

A kind of “mental geography”: Remarks on Hume’s science of human nature

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Abstract: Most of Hume’s philosophy hinges on the project of founding a new “science of human nature”, mirrored in the successful “experimental method of reasoning” introduced in natural philosophy by Galileo, Newton and their contemporaries. In this essay I make some remarks on this project, with a view to elucidating its nature and exploring its potential fertility in the study of the human mind. I begin by showing that Hume carefully demarcates the domain in which the new method is applicable, namely, the domain of unobserved matters of fact. I argue that, given his conclusions about the narrow limits of the traditional, *a priori* philosophical method, naturalism is Hume’s favoured instrument for advancing research in this domain. Then, I draw attention to the epistemic priority that Hume ascribes to the phenomenological level, both in the natural sciences and in his science of man. I argue that he had good reasons not only for making this choice, but also for holding that the phenomena forming the basis of a naturalistic theory of mind should be *specifically* mental. This is in sharp contrast with the typical forms of epistemological naturalism prevalent in our days, which seek to establish the science of mind either on a behaviouristic basis, or on the theoretical study of neurological processes. In the final section of the article, I consider briefly one of the most difficult questions raised by the adoption of a naturalistic approach in epistemology: whether naturalism leaves room to epistemic norms. I defend the view that the Humean version of naturalism is compatible with a moderate form of normativity in epistemology.

“And if we can go no farther than this mental geography, or delineation of the distinct parts and powers of the mind, it is at least a satisfaction to go so far; and the more obvious this science may appear (and it is by no means obvious) the more contemptible still must the ignorance of it be esteemed, in all pretenders to learning and philosophy.” (Hume, EHU 1.13; SBN 13)

1. Introduction

Both in “The two dogmas of empiricism” (1951) and in “Five milestones of empiricism” (1975), Quine explicitly situates Locke and Hume at a primeval stage of the historical development of empiricism.¹ In those “days of yore”, says Quine (1995, chap. 1) it had not yet outrun any of the five milestones, or “points where empiricism has taken a turn for the better” (1975/1981, p.67). These landmarks are, according to Quine: 1) the shift of attention *from ideas to words*; 2) the shift *from terms to sentences*; 3) semantic and epistemic *holism*, or the shift from sentences to systems of sentences; 4) the ensuing *blurring of the analytic-synthetic distinction*; and, 5) *naturalism*, or the abandonment of the goal of a first philosophy, with the consequent assimilation of epistemology to empirical psychology (Quine 1975/1981).

Elsewhere I have examined, and rejected, some of the charges made by Quine on Locke as a result of this view on the history of empiricism (Chibeni 2005a). I believe this analysis can be extended, *mutatis mutandis*, to the case of Hume. I hold, in particular, that Quine is wrong in attributing to them the “dogma of reductionism”, or “the belief that each meaningful statement is equivalent to some logical construct upon terms which refer to immediate experience” (1980, pp. 20, 38). Convinced that all of Locke’s and Hume’s epistemology hinged on such “impossible” “term-by-term” reduction of empirical sentences (1980, p. 42), it is no wonder that Quine was blind to any positive contribution of these philosophers to epistemology. Thus, Quine could not see that, in dealing with certain complex epistemological issues, they transcended the theory of ideas or perceptions forming the starting point of their studies – a theory capable, indeed, of suggesting an “atomistic attitude toward sense data” (Quine 1973, p. 2). And much less did he notice that, as they moved ahead in their investigations, both Locke and Hume came to propose epistemological theses that closely resemble those that he takes as characteristic of modern empiricism. It is arguable, for instance, that they have (essentially) crossed milestones 2 and 3, for different reasons and in different ways.

The main goal of this article is to determine to what extent Hume can be said to having also crossed milestone 5, leading to naturalism. Although among Hume scholars the thesis that Hume’s philosophy involves some sort of naturalism is now more than a hundred years

¹ See also his lectures on Hume, delivered at Harvard in 1946 and published posthumously (Quine 2008).

old,² authors participating in the current debate on epistemological naturalism show little or no sign of being aware of Hume's contributions to their theme – an effect, perhaps, of Quine's indictment.³ I regard this situation as unfortunate, since the contemporary discussions could, on several respects, be clarified by Hume's insights and arguments. In providing some elements in favour of this opinion, I will link the issue of naturalism to that of mentalism. Quine and his followers regard mentalism as part of what they take to be the primeval stage of empiricism. I believe that, on the contrary, Hume's (and Locke's) explicit adherence to this theoretical framework in the study of mind is a respectable philosophical position, even when certain recent advances in epistemology are taken into account. In other words, it seems to me that our empiricist grandfathers had good reasons for (implicitly) ignoring milestone 1 in their pioneering efforts to reach the other milestones.

A well-known hint to the naturalistic interpretation of Hume's philosophy is provided by Hume's remarks on his own project. The subtitle of the *Treatise* says that it is “an attempt to introduce the experimental method of reasoning into moral subjects”; and its Introduction is in large part dedicated to drawing parallels between the proposed “science of man” and the natural sciences. Furthermore, Hume effectively explores such parallels in the book, as when, for instance, he appeals to a series of “experiments” to “prove” his theory of belief formation through associative channels.⁴ Now, given that the nucleus of naturalism is precisely this proposal of investigating philosophical problems by methods adapted from the natural sciences, there is little doubt that Hume effectively regarded his own philosophy as containing

² The thesis has been proposed by Norman Kemp Smith in a pair of articles published in *Mind* in 1905, and received extensive treatment in his classic 1941 book, *The Philosophy of David Hume*.

³ It is interesting to notice that not even *critics* of Quinean naturalism (e.g. Putnam 1981) have examined the possibility of finding in Hume's work a naturalistic alternative that, being substantially distinct, could perhaps stand up to their objections.

⁴ T 1.3.8; SBN 98-106. It should be remarked, however, that in the Introduction to the *Treatise* Hume warns against the error of believing that the experimental methods in the two fields are *identical* in every detail. Thus, he notices, for instance, that in the science of man we cannot make experiments “purposely, with premeditation” without irremediably disturbing our “natural principles”. “We must therefore glean up our experiments in this science from a cautious observation of human life, and take them as they appear in the common course of the world, by men's behaviour in company, in affairs, and in their pleasures.” (T Intro. 10; SBN xix)

an important naturalistic element. In the following sections I shall make some remarks on the scope, manner and import of Hume's naturalistic project.

2. The scope of Hume's naturalism

The third part of book 1 of the *Treatise* is called "Of knowledge and probability", in clear reference to the Lockean division of the *products* of human cognition.⁵ Furthermore, he maintains, again in the footsteps of Locke, that this division reflects the existence in man of two distinct cognitive *faculties*. Hume approaches this point in two distinct ways, in his two epistemological books. In the *Treatise*, he begins by proposing an exhaustive enumeration of the "philosophical relations": resemblance, proportion in quantity or number, degrees in any quality, contrariety, identity, relations of space and time, and causation (T 1.1.5.3-9 and 1.3.1.1; SBN 14-15 and 69). Then he notices that of these seven relations only the first four, "depending solely upon ideas, can be the objects of knowledge and certainty" (T 1.3.1.2; SBN 70). The other three "may be chang'd without any change in the ideas", depending, thus, on the "information [we receive] from experience" (T 1.3.1.1; SBN 69).

In the *Enquiry* Hume introduces directly, in the opening paragraph of section 4, the notions of *relations of ideas* and *matters of fact*, which are intended to capture essentially the same distinction as that existing between the two classes of philosophical relations. Indeed, relations of ideas "are discoverable *by the mere operation of thought* [intuition and demonstration], without dependence on what is anywhere existent in the universe. [...] Matters of fact [...] *are not ascertained in the same manner*; nor is our evidence of their truth, however great, of a like nature with the foregoing." (EHU 4.1-2; SBN 25; italics added.)

The notions of probability and belief pertain exclusively to the domain of matters of fact. For Hume, as well as for modern philosophers in general, knowledge, to be knowledge,

⁵ Later in the book, Hume expresses second thoughts on this bipartition, as he discovers that a crucially important sub-class of the propositions initially classified as "probable" are, in fact, not object of reasonable doubt. He replaces, then, the bipartition of "human reason" by a tripartition: knowledge, proof and probability. "By knowledge, I mean the assurance arising from the comparison of ideas. By proofs, those arguments, which are deriv'd from the relation of cause and effect, and which are entirely free from doubt and uncertainty. By probability, that evidence, which is still attended with uncertainty." (T 1.3.11.2; SBN 124; see also EHU 6 footnote; SBN 56.)

must be *certain*. Furthermore, for Hume belief is *not* a necessary condition for knowledge, as present-day epistemologists typically hold (see e.g. Chisholm 1977). It is, rather, a separate epistemic category, *complementary* to knowledge, rooted in a different cognitive faculty, and concerned with a different class of propositions. This is a point about which Hume's debt to Locke is particularly evident.⁶ But the fact that Hume has not explicitly acknowledged this debt may lead to a rather serious distortion in the appraisal of Locke's fundamental contribution to epistemology. Having defined knowledge as "*the perception of the connexion of and agreement, or disagreement and repugnancy of any of our Ideas*" (*Essay IV i 2*), Locke set out to determine how far knowledge goes, in *all* the main areas of cognition. This was the right thing to do, since knowledge represents the ideal towards which all cognition should aim. Locke examined, in particular, the possibility of establishing the truth of universal propositions about matters of fact via the analysis of ideas. This would guarantee, among other things, the certainty of all phenomenological laws of science. The result was found to be negative.⁷ But no sooner Locke reached this conclusion than he actively began the search for a means to secure an epistemically respectable position to at least some of propositions belonging to this important class. It was in this way that he came to devise a pioneering draft of a theory of epistemic probabilities.

Now, the project of establishing matters of fact through intuition and demonstration may look contradictory to someone trained in Humean epistemology. But this is a perspectival effect, resulting from the fact that Hume capitalized on Locke's conclusions, assuming from the beginning that the faculties proper to generate certain knowledge via the analysis of ideas are powerless to determine matters of fact. Accordingly, Hume handed matters of fact directly over to experience: the very initial characterization of matters of fact includes the view that they are established exclusively by empirical means.

⁶ Cf., for instance, *Essay IV xiv 4*: "Thus the Mind has two Faculties conversant about Truth and Falsehood. *First, Knowledge*, whereby it certainly perceives, and is undoubtedly satisfied of the Agreement or Disagreement of any *Ideas*. *Secondly, Judgment*, which is the putting *Ideas* together, or separating them from one another in the Mind, when their certain Agreement or Disagreement is not perceived, but *presumed* to be so; which is, as the Word imports, taken to be so before it certainly appears."

⁷ For a critical survey of Locke's arguments, see my 2005a.

It is important to be clear on the notion of experience, as here employed. Definitely, it is *not* the logically prior process of genesis of *ideas*, or perceptions, which both Locke and Hume also call experience. Experience here must be understood as the direct apprehension of *facts* by sensation (in the case of facts referring to bodies), or by reflection (in the case of facts concerning the mind of the inquiring subject).⁸

Notice, further, that such reference to *facts* is also ambiguous. Ordinarily, when we – and often Locke and Hume too – talk of empirical facts, we have in mind items that, strictly considered, are unobserved or even unobservable. When I say, for instance, that it is a fact that there is now a piece of paper before me, I ordinarily mean more than that in my mind there are now certain perceptions of forms, colours, etc. I intend to be asserting the real existence of a body – which, as a material substance, is unobservable. But in the empiricist approach facts, strictly speaking, refer exclusively to items of *immediate awareness*: *ideas* (Locke) or *perceptions* (Hume). Therefore, in this latter sense facts are limited to the contents of our own minds. Thus, when I assert that there is a piece of paper before me the only incontrovertible fact is that certain patterns of black and white, etc., are perceived by me now.⁹

One of the consequences of this distinction is that the Humean expression ‘matters of fact’ has two possible meanings too. Disambiguation sufficient for the purposes of the present article is easily accomplished by using ‘observed (observable) matters of fact’ and ‘unobserved (unobservable) matters of fact’ for, respectively, the items of which we are or have been (can, in principle, be) immediately aware, and the items of which we neither are nor have been (cannot, in principle, be) immediately aware. In these terms, one can say that

⁸ Notice, by the way, that in attributing to Locke and Hume the dogma of radical, term-by-term reductionism, Quine betrays his complete insensibility to the presence of this second, all-important sense of the word ‘experience’ in the works of these philosophers.

⁹ Kemp Smith has suggested that immediate awareness of the mind’s own contents should have been introduced by Hume as a third epistemic category, separate from belief and knowledge (1941, chap. XV, pp. 356-357). Indeed, being certain, but not based on the analysis of ideas, it does not fit well neither in knowledge nor in belief. Fortunately, this point does not affect directly the present analysis. I am assuming only that awareness of our own mental states (perceptions, sentiments, etc.) counts as matters of fact – and matters of fact about which we are absolutely certain.

the main epistemological issue Hume is interested in investigating is the epistemological status of *unobserved matters of fact*. In his own words:

It may, therefore, be a subject worthy of curiosity, to enquire what is the nature of that evidence which assures us of any real existence and matter of fact, beyond the present testimony of our senses, or the records of our memory. This part of philosophy, it is observable, has been little cultivated, either by the ancients or moderns; and therefore our doubts and errors, in the prosecution of so important an enquiry, may be the more excusable; while we march through such difficult paths without any guide or direction. (EHU 4.3; SBN 26; see also T Abs. 4; SBN 646-647)

Among Hume's predecessors, Locke is the one who came closer to identifying this issue as one of the most fundamental epistemological problems arising in the empiricist approach. His analysis of knowledge led to the correct conclusion that unobserved matters of fact are strictly unknowable, and that the most we could get about them is more or less well-grounded "probability", "belief", or "opinion". Hume agreed. But upon examining in depth the possibility of deriving belief about unobserved matters of fact from knowledge of observed matters of fact *by means of arguments* (either demonstrative or "probable"), Hume reached, famously, a thoroughly negative conclusion. On this crucial point Hume parted company with Locke, since, as David Owen has remarked, for Locke "opinion based on probability was grounded in reason and the understanding every bit as much as demonstrative knowledge".¹⁰

Interestingly, Hume's negative conclusion did *not* push him toward an unqualified scepticism on unobserved matters of fact. He sought to secure a respectable epistemological place for belief, by casting the Lockean issue of the "grounds of probability" on an entirely new mould. The strategy consisted in displacing belief from the realm of "the understanding", as classically understood, and locating it in a different province of the mind, where *imagination* is the leading faculty. And he proposed that the study of this province – where not only belief is formed, but also the moral and aesthetic judgements – should proceed according to methods similar to those employed in the natural sciences.

¹⁰ Owen 1994, p. 152; see also Owen 1999, chap. 3.

The proper delimitation of the scope of Hume's naturalism is often neglected in the literature, with unfortunate consequences.¹¹ It is a mistake, in particular, to take naturalism as applying also to the domains of relations of ideas and observed matters of fact – i.e. where there can be certainty. Hume's approach to these domains is entirely classical. Intuition and demonstration, in one case, and immediate awareness, in the other, are the necessary and sufficient epistemic tools for getting knowledge, in the strict sense of the word. Hume appeals to naturalism (in epistemology) exclusively as an attempt to overcome scepticism with respect to the all-important case of *unobserved matters of fact*, or "probability", since he has been the first to see clearly the irremediable limitations of aprioristic epistemology to deal with this case. I shall now make some tentative remarks on how Hume proceeded in this pioneering exploration.

3. The nature of Hume's epistemological naturalism

Among unobserved matters of fact, Hume is particularly interested in two cases: unobserved, but observable facts regarded as effects (causes) of observed causes (effects), and the real existence of bodies. In each case Hume puts forward a specific theory for the process of belief formation, in parts 3 and 4 of the first book of the *Treatise*, respectively. According to these theories – whose details will not be discussed here – "*belief is more properly an act of the sensitive, than of the cogitative part of our natures*" (T 1.4.1.8; SBN 183). In other words, belief is not the result of any *intellectual* operation, but the effect of certain *natural mechanisms* of the mind, "a species of natural instincts, which no reasoning or process of the thought and understanding is able, either to produce, or to prevent" (EHU 5.8; SBN 46-47).

Coming across such a conclusion, readers from all epochs have, expectedly, tended to take Hume as a sceptic.¹² Hume's innovative naturalistic approach has not been recognized as

¹¹ In his otherwise valuable analysis of naturalism in Hume's epistemology, Falkenstein, for instance, gets involved in a number of pointless difficulties as a result of his inclusion of reason among the "causes of belief", and the consequent subsumption of relations of ideas under the category of belief (Falkenstein 1997, sect. I and *passim*). Loeb also falls prey of this confusion, as when, for instance, he includes demonstration among the belief-forming mechanisms (Loeb 2002, p. 13).

¹² In recent decades, several scholars have advocated a non-sceptical interpretation of Hume's epistemology: John Wright (1983), Galen Strawson (1989), Edward Craig (1987), among others. (Not

epistemologically valid. It has been regarded as a change of subject: from epistemology to *psychology*. The reversal of this appraisal requires a radical change in the way of conceiving epistemology, as the contemporary defenders of epistemological naturalism correctly point out. According to epistemological naturalism, the empirical study of the mind *does* count as genuine philosophical work. This is not a purely taxonomic issue. Given the strong sceptical arguments advanced by Hume against the possibility of accounting for belief in unobserved matters of fact using the tools of classical epistemology, the refusal to enlarge the scope of epistemology entails the conclusion that most of common sense and science is epistemically unjustifiable.

Furthermore, it is arguable that the naturalistic construal does more justice to Hume's texts. It is worth quoting, in this respect, a passage from the introductory section of Nelson Goodman's classic "The new riddle of induction" (1954). Examining the issue of the epistemological status of Hume's proposal that "inductive" (i.e., causal¹³) inferences are instinctive, based on habit, Goodman asks:

How satisfactory is this answer? The heaviest criticism has taken the righteous position that Hume's account at best pertains to the source of predictions, not their legitimacy; that he sets forth the circumstances under which we make given predictions – and in this sense explains why we make them – but leaves untouched the question of our license for making them. To trace origins, runs the old complaint, is not to establish validity: the real question is not why a prediction is in fact made, but how it can be justified. Since this seems to point to the awkward conclusion that the greatest of modern philosophers completely missed the point of his own problem, the idea has developed that he did not really take his solution very seriously, but regarded the main problem as unsolved and perhaps insoluble. Thus we come to speak of 'Hume's problem' as though he proposed it as a question without answer. [...] All this seems to me quite wrong. I think Hume grasped the central question and considered his answer to be

all of these authors align themselves with Kemp Smith in maintaining that Hume's way out of scepticism is naturalism.) In the opposition camp, Kenneth Winkler (1991) argues that, when all pros and cons are considered, the traditional interpretation still maintains its hold.

¹³ Following a long tradition, Goodman mistakes the problem of induction for Hume's problem, which is that of the *causal* inferences. Fortunately, this slip does not affect the point I am making here. For a pioneering analysis of the confusion of the problem of induction with the problem of causal inferences see Monteiro 2001.

passably effective. And I think his answer is reasonable and relevant, even if it is not entirely satisfactory.¹⁴

These words represent, effectively, one of the most eloquent pronouncements in favour of the naturalistic construal of Hume's epistemological theory. In arguing explicitly for this construal, Kemp Smith introduced the notion of *natural belief*, to stress that, according to Hume, belief in matters of fact causally related to observed facts and belief in the existence of bodies result from the operation of certain unreflective, natural instincts, triggered by empirical stimuli, under appropriate circumstances.¹⁵ The determination of these circumstances is one of the main tasks undertaken by Hume. It constitutes, in fact, the bulk of his epistemological work. Hume proposes, in short, that belief in matters of fact causally related to observed facts is conditioned by the exposure, in the past, to regular conjunctions of phenomena of two kinds (e.g. approach to fire and fusion of wax), and triggered by the actual perception of a particular phenomenon of either kind. As to the belief in the existence of body, the underlying factors are the constancy and coherence of certain perceptions (e.g. the several patterns of black and white that I have perceived in the last five minutes leading to the belief that there is a sheet of paper before me). If Hume is right in maintaining that this theory is somehow confirmed by empirical inquiry – introspection and indirect evidence resulting from the observation of human and animal behaviour –, the naturalistic construal of his epistemology is essentially vindicated.

Summing up: Hume's main concern is with matters of fact. Interesting matters of fact – those going “beyond the present testimony of our senses, or the records of our memory” (EHU 4.3; SBN 26) – do not belong to the domain of knowledge, as Locke's and Hume's

¹⁴ Goodman 1954/1983, pp. 60-61. The “old complaint” referred to by Goodman continues to be voiced nowadays, even, surprisingly, by authors who fully acknowledge the naturalistic character of Hume's theory of belief. Thus, for instance, William Morris maintains that “Hume doesn't endorse these [causal] inferences and he believes we *shouldn't* as well” (2006, p. 79; italics in the original). In a footnote appended to this assertion, Morris underlines that he does *not* take it in the weak sense proposed by Garrett (1997) and Owen (1999), according to which when Hume says that the causal inferences have “no just foundation” (T 1.3.6.10; SBN 91) he only means that they are not based on *reason*.

¹⁵ Kemp Smith maintained that such “doctrine of natural belief is one of the most essential, and perhaps the most characteristic doctrine in Hume's philosophy” (1941, p. 86; see also 1905, p. 151).

sceptical arguments show. The most we can hope to get about them is belief. But belief cannot be rationally grounded on experience, as Locke thought. Among the many kinds of belief, Hume was interested in those that, notwithstanding their a-rational character, possess certain epistemically credentials (see Section 5, below): those generated by the two above-mentioned natural mechanisms, fed by appropriate empirical stimuli. Finally, Hume submitted that the epistemological study of this area should proceed mainly according to the “experimental method of reasoning” originally employed in natural philosophy. In the following section I will discuss a particularly important aspect of this method.

4. A kind of “mental geography”

On several occasions, Hume compared his science of man to two scientific disciplines, *anatomy* and *geography*:

He [the author of the *Treatise*] proposes to *anatomize human nature* in a regular manner, and promises to draw no conclusions but where he is authorized by experience. He talks with contempt of hypotheses; and insinuates, that such of our countrymen as have banished them from moral philosophy, have done a more signal service to the world, than *my Lord Bacon*, whom he considers as the father of experimental physicks. He mentions, on this occasion, *Mr. Locke*, *my Lord Shaftesbury*, *Dr. Mandeville*, *Mr. Hutcheson*, *Dr. Butler*, who, tho’ they differ in many points among themselves, seem all to agree in founding their accurate disquisitions of human nature entirely upon experience. (T Abs. 2; SBN 646)

‘Tis now time to return to a more close examination of our subject, and to proceed in the accurate *anatomy of human nature*, having fully explain’d the nature of our judgment and understanding. (T 1.4.6.23; SBN 263)

And if we can go no farther than this *mental geography*, or delineation of the distinct parts and powers of the mind, it is at least a satisfaction to go so far; and the more obvious this science may appear (and it is by no means obvious) the more contemptible still must the ignorance of it be esteemed, in all pretenders to learning and philosophy. (EHU, 1.13; SBN 13)

The hearing of an articulate voice and rational discourse in the dark assures us of the presence of some person: Why? because these are the effects of the human make and fabric, and closely connected with it. If we *anatomize all the other reasonings* of this nature, we shall find that they

are founded on the relation of cause and effect, and that this relation is either near or remote, direct or collateral. (EHU, 4.4; SBN 27)

Now, what anatomy and geography have in common is, evidently, the fact that both are *phenomenological* branches of science. The parallel drawn by Hume is, thus, intended to indicate *the epistemic priority he ascribed to phenomenological theories in science, over theoretical speculations departing from experience* in greater or lesser degree. In the same way as the anatomist seeks to describe the different parts and functions of the human body, the “moral” scientist seeks to delineate “the distinct parts and powers of the mind”, leaving aside, in the initial and main stage of inquiry, any speculation as to the “hidden” mechanisms responsible for these powers and phenomena. The adoption of this epistemic ordering is much to be expected from an empiricist philosopher, of course.

I would like to stress that this is a question of epistemic *priority*, not of exclusivity. There is a widespread opinion that all of Hume’s philosophy – naturalistically interpreted or not – is strictly confined to the bounds of experience. I believe that this opinion is mistaken. Notwithstanding the above-quoted declarations, Hume *did* think that it was possible to “go [...] farther than this mental geography” (EHU, 1.13; SBN 13), as we learn, for instance, from what he says just two paragraphs below:

But may we not hope, that philosophy, *if cultivated with care*, and encouraged by the attention of the public, *may carry its researches still farther, and discover, at least in some degree, the secret springs and principles, by which the human mind is actuated in its operations?* Astronomers had long contented themselves with proving, from the phaenomena, the true motions, order, and magnitude of the heavenly bodies: Till a philosopher, at last, arose, who seems, from the happiest reasoning, to have also determined the laws and forces, by which the revolutions of the planets are governed and directed. The like has been performed with regard to other parts of nature. And *there is no reason to despair of equal success* in our enquiries concerning the mental powers and oeconomy, if prosecuted with equal capacity and caution. (EHU 1.15; SBN 14; the italics are mine)

Close attention to what Hume has effectively done as a scientist of the human nature leaves no doubt that, contrary to what he says in the passage quoted from the *Abstract*, his stand toward *hypotheses* is not uniformly contemptuous. At several important junctures he cautiously indulges in hypothesising on the underlying phenomena he was studying. A good example is provided by his conjectures on the physiological correlates of the

phenomenological principles of association of ideas (T 1.2.5.20, 1.3.8.2 and 1.3.10.7). If I am right on this point, the parallel between natural philosophy and Hume's science of man is broader than usually assumed. Over-impressed by both Newton's famous declaration that he "frame[d] no hypotheses" (*Principia*, General Scholium, p. 547) and by Hume's similar declaration in the *Abstract* that he "talks with contempt of hypotheses", commentators have often failed to realise that neither Newton nor Hume has adopted a purely phenomenological, or "inductivist" approach to science. Both make essential use of hypotheses at appropriate places in their theories of the natural and the mental worlds.¹⁶ And when Hume evokes Newton as a model, he understands very well the double nature of his theorizing – phenomenological and hypothetical –, and follows him in the epistemic ordering of these two levels.¹⁷

An important difference between Hume's naturalism and the varieties of naturalism typically defended nowadays becomes clear from the above considerations. Hume formulated a science of mind in terms of, and concerned mainly with, *specifically mental* concepts, such as perceptions, ideas, sentiments, reason, memory, imagination, etc. Thus, Hume conjugated the emphasis on the phenomenological level to *mentalism* (in our terminology). Contemporary naturalists, on the other hand, tend to diverge from Hume on both these points. Their chief leader, Quine, famously encapsulated the programme of naturalized epistemology in the slogan that epistemology should be reduced to "a chapter of psychology".¹⁸ But psychology was understood by him either as *behaviourism* – the study of the behaviour of human bodies – or as the *physical* investigation of the "irritations of our [bodily] surfaces" and their ensuing effects on the nervous system (Quine 1975, p. 72), with unrestricted use of the whole conceptual and theoretical arsenal of physics and chemistry (magnetic fields, electric currents, atoms and molecules, chemical bonds, etc.). In both cases the specifically mental concepts are displaced from their classical position, and taken as ontologically and

¹⁶ For this point, see e.g. Monteiro 1981, and my 2003 and 2005b.

¹⁷ Notice, in this respect, that the above-quoted passage from E 1.15 makes explicit the contrast between the phenomenological level (the motions of the celestial bodies) and the hypothetical level (the "forces by which the revolutions of the planets are governed"). Forces, let us recall, are unobservable, hypothetical entities par excellence (unless, of course, they are reinterpreted in some non realistic way).

¹⁸ See, e.g., Quine 1968, pp. 82-83; 1975, p. 72.

theoretically *derivative*. And in both cases the naturalistic programme is made to rest on the fundamental philosophical assumption that, at the end of (ideal) inquiry, the specifically mental concepts and principles will be explained, or explained away, in *physical* terms, either behaviouristic or theoretical (physics, computer science, etc).

This is not the place to discuss the history of these naturalistic programmes, or to speculate on their prospects. I just want to remark that in his late years Quine himself came to express misgivings on both of them. Dissatisfaction with behaviourism is detectable in several texts; and in his last book, whose title indicates allegiance to the second variant of naturalism – *From Stimulus to Science* (1995) –, Quine openly acknowledges that, in what concerns the *contents* of thoughts, he despaired of a physicalist accommodation.¹⁹

It is also worth observing that the optimism and energy of the contemporary defenders of the Quinean naturalistic programmes have not, apparently, been effective in promoting them much beyond the condition of a draft. In their present state, they are still more programmatic than Carnap's *Aufbau*, which was Quine's explicit contrasting empiricist project. Should not this be taken as a hint that it is time to consider seriously the possibility of rehabilitating Hume's modest, but apparently surer, *phenomenological and mentalist* version of naturalism – his "mental geography" –, now that Hume scholars have rectified several misconstruals of Hume's philosophical project which hampered the recognition of its philosophical virtues?

5. Naturalism and normativity in Hume's epistemology

The radical change of philosophical methods, standards and goals promoted by the adoption of naturalism has far reaching implications. One of the most important issues raised by naturalism is whether it is compatible with normativity in epistemology. On the face of it, the answer is negative: naturalized epistemology seems to be purely descriptive. But in fact this is a point on which there is deep disagreement among naturalists themselves. Some of them admit that naturalism does indeed leave no room for epistemological norms, but do not

¹⁹ Quine 1995, pp. 87 and 93. Quine makes similar concessions in *Pursuit of Truth*, published three years before (see especially paragraphs 24 and 29). In these texts, Quine expresses sympathy to Davidson's anomalous monism, as a compromise between ontological materialistic monism and a dualism of predicates.

regard this as a defect. To this group belong, for instance, many social constructivists and other relativists who, justifiably or not, seek inspiration in Kuhn's account of science.²⁰ Another group of naturalists argue that normativity can, in the end, be preserved within naturalism, at least in some moderate form. This is the case, among many others, of Kitcher, Laudan and even Quine, in his late writings.²¹ Supporters of traditional epistemology, on the other hand, tend to regard the implication naturalism \rightarrow anti-normativity as a *reductio ad absurdum* of naturalism (see e.g. Kim 1988).

Putting this general controversy on a side, I would like to make some tentative remarks on the more specific issue of whether *Hume's* version of naturalism is compatible with at least some forms of epistemological normativity. According to the classical interpretation of Hume's philosophy, when he set about to doing empirical, psychological research on mental processes, Hume abandoned, *ipso facto*, epistemological inquiry, and therefore any intent of establishing the rules according to which the mind *should* operate in cognition. He would, in particular, have deprived himself of any means for distinguishing among the several kinds of belief, with respect to their epistemic legitimacy. It seems to me that this interpretation does not find adequate support in Hume's texts.

Notice, first, that having demarcated the domains of knowledge and belief, Hume has not adopted a purely sceptical attitude towards the *former*. Hume's sceptical analysis of knowledge has simply the effect of making sharper its borders, reinforcing thus Locke's previous conclusions. Hume's arguments show, in particular, that, and why, there can be no *knowledge* of the existence of bodies and of the causal regularity of nature. But these sceptical arguments leave almost intact the entire domain of the relations of ideas.²² Thus, independently of any conclusion regarding the domain of belief, we are left with at least one important area of cognition – which includes the whole of algebra and arithmetics – as the

²⁰ For references and a critical discussion of this brand of naturalism, see Freedman 2005.

²¹ Kitcher 1992, Laudan 1987, 1990. As to Quine, see the specific discussion in paragraph 8 of *Pursuit of Truth* (1992).

²² *Pace* the arguments put forward in "Of scepticism with regard to reason" (T 1.4.1; SBN 180-187). As Kemp Smith convincingly argues, Hume's arguments in this section have no damaging effect on the possibility of a priori, rational knowledge of relations of ideas (Kemp Smith 1941, chap. 15, pp. 357-363).

proper province of the classical epistemological methods. If, therefore, there is room for normativity in classical epistemology, there will also be in Hume's epistemology, at least in the well-delimited domain of relations of ideas.

But even in the domain of *belief*, or probability, normativity is not automatically ruled out by Humean naturalism. At the end of the exposition of the central part of his theory of causal belief in the *Treatise*, Hume himself acknowledges that not every belief have adequate epistemic credentials. He then spends several sections discussing the issue (T 1.3.8-13; SBN 98-155). Hume notices, for instance, that "more than one half of those opinions that prevail among mankind" is due to "education" – an "artificial", and therefore epistemically disreputable, cause of belief (T 1.3.9.19; SBN 117). He examines also the dubious beliefs induced by certain passions, by a heated imagination, by madness, by a credulous turn of mind, by rhetoric artifices, etc. (T 1.3.10; SBN 118-123). Now, no hope exists of adequately separating bona fide beliefs from such spurious beliefs if we do not go beyond Hume's initial characterization of belief in terms of vivacity of perceptions. There is no doubt that Hume was not only aware of the problem, but also that he was prepared to modify his initial account. This he does mainly through complementation. Vivacity continues to be the kernel of the notion of belief, but now, interestingly, *reason* is called upon to help in the *evaluation* of beliefs. Although, as Hume insists, reason is powerless either to generate belief or to suppress it completely,²³ it may assume the role of controlling belief.²⁴ Indeed, the rational analysis of

²³ See e.g. the famous passages in T 1.4.1.7-8; SBN 183-184, and EHU 5.8 and 12.23; SBN 46-47 and 159-160. In EHU 5.8, for instance, we read: "All belief of matter of fact or real existence is derived merely from some object, present to the memory or senses, and a customary conjunction between that and some other object. [...] This belief is the necessary result of placing the mind in such circumstances. It is an operation of the soul, when we are so situated, as unavoidable as to feel the passion of love, when we receive benefits; or hatred, when we meet with injuries. All these operations are a species of natural instincts, which no reasoning or process of the thought and understanding is able, either to produce, or to prevent."

²⁴ Kemp Smith argues for this point in his 1905 paper, pp. 168-169, and, in greater detail, in his 1941 book, pp. 129-132, 378 and 383-388. In a section entitled "Why reflective thinking is required to supplement custom", he submits that "it is solely in virtue of the *normative* standards supplied by [reflective thinking] that a sceptical scrutiny of prevailing beliefs and practices and a programme for their reformation are, in Hume's view, the task which fall to a philosophy worthy the name" (1941 pp. 386-387; italics in the original).

the *causes* of belief shows that in certain cases belief is due to principles that are “changeable, weak, and irregular”, whereas epistemically legitimate beliefs – causal beliefs, belief in the reality of bodies – result from principles that are “permanent, irresistible, and universal”. It is worth quoting in full the passage in which these phrases occur:

In order to justify myself, I must distinguish in the imagination betwixt the principles which are permanent, irresistible, and universal; such as the customary transition from causes to effects, and from effects to causes: And the principles, which are changeable, weak, and irregular; such as those I have just now taken notice of. The former are the foundation of all our thoughts and actions, so that upon their removal human nature must immediately perish and go to ruin. The latter are neither unavoidable to mankind, nor necessary, or so much as useful in the conduct of life; but on the contrary are observ'd only to take place in weak minds, and being opposite to the other principles of custom and reasoning, may easily be subverted by a due contrast and opposition. For this reason the former are received by philosophy, and the latter rejected. (T 1.4.4.1; SBN 225)

To illustrate the point, Hume offers a telling example of the contrast between causal belief and belief due to education-cum-credulity:

One who concludes somebody to be near him, when he hears an articulate voice in the dark, reasons justly and naturally; tho' that conclusion be deriv'd from nothing but custom, which infixes and enlivens the idea of a human creature, on account of his usual conjunction with the present impression. But one, who is tormented he knows not why, with the apprehension of spectres in the dark, may, perhaps, be said to reason, and to reason naturally too: But then it must be in the same sense, that a malady is said to be natural; as arising from natural causes, tho' it be contrary to health, the most agreeable and most natural situation of man. (T 1.4.4.1; SBN 225-226)

This line of interpretation requires that we take certain irrationalistic-looking passages of Hume's texts *cum grano salis*.²⁵ Hume's more matured position seems to be not that instinct, habit and sentiments are the ultimate arbiters in matters of fact, but that reason retains some of its normative role, endorsing naturally generated beliefs *only to the extent in which*

²⁵ For instance: “'Tis not, therefore, reason, which is the guide of life, but custom” (T Abs. 16; SBN 652). See also T 1.3.7.5 footnote, 1.3.16.9 and 1.4.1.7-8; SBN 96-97, 178-179 and 183-184, and EHU 5.8 and 12.25; SBN 46-47 and 162.

*they rest on stable and universal principles.*²⁶ Such beliefs are not thereby established as true, but are exhibited as the best we can get, being sufficient for all practical and scientific purposes. Hume's epistemological theory seems, therefore, capable of accommodating a moderate form of normativity.²⁷

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²⁶ There are, in the literature, a number of different accounts of normativity in Hume's naturalistic treatment of belief. Three recent examples are found in Morris 2006, Loeb 2002 and Falkenstein 1997. These accounts do not acknowledge any role for reason in sorting out spurious from legitimate beliefs, proposing, respectively, that normativity is grounded in: general rules; stability of the belief-forming mechanisms; and general rules *cum* sceptical crisis. There is no room here to examine these proposals; in my view, they have contributed to advance the discussion in important directions, but suffer nonetheless from several shortcomings, most of which could perhaps be mended by a circumspect appeal to reason, as a higher-level cognitive faculty.

²⁷ I would like to thank David Owen, Tito Magri, Paulo Abrantes, José Carlos Pinto de Oliveira, Tristan Torriani and Livia Guimarães for their helpful comments on earlier versions of this article.

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