect a verdict of permissibility, or other contextual factors are, but we cannot well defend them as morally significant features of a situation, we rightly become nervous, and may even change.

The richer the learning environment is conceived as being, and the greater the child’s practice in it, the less she needs to come from the womb equipped with ‘clouds of biological glory’, to use Ryle’s phrase. But of course, everyone acknowledges that she will need some things: capacities for noticing the emotions of others, capacities of empathy, of planning, of response to the intentions of others, of self-control, of mimicry, of subsuming ‘I’ under ‘we’, of entering into the social world. If Professor Hauser is right, in this as in other areas she will also need combinatorial skills and “promiscuous interfaces” enabling her to integrate and juggle information and capacities from different domains. And I don’t doubt that the study of deficits in these directions has much to teach us, as contemporary work on autism has begun to show. But even here, and with other large scale deficits such as those caused by damage to the ventromedial pre-frontal cortex, indeterminacies of interpretation abound, and this alone should surely cause triumphalism to hesitate.\textsuperscript{10} In fact the interpretation of such patients involves delicate issues surrounding the interplay of emotion, autonoesis, memory, and imagination.\textsuperscript{11} As already said, brain writing is no easier to interpret than peoples’ doings, or for that matter, animal doings.

Returning to the question of the richness of the cultural environment, we can notice that this is relevant to one worrying implication of the rival emphasis on nativism or innateness. For many people that is going to be associated with inevitability: biologist E.O Wilson’s remark about Marxism: “nice theory; wrong species” implies that the


failure of Marxism, for instance, is inevitable, and that any future resurrection of such a political system will meet the fate of the last ones. Whereas other stories, by reminding us of the work of context and culture, are less dogmatic about this. We simply do not know, for instance, whether an education in a different context and culture, with an emphasis on different prototypes and different patterns of events and behaviour, might not form people who find inequality as distasteful and shameful as Republicans find taxes. Hume should therefore be our mentor here. One of his many pathbreaking discussions in the Treatise concerns the emergence of contract and convention, whereby actions can gain a point only conditionally upon others in turn performing their part: the point made by the celebrated analogy with the stones in an arch. But Hume thought that it was the work of intelligence and understanding, rather than any innate moral module, that was needed to lead people to sacrifice immediate interest for the goals assured only by long-term cooperation and convention. He also thought that we could see why intelligence and understanding, not working on any beyond general principles and general rules of cause and effect, could perform the task. And this genealogy at least leads us to understand that what culture can give, it can also take away. It is by no means inevitable that people are coopeerative or prone to respect property, promises, law or government, and we flirt with disaster if we are confident that innate modules will get a new generation there unaided.

I have not, in these comments, said anything about the other mention of Hume in these discussions, which is usually in connection with his emphasis on the place of the passions. But since Professor Hauser touches on this, generally in order to contrast judgment with emotion, I shall conclude with a final remark. The essential core of Hume’s approach to ethics is that it is practical or motivational. This is not the same as saying that it is emotional, since other states of mind such as attitude and desire are

\[12\] EM, Appendix 3, p. 171.

\[13\] In Lust I similarly commended Hume’s cultural emphasis in his discussion of the asymmetry between male and female chastity and modesty. There would not be so much education and so much moralizing about this if nature had simply hard-wired it for women.
clearly practical, and yet may have no emotional phenomenology or emotional expression. You can put up a fence in a quite unemotional or clinical frame of mind, and this remains true if it is a fence around conduct, such as a moral prohibition is. Hence, the absence of emotion and its overt signs, or the absence of neurophysiological excitability in areas of the brain thought to subserve it, is no kind of license to shunt moral judgment away from anything practical. Hume himself knew this well, as his separation of a distinct category of calm passions demonstrates.\textsuperscript{14} For Hume, the passions cover any practical orientations towards the world, and our morality is at least one of those. If it is not—and Professor Hauser has evidence of psychopaths giving saying normal things in a moral vocabulary when their affect responses are highly abnormal and their motivations completely out of line with what they say—then the suspicion must be that they merely parrot what they know to be the socially acceptable verdict.\textsuperscript{15} If moral judgment becomes far enough divorced from practical stances, it stops being what it appears to be.

\textsuperscript{14} Treatise, Bk II, Part III, sect. iv.

\textsuperscript{15} I am indebted here to Walter Sinnott-Armstrong’s very useful commentary on this literature, which emboldened me to expand my final paragraph.