

HUME'S PRINCIPLE

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ABSTRACT

Hume's project aimed at the discovery of the principles of human nature, and among these the most important in most respects is not association of ideas, but the one he calls "custom or habit." But what is the real nature of Hume's principle? It would be philosophically naive to decide that Hume's concept of habit simply reproduces the dominant conception. In the latter the main element is time, and the possibility of habit depending only on repetition is absent in the tradition, from Aristotle to Berkeley. When Hume proposes to explain causal inference by habit, he uses this word as tantamount to the old principle of induction by simple enumeration, which may depend only on repetition, the element of time being reduced to the strict minimum necessary for the repetition to occur. Hume's principle of causal knowledge is really a new principle, not the old "psychological" tendency called custom or habit, and his attempt tacitly was to change the very essence of the concept involved.

Hume explained causal reasoning by a principle of human nature which he carefully distinguished from the classical principle called "reason." To the latter he reserved a restricted role, as a principle governing only one kind of reasoning, the deductive or "demonstrative" kind and no other. His main argument against explanation of causal inference by reason was that this type of inference depended on repetition, and that the faculty known by the name of "reason" suffered from what we may call an "insen-

sitiveness to repetition," that it, an indifference to repeated experiments. In total contrast with this, the principle favoured by our philosopher, for which he proposed the names of "custom or habit," was conceived as a human disposition characterized by its sensitiveness to repetition, and was thus to be considered as a suitable principle of explanation for reasonings derived from repeated experiences.¹

All relevant names employed by our philosopher are common words in ordinary usage, in obedience to the norm he always follows, of avoiding, as much as possible, all recourse to philosophical "jargon."² He used the term "reason" as he found it in common usage, and when he proposed to replace reason by habit, as the true principle of causal inference, he gave no indication that he was using that second term, "habit," in any other way. But should it be satisfactory for us to uncritically accept these names, "reason" on the one hand, and "habit" or "custom" on the other, for their face value? I believe there is something else to be considered, and that, to identify it, we must pay attention to the *concepts* behind those names.

What was Hume's concept of reason? It could only be that of his contemporaries, the concept of the human capacity of reasoning which today, at least in the continental tradition, still is usually called "classical" reason. Many are those, of course, who contrast that kind of reason with "historical" reason, but on another level of reflection. Maybe it would not be too controversial to posit that classical reason was mainly the power of *deductive* reasoning, that is, the kind of reason to which Hume attributed all knowledge of "relations of ideas," in the first text mentioned above. I think that our philosopher, if he indeed has restricted reason to the limits of a deductive capacity, did not entirely redefine that faculty, or try to produce a new concept of reason. He only dethroned classical reason, rob-

bing it of its sovereign position in philosophy, which was not a minor feat—but he never suggested any deep change in the concept of that deductive power itself

So that a first Humean thesis was that classical reason, as deductive reason, was only capable of deduction—the redundancy being only apparent, because even those who criticised enumerative induction did never for a moment, I am sure, doubt that this kind of inference was derived from human reason. Only with Hume did it become clear that classical reason was nothing but a deductive capacity, not something else as well. The Humean humbling of classical reason was not a step towards irrationalism, it was simply the identification of the limits of that faculty and of its proper place in the general scheme of human cognition. Hume's critical philosophy was mainly critical of the too large role reserved to reason by the philosophical tradition, but here it is important to insist that his concept of that faculty was no different from that of his main contemporaries and predecessors.

Let us now compare this with the case of "custom or habit." These terms were occasionally employed by other philosophers, in some of the usual senses they had in ordinary language. For Locke, the "idea" of habit is that of "power or ability in man of doing any thing, when it has been acquired by frequent (*sic*) doing the same thing"³ Contrast this with Hume's concept of custom or habit as consisting in, more than simply a capacity, an actual *propensity* to do something that has already been repeatedly done "wherever the repetition of any particular act or operation produces a propensity to renew the same act or operation () we always say, that this propensity is the effect of custom"⁴

Locke and Hume have each looked at one aspect of the same disposition—there is here no important difference be-

tween “custom” and “habit”—the first philosopher emphasising the capacity or ability and the second the propensity or tendency (or “instinct,” EHU, V, 11, 55), but this is not the most significant difference between them. In the first case the accent is on *frequency*, in the second it is on *repetition*. But is it not the same? Well, yes and no, depending on the context and the perspective—and it so happens that in the present case there is a *philosophical* difference that is of some consequence, in the fact that Hume’s concept of his principle includes, and *par excellence*, those cases where *only* repetition is relevant, and not repetition *in time*, as is patently the case in Locke’s text and, I submit, in all uses of the terms “custom or habit” before Hume.

Consider his main examples of the operation of his principle of custom or habit: the shock of two billiard balls, a stone raised in the air and then falling, the succession of flame and heat, or of snow and cold,⁵ and other “constant conjunctions.” In all these cases, only repetition is necessary for the operation of Hume’s principle. I do not mean that our philosopher was or should have been aware of this, only that the concept he had of his own principle was that of a “sensitivity” of human nature to observation of repeated conjunctions, *not* a sensitivity to experience in time *as such*. Of course, no experience is possible except in time, any length of time. But in some cases the passage of time is the *relevant* element, in other cases the only relevant element is repetition. And in Hume only the second counts, in giving meaning to his celebrated principle.

What is our philosopher really talking about here? He is talking about a *disposition* we all have, the *disposition* to derive, from repeated concomitance of two objects in our experience, the prediction of the same conjunction in future experiences of them. If I throw a dice fifty times in a row and in all those cases the result is an even number, I un-

hesitatingly conclude that the same object shall always behave in the same way, and I shall expect the next throw, perhaps all future throws of the same dice, to give me an even number. Now, is this an effect of habit? David Hume would simply have to answer that it really is. But many people, perhaps including Locke, would give a negative answer, *independently* of their acceptance or non acceptance of Hume's theory of causal inference by repetition.

It would be, and of course still is, possible and legitimate to accept Hume's theory that causal inference and belief derive from experience of repeated conjunctions, as well as Hume's denial that this could ever be derived from reason (if we conceive of this faculty as a deductive capacity, and this capacity as insensitive to repetition) and at the same time reject Hume's derivation of causal inference and belief from custom or habit. Let us see in what terms Hume argues against the explanation of our inferences from repetition by reason. "Reason is incapable of any such variation. The conclusions which it draws from considering one circle are the same which it would form upon surveying all the circles in the universe" (p. 43). This "incapacity of variation" or, as I have been suggesting, "insensitiveness" of reason to repetition, is the final Humean argument for elimination of deductive reason as a true principle of causal inference. The concept of reason he worked with—the living concept of reason in his own time—was not adequate to account for any process in which repetition was an essential feature.

Now, in Hume's concept of his own principle of causal inference we may find a comparable "insensitiveness"—a complete indifference to the action of time in the process he pretends to investigate with the help of that principle. In causal experience as he presents it, regardless of whether he was or was not aware of this, repetition is the only relevant

factor in our example of the dice, but also in his examples of impulse and motion or of throwing and falling, or flame followed by heat or snow followed by cold, only repetition counts, not the passage of time. The decisive element is the number of repetitions—no one knows how much, but everyone knows there is a limit—not the duration of each experiment. A dice showing even numbers fifty times in fifty seconds, or fire followed by heat fifty times in fifty minutes, are sufficient experiences for causal inference, as much as fifty times in fifty hours or, *per absurdum*, learning something in fifty years, with observation of the same conjunction of phenomena once a year! But more absurd, I believe, would be to insist that Hume's principle of induction has *intrinsically* anything to do with time going by—more than in the obvious necessity of time for any kind of repeated experience.

Is this what we understand by custom or habit? Well, it certainly is not what I understand by those terms. My concept of habit is, I believe, the common concept—the concept of a disposition to acquire capacities or tendencies by the action of time on our bodies, or on our minds, or on both. I also believe that this was the common concept in Hume's time, and also that during that time, or before, the concept of custom or habit never involved processes exclusively derived from repetition, without the influence of time. Habit was and is sensitiveness to the influence of time—even without repetition. If I spend several days somewhere under constant heat, or constant cold, with no interruptions and thence no real repetition, I become *used* or *accustomed* to heat or cold at least as much as if I experience those temperatures at intervals, that is, if I repeatedly experience them. In our ordinary concept of the influence of custom, repetition is expendable, whereas time is the really indis-

pensable feature that allows us to talk about the action of habit

The prevailing concept of habit, in Hume's time or at present, commonly comprehends both an element of time and an element of repetition. In his theory of language learning, Berkeley already noted that "there must be *time* and experience by *repeated acts*, to acquire a habit of knowing the connexion between the signs and things signified"⁶ In Berkeley's *Treatise*, the important element seems to be time "(it is) difficult () to dissolve a union so early begun, and confirmed by so long a habit as that betwixt words and ideas"⁷ But Berkeley obviously never entertained any notion of a kind of habit who might possibly depend solely on repetition, regardless of the amount of time elapsed in the process.

What did Hume really do, concerning the concept of habit, when he presented his theory about the origin of causal inference and belief? I believe we may safely suggest that he *expanded*, or tried to expand, the concept of custom or habit. He proposed to his readers that something must be accepted as a legitimate example of the influence of habit merely because it derives from repetition, as he so clearly states in p. 43 of the *Enquiry* (note 5 above). This amounts to tacitly proposing an expanded concept of habit, as the disposition to be influenced by time, or repetition, or both. The second of these three possibilities being, of course, entirely new in that concept.

To my knowledge, the concept of habit has never changed since Hume's time. Repetition still is for everyone a plausible factor in an habitual process only when time is also involved—that someone might really become accustomed to anything in fifty seconds is simply preposterous. I suppose it is possible to become *addicted* to a drug in a few seconds, but even if that is really possible no one will say

that someone became accustomed to the drug, or that the addiction really was an effect of habit, people will say it was something else in some cases, simply drug dependence, never habit properly so called, and custom, perhaps, even less

This may even be a negative factor among Hume's readers, as an obstacle to acceptance of the reasonableness of his theory of induction. Perhaps some people "feel" that what happens to them when they learn something, even when they learn it from repeated experience, does not depend on the amount of time spent in the process, it thus becoming implausible that it really depends on habit. I know that there were special people, like Bertrand Russell, who adopted some version of that theory. In his *Outline of Philosophy* there is a chapter on "Inference as a Habit"⁸. But what Russell meant by "habit" here had to do with bodily reactions and conditioned reflexes, Hume being mentioned only as the author of sceptical arguments about induction, with no direct reference to his concept of custom or habit (pp. 83-4). Nowhere have I found trace of anyone showing an equivocal belief that habit is to be conceived independently of the time factor.

Another important feature of Hume's principle of causal inference is that its effects on the human mind are *unavoidable*, and this could never have been dreamed in any case of "traditional" habit. The *Enquiry* is quite unequivocal about it: this "instinct or mechanical tendency" is "infallible in its operations." Causal belief is a "necessary result" of observation of constant conjunctions, "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" (EHU V, 11, p. 55). We are far from the realm of true custom or habit, where, as we know, the most we have are *inclinations* to certain courses of action or

thought, but never to the point of anyone being completely unable to avoid them. So that there is something else, besides independence from time, that Hume's theory would implicitly be trying to add to the common concept of habit: the possibility, in some cases, of *forceful* and really unavoidable consequences of that principle.

The concept of habit we would have, were it not for Hume's suggestions—or that we really have, if we ignore those suggestions—corresponds in part to Hume's own characterisation of a quite different mechanism, the celebrated association of ideas, as “a gentle force, which commonly prevails” (THN I, 1, 4, p. 10). According to Hume, association of ideas is another very important principle of human nature, but this “principle of connexion” only causes our ideas to “introduce each other with a *certain degree* of method and regularity” (EHU III, p. 23, emphasis mine). Nothing here is really unavoidable. The *Treatise* is entirely explicit about it: this principle “is not to be considered as an inseparable connexion” (*ibid.*). This strongly contrasts with Hume's “infallible” principle of induction—and not, curiously enough, with habit as it was and is generally considered by other people, philosophers or not. In folk wisdom we have a clear idea of the “force of habit,” and even, at least since Aristotle, of habit as “a second nature,” but nothing there can be compared with the force of Hume's principle in the formation of causal inferences and beliefs. Had he recognised the existence of the common concept of habit, as distinct from his own, he would probably have regarded its force as comparatively insignificant, just like he did in the case of association of ideas.

But the fact remains that he did not recognise that independent concept, and his *Enquiry* insists that “custom” and “habit” are the proper names of the principle of inference that takes the traditional place of reason in his philosophy.

Now, why did he choose to do this? Why didn't he simply defend his novel idea of a sensitivity to observation of repeated experiences, abstaining from any attempt to include it in the framework of a well known principle of human nature? Well, we have seen his attacks on "abstruse philosophy and metaphysical jargon,"⁹ and a plausible explanation of our philosopher's choice might be that to introduce his new principle—if I am right in thus considering it—would force him to give it a new name, and any choice could make him appear, maybe specially to his own eyes, as "guilty of jargon"—to say the least

The least, for it could be even worst. We find in the *Treatise* two very ironical pages about ancient philosophers. Those pages should be read in their entirety, but here I restrict myself to the passages where he ridicules those philosophers who find a "consolation amid all their disappointments and afflictions" in recourse to "faculties and occult qualities." "They need only say, that any phenomenon, which puzzles them, arises from a faculty or an occult quality, and there is an end of all dispute and enquiry upon the matter."¹⁰ Could Hume ever become a suspect in this game? Why not? Newton's *hypotheses non fingo* is a well known example of an attempt not to become such a suspect—and fortunately for us Newton did frame several brilliant hypotheses. So did Hume—but he had a safer way out of that kind of difficulty.

It was safer, I submit, to point at something that was already there, and to present arguments like the following, about the choice of the term "custom." "By employing that word, we pretend not to have given the ultimate reason of such a propensity. *We only point out a principle of human nature, which is universally acknowledged, and which is well known by its effects*" (EHU V, 1, p. 43, emphasis mine). No jargon, no danger. This is the oversimplification of a com-

plex question, and may be slightly unfair to Hume. Alternatives are welcome. Be that as it may, the "well known principle" was not Hume's principle, not yet there is only an *analogy* between both. Our philosopher may have thought that the true concept of custom or habit was *really* the new expanded concept he proposed in the *Enquiry*, and that other people simply were not able to see that. My own choice is to insist in the radical novelty of a human disposition of sensitivity to repetition independently of time, which has a partial analogy with the "old" disposition but cannot be simply identified with it. There is more: the new disposition works only with *conjunctions*, other possibilities being obviously excluded from the cognitive field that is thus created in the human mind.

Hume did consider another possibility in the *Treatise*, although he suppressed it in the *Enquiry*. Education, he says, is largely dependent on "custom and repetition," this being an example of "other kinds of custom," or "other habits." This is the only example Hume there gives us of custom or habit influencing the mind in the absence of any conjunctions. It is the case when "a mere idea alone () should frequently make its appearance in the mind," and "must by degrees acquire a facility and force," thus distinguishing itself among other ideas.¹¹ In sum: those young people who in Hume's century were subject to the British teaching system had ideas imprinted in their minds by frequent repetition, operating upon them just like those ideas "which the senses, memory or reason present to us." This is another magnificently ironical page, where that kind of learning is even compared to liars who, "by the frequent repetition of their lies, come at last to remember them" (THN, I, III, 9, p. 117, cf. 5, p. 86), but it does present the example of a kind of habit other than Hume's principle of causal reasoning. Which fortunately is more on the side of

“traditional” habit, its force being far from the inevitability of Hume’s principle—otherwise, those poor British students would be forever imprisoned in the web of lies their schools, by insistent repetition, have built in their tender minds

The title itself of this section (“Of the Effects of other Relations, and other Habits”) reveals that Hume was aware of the plurality of “habits,” that is, of the variety of dimensions in that disposition. But this concept, unlike the concept of consciousness, is far from being a “cluster concept,” much less a “mongrel concept”¹² Hume was the one who proposed to introduce in it a new dimension. The “otherness” of his novel dimension is admitted, if only obliquely, in the section title above, in spite of his official thesis that it is part of a “well known principle.” It might, of course, be part of a vast concept of custom or habit, including the three elements seen above, and not only the two that are generally admitted (time and repetition in time, not only repetition). It all depends on the convention we adopt.

One might insist, against Hume, that the convention concerning the use of those terms does not include the possibility to acquire a habit in less than one minute. But more interesting than this, I think, is to distinguish between Hume’s decision to present his principle as one more aspect of custom, on the one hand, and on the other hand the precise concept of that principle that is at work in his philosophy. It may be legitimate to question, or even to regret, the first decision and at the same time to applaud the discovery of that precise concept and of the role it plays in Hume’s epistemology.

If the proposed distinction, and yes, *separation* of the concept from its framework, is accepted, one may set aside the framework and its problems and concentrate on the discussion of the nature of Hume’s principle. What we have

now is simply the concept of a disposition, shared by humans and animals (THN I, 111, 16, EHU IX), to develop expectations of future conjunctions, by a process that is triggered by experience of similar conjunction of objects or events

Hume's principle is an instinctual disposition, with a very strong hold on our minds, and it is one of our main instruments of survival. Says Hume in one of his most speculative moments: "Here is, then, a kind of pre-established harmony between the course of nature and the succession of our ideas, and though the powers and forces, by which the former is governed, be wholly unknown to us, yet our thoughts and conceptions have still, we find, gone on in the same train with the other works of nature" (EHU V, 11, pp. 54-5). Which means that our predictions tend to come out right, in spite of their unconscious origins in the dark recesses of human nature, at a great distance from the Cartesian transparency of deductive reason.

From this perspective, we may begin to suspect that, after all, Hume's principle corresponds to nothing but the concept of the human disposition to make *enumerative inductions*, on the one side extended to animals as well, on the other side dissociated from reason, and with several other interesting new aspects—but being at bottom nothing but the disposition we have to derive enumerative inductions from repeated experiences.¹³ Of course, there is the famous "Hume's problem," celebrated from Kant to Quine and Popper, with the consequent dissociation of that "inductive disposition" from the territories of logic. If we in turn dissociate it from the territories of custom, at least by a methodological decision, Hume's principle is going to stand in isolation, as an independent "power" of human nature, the "power of enumerative causal induction."

Contrary to Bacon and Berkeley before him, and practically all philosophers after his time, Hume never employed the term "induction" in the "classical" sense of an "inference from particulars" (cf Berkeley, "induction of particulars" in his *Treatise*, Part I, Section 50, p 62) The term appears twice in Hume's *Treatise*, and once in the second *Enquiry*, only in the general sense of "argument" or "reasoning" (THN I, II, 1, p 26, Appendix, p 628, EPM I, p 170) Adam Smith, one of Hume's closest friends, returned to the old use of the term, at the same time that he assigned induction to reason—thus completely discarding his friend's most notorious theory "The general maxims of morality are formed, like all other general maxims, from experience and induction We observe in a great variety of particular cases what pleases or displeases our moral faculties, what these approve or disapprove of, and, by induction from this experience, we establish those general rules But induction is always regarded as one of the operations of reason"¹⁴

I for one feel perfectly comfortable with the isolation of Hume's principle, but the philosopher himself might have felt uneasy about it Hume again ridicules occult qualities, in similar terms to those we have seen in the *Treatise*, when Philo, his hero in the *Dialogues*, says to his adversary "It was usual with the Peripatetics, you know, Cleanthes, when the cause of any phenomenon was demanded, to have recourse to their faculties or *occult qualities*, and to say, for instance, that bread nourished by its nutritive faculty, and senna purged by its purgative"¹⁵ This being only "the disguise of ignorance," Hume himself would naturally fear any possible suspicion that he was guilty of such primarism Explanation by a nutritive faculty, or a purgative faculty, is no worse than would be the case of explanation of enumerative induction by an inductive faculty

Nowadays, the notion of a brain mechanism specialised in conversion of the input resulting from observation of repeated conjunctions into an output consisting in predictions of future, similar conjunctions, is probably as natural a posit as many others, with no special epistemological difficulties. Of course, such a posit cannot amount to a satisfactory explanation of why we make predictions based on such flimsy evidence, but at least in principle we may feel that the explanation should be sought in that direction—not in logic (deductive reason) or in folk psychology (custom or habit).

There is in Hume no destructive criticism of enumerative induction, neither does our philosopher rest contented with it, as a source of inductive information about the natural world, as well as man's behaviour, private or social. Causal inference may also dispense with repeated experience as its starting point and simply begin with "single experiments," when circumstances are favourable. I have discussed this subject elsewhere,¹⁶ but the reality of that kind of "secondary induction" is entirely explicit in Hume's works. In these, inferences from single experiments become possible "after removal of all foreign and superfluous circumstances."¹⁷

One viable interpretation of this and other rather cryptic Humean expressions could be the following. At least one of the epistemic situations where inductions from single experiments become viable involves conjunctions of pairs of events "in" a class of objects. For example if, in the class of metals, changes of temperature (first event) are *regularly* followed by changes of state (second event), this regularity itself may be learned by "induction"—a slightly more "abstract" kind of induction, perhaps—and serve as a starting point for new predictions. When a new member of that class (say, quicksilver) is submitted to a change of tempera-

ture and this change is followed by a change of state (e.g., quicksilver freezing at minus 60 Celsius), one experiment of this conjunction of events is enough to allow for an inductive conclusion. Hume never gave any clear example of this kind of inference.¹⁸ Thomas Reid was the first to present such an example—precisely the example of freezing quicksilver.

That inductions from single instances, and not only simple inductions by enumeration, also derive from Hume's principle, is perhaps the most original aspect of his philosophy of knowledge. After all, everybody already knew, long before Hume, that induction by simple enumeration derives from repetition of conjunctions—but nobody knew that all causal beliefs directly originated in observation of only one conjunction of phenomena also derive, in the last analysis, from repeated experience. It was common knowledge that *some* inferences arise from repetition, and the real news brought by Hume to mankind was that, at bottom, *all* causal inferences derive from it. And if we minimize the importance of the analogy between Hume's principle of repetition and custom or habit properly so called, as is suggested in this paper, that aspect may appear as the only really original mark of that principle. As we shall presently see, this may contribute to enhance its importance in the framework of a general theory of rationality.

I hope that an account of this kind of inference, in terms of "abstract" inductions about regularities, instead of concrete events, may explain how Humean, or Reidian, inferences on single experiments become possible. But on any account it seems to me that Hume's announcement of the possibility of this type of inference allows for a new argument for the advantages of an isolated treatment of his own Principle. For this aspect of causal inference clearly has nothing to do with custom or habit of any kind, among

those kinds, or "other habits," that were comprised in the concept of habit before Hume, as well as in present days. It may look sensible to say that someone is "accustomed" to, say, snow feeling cold—but saying that someone is "accustomed" to the regularity with which metals change state when subject to changes of temperature should be, I think, immediately recognised as preposterous. The operation is too obviously "intellectual" to allow for such "psychologising." Of course, in the case of "concrete" inductions the linguistic use above only *looks* sensible, in my view, it would also be a serious distortion of the problem of induction and of Hume's epistemology.

Hume's principle is a special principle, and a key to any understanding of Hume's epistemology as a philosophy of *rationality*. The latter word was not in use in the time of our philosopher—although, of course, "reasonableness" was, as well as the adjective "rational"—so that rationality was not discussed under this name. But Hume never said or even suggested that causal inference, as he always called what others preferred to call "induction," was not rational, or was unreasonable in any sense. He only *demonstrated*, in the strongest sense of this term, that it would be illogical to derive this kind of inference from classical or deductive reason. And there even is at least one passage strongly suggestive that Hume never even dreamed that any authentic causal inference could be anything but *reasonable*. When he argues in the *Enquiry* that someone with no previous experience could never infer a causal relation from a single experiment (for once, not under this name), he adds the following: "Nor is it *reasonable* to conclude, merely because one event, in one instance, precedes another, that therefore the one is the cause, the other the effect" () There may be no *reason* to infer the existence of one from the appearance of the other" (EHU V, 1, p. 42, both emphases mine). The

inescapable conclusion about Hume's meaning and intention here seems to me to be that, when one event repeatedly precedes another, this is a *good reason* to conclude that it is its cause, if nothing can be argued against that, and that in this case it is the only *reasonable* conclusion we can draw

But in what sense may observed repeated conjunctions be good reasons? This is a case where "good" cannot qualify reasons as a synonym of "valid," in any logical or deductive sense. What other senses are there? These other senses could hardly be "psychological," because then they would not be properly good reasons. The Popperian interpretation of Hume consists precisely in concluding that, if custom or habit is the cause of our inferences, then Hume's problem is just a "psychological" problem, and there is no true solution because the answer cannot give us any kind of reasons. But a repeated conjunction of two phenomena may be considered a good reason to reject the *hypothesis* that their concomitance, in the observed cases and in general, is entirely due to *chance*.

Neither Hume nor any of his contemporaries had a real theory concerning hypotheses or conjectures,¹⁹ and on the other hand Hume has the official position that "what the vulgar call chance is nothing but a secret and concealed cause" (THN I, iii, 12, p. 130, cf. EHU VI, p. 56). There hardly was in his philosophy any place for theories about hypotheses and chance, or about chance hypotheses. But it should never be forgotten that his principle was, eminently enough, a principle of survival, and that if mankind has survived it has been because, like other species, we have a mental capacity to distinguish between those conjunctions of phenomena that are casual and irrelevant and those that are *causal*, some of them being of vital importance. Hume never followed this kind of path, but this would have been

a possible way of arguing that a repeated conjunction is a good reason, as a good reason to reject or eliminate the hypothesis that the conjunction in question is merely due to chance. And he does say that it is not reasonable to jump into conclusions from any solitary conjunction because it "may be arbitrary and casual" (EHU V, 1, p. 42). Which means that the conjunction might be a chance event, and implies that repetition reveals that it probably is not.

We are at all moments experiencing conjunctions of phenomena of all kinds, and most of them are chance conjunctions: it simply "happens" that a dog barks in the distance while I enter a door, or that I hear a thunder at the same time as I close that door, to speak only of conjunctions between actions and sounds. But there are millions of others, all the time, almost all of them completely unconnected between them, and only a few represent causal connections of some kind. Hume's theory is that we can only discover these through observation of repeated conjunctions between those connected phenomena, that we only learn that they are connected through their frequent or constant conjunctions, and his great principle is a sensitivity to those conjunctions. He would perhaps have agreed that, if all conjunctions produced expectations in us, we would be submerged in a chaotic mental world, and that if none did we would be killed by the first lethal conjunction in our path. Hume's principle, distinguishing some of them but only those that sufficiently repeat themselves, is situated in a convenient middle ground, as an instrument of survival.

Hume's principle is, I think, a clear principle of rationality. Besides "deductive" rationality, exemplified in his own time by the mathematical sciences, but in which he would not hesitate to include contemporary formal logic, a form of

rationality he found in the domain of pure “relations of ideas”—besides this, there was a different form of rationality, to be found in the discovery of regularities in the natural world. When in the *Enquiry* he proposes to discover “the nature of that evidence which assures us of any real existence and matter of fact,” beyond the senses and memory (EHU IV, 1, p. 26), he is making the announcement of his search for a new source of rationality, to replace the old source others imagined they owned by being in possession of classical reason. This was a demonstrably impossible dream. I am not sure that the Humean dream is demonstrably possible—but that it might be is, I believe, what contemporary epistemology has been trying to establish.

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Notes

¹An *Enquiry concerning Human Understanding* (EHU), in *Enquiries*, L. A. Selby Bigge, ed., P. H. Nidditch, rev., Clarendon Press, Oxford, 1975, IV, 1, pp. 25–6, V, 1, p. 43.

²EHU I, p. 12, II, p. 21.

³John Locke, *An Essay concerning Human Understanding*, A. C. Fraser, ed., Dover Publications, New York, 1959, II, xxii, 10, vol. I, p. 387.

⁴EHU V, 1, p. 43.

⁵EHU IV, 1, pp. 28, 29, V, 1, pp. 43, 46.

⁶*Alciphron or the Minute Philosopher*, in *The Works of George Berkeley*, A. A. Luce and T. E. Jessop, eds., Dialogue 4, Section 11, Nelson, Klaus Reprint, Nendeln, vol. III, p. 155.

⁷*A Treatise on the Principles of the Human Mind*, Introduction, Section 23, Luce and Jessop (see note above), vol. II, p. 39.

⁸An *Outline of Philosophy*, George Allen & Unwin, London, 1927, pp 82 ff

⁹EHU I, p 12, see note 2 above

¹⁰A *Treatise of Human Nature* (THN), L A Selby Bigge, ed, Clarendon Press, Oxford, 1958, I, iv, 3, pp 223–5 A similar text is to be found in Hume's *Dialogues*, as will be seen below

¹¹THN I, iii, 9, pp 117, 115, 106, 114

¹²Cf Ned Block, "On a Confusion about a Function of Consciousness," in *The Nature of Consciousness*, Block, Flanagan & Guzeldere, eds, MIT Press, Cambridge, Ma and London, 1997, p 375

¹³Fred Wilson sees in Hume a refusal of enumerative induction, a view I criticise in my "Hume's Empiricism and the Rationality of Induction," in *Modern Philosophy*, Vol VII, *Proceedings of the Twentieth World Congress of Philosophy*, Philosophy Documentation Center, Boston, forthcoming

¹⁴Adam Smith, *The Theory of Moral Sentiments*, VII iii 2 5, Liberty Classics, Indianapolis, 1982, p 319

¹⁵*Dialogues concerning Natural Religion*, Norman Kemp Smith, ed, Bobbs Merrill, Indianapolis and New York, IV, p 162

¹⁶See my "Hume on Singular Experiences," transl Michael Wrigley, *Manuscripta*, vol XX, n 2, October 1997

¹⁷THN I, iii, 8, p 104, 12, p 131, EHU IX, p 107

¹⁸Nevertheless, Russell presents, in the aforementioned chapter on habit, the "induction" a child makes when touching a knob that gives him an electric shock and then avoids touching the knob as an example of "an induction based on a single instance" (pp 83–4)

¹⁹See my "Hume's Conception of Science," *Journal of the History of Philosophy*, vol XIX, n 3, 1981