

HUME'S "GENERAL RULES"

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At several key points throughout his *Treatise*, Hume refers to certain "general rules" which, he claims, we are "mightily addicted to", and which frequently make us "carry our maxims beyond those reasons, which first induc'd us to establish them" (T 3.2.9.3).¹ As Michael Gill (2006, 221) observes, Hume typically italicizes the term 'general rules', thus seemingly referring to "a specific, well-defined piece of his technical apparatus".² Unfortunately, Hume never explains what he means by the term. Nevertheless, he clearly thinks that *general rules* influence many of our beliefs, passions, and moral judgments.³ It is therefore important to understand exactly how Hume understands them. This is my aim in this paper.⁴

Thomas Hearn (1970) argues that, by "general rules", Hume means our propensity to *overgeneralize*, from cases where we have seen objects or events of type C being followed by objects or events of type E, to cases where we see something that *partially* resembles a token of C, so that we expect a token of E.⁵ I think Louis Loeb (2005, 105–11) is closer to the truth in his understanding of *general rules* as generalizations that *result* from this propensity. I also agree with Donald Ainslie (2015, 32)

1. References to the *Treatise* are to the Norton and Norton edition (Oxford: Oxford University Press, 2002), cited in the text as "T" followed by Book, part, section, and paragraph numbers. References to the first *Enquiry* are to the Beauchamp edition (Oxford: Oxford University Press, 1999), cited in the text as "E" followed by section and paragraph number. All emphasis in quotations is original.
2. Confusingly, Hume sometimes uses the unitalicized term 'general rules' to refer to things other than *general rules*, such as "explicit laws or conventions" (Gill 2006, 318).
3. E.g., T 1.3.10.10–12; T 1.3.12.24; T 1.3.13.7; T 1.3.13.12; T 2.1.6.8; T 2.2.5.12; T 2.2.7.5; T 2.2.8.5; T 3.2.2.24; T 3.2.6.9; T 3.3.1.20.
4. I will focus on Hume's *Treatise*, as the only work where he explicitly discusses *general rules*.
5. See also, e.g., Gill 2006, 221–2.

that they are "unreflective causal judgements".⁶

In what follows, I will argue that Hume endorses an early form of what we now call a "dual-process theory of cognition": a theory by which cognitive processes can be broadly distinguished into a fast, automatic, non-conscious kind and a slower, more controlled, consciously available kind (Frankish 2010). On this interpretation, Hume's *general rules* are causal beliefs: they are lively ideas produced by customary association with one's impressions or memories. However, they are unlike any beliefs that are produced via slow, consciously controlled processes of reasoning. My primary aim is to argue for the novel thesis that Hume understands *general rules* as a set of automatically produced causal beliefs that are produced *so* quickly that they occur independently of our other beliefs.

I will argue that *general rules* can only be verbally expressed via generic sentences, like "fires cause heat". I believe it is for this reason that Hume calls them "*general rules*". Furthermore, I will argue that Hume believed – somewhat as Sarah-Jane Leslie (2008; 2017) does today – that we are often psychologically disposed to form such generic generalizations instead of quantified generalizations, and that this can cause us to be prejudiced against members of certain social groups.

1. Hume's account of *general rules*

According to Hume, all mental items, or "perceptions", are either impressions or ideas (T 1.1.1.1). All thoughts, beliefs, and memories are ideas, and all other perceptions are impressions. Impressions therefore include our sensory impressions, but also our pains, pleasures, feelings, and emotions. Hume claims that impressions fundamentally differ

from ideas only in that they "strike... the mind" with more "force and liveliness" (T 1.1.1.1).⁷ He also argues that (almost) all simple ideas are copies of simple impressions, or of other simple ideas (T 1.1.1.7; T 1.1.1.11).⁸ Simple perceptions, as opposed to complex perceptions, are ones that "admit of no distinction nor separation" (T 1.1.1.2).

Hume distinguishes two kinds of reasoning. What he calls "demonstration" is the kind of reasoning that concerns "the abstract relations of our ideas", notably mathematical reasoning (T 2.3.3.2). He is generally much more interested in "reasonings from causation, and concerning matters of fact" (T 1.3.7.3). He believes that *all* beliefs about "matters of fact" are the products of causal reasoning (T 1.4.2.21; E 4.4).

According to Hume, our most fundamental processes of causal reasoning are unreflective or, to use David Fate Norton's (1982, 209) term, "reflexive". They are automatic, *associative* processes, which can occur only after we have repeatedly experienced one type of object following another, such that we habitually associate our ideas of the two. From that point on, any "appearance or idea of the one immediately carries us to the idea of the other" (T 1.3.8.10).

To illustrate: if we see a flame, then we will immediately believe that it is causing heat. In Hume's view, this is fundamentally due to our having repeatedly experienced visual impressions of "that species of object we call *flame*" being followed by impressions of "that species of sensation we call *heat*" (T 1.3.6.2). Given this, Hume believes, whenever we *imagine* a flame, then the associated idea of heat will immediately come to mind, via custom. If we *see* a flame, then we will similarly imagine an idea of heat. In this case, however, some of the liveliness from our visual impressions will also be transmitted to that idea, such

6. There are of course further interpretations. According to Martin (1993, 250), Hume understands all *general rules* as "higher-order" principles, such as the "general principle, 'like causes, like effects'", which we often apply to our first-order causal inferences (see also, e.g., Owen 2002, 212). Lyons (2001, 254) understands them as "belief-like states with the content of statistical or universal generalizations". Hickerson (2013, 1147) broadly agrees with Lyons, but stresses that *general rules* are "instinctually" rather than reflectively employed.

7. Hume uses several terms, including 'vivacity' and 'liveliness', for what he here calls "force and liveliness". Hume appears to use these terms interchangeably, and I will do likewise.

8. One perception is a copy of another if it is *caused* by that perception and if it precisely *resembles* that perception (T 1.1.1.7).

that the idea itself will become enlivened (T 1.3.8.2).⁹ We will thus believe in the heat coming from the flame, because a (causal) belief just is, according to Hume, a "lively idea related to a present impression" or memory (T 1.3.8.1).¹⁰ A paradigmatic Humean causal belief is thus simply an idea of an object, but one which *feels* such that we believe that the object exists, will exist, or has existed.

Hume's most detailed example of simple, unreflective causal reasoning appears in the following passage:

A person, who stops short in his journey upon meeting a river in his way, foresees the consequences of his proceeding forward; and his knowledge of these consequences is convey'd to him by past experience, which informs him of such certain conjunctions of causes and effects. But can we think, that on this occasion he reflects on any past experience, and calls to remembrance instances, that he has seen or heard of, in order to discover the effects of water on animal bodies? No surely; this is not the method, in which he proceeds in his reasoning. The idea of sinking is so closely connected with that of water, and the idea of suffocating with that of sinking, that the mind makes the transition without the assistance of the memory. The custom operates before we have time for reflection. The objects seem so inseparable, that we interpose not a moment's delay in passing from the one to the other. (T 1.3.8.13)

In this passage, as David Owen (2002, 169) argues, Hume's main claim is that we often "form beliefs, based on past experience, without any conscious act of reasoning". By saying that such beliefs occur before

we have time for "reflection", Hume appears to mean that they occur before we have time to pay any careful, conscious attention to any of the perceptions involved in their production.¹¹ I will, therefore, henceforth call any psychological process "reflective" if it involves reflection of this kind, and "unreflective" if it occurs too quickly to allow for such reflection.

Hume appears to believe that *most* processes of causal reasoning are unreflective. At least, he argues that "*when any impression becomes present to us, it not only transports the mind to such ideas as are related to it, but likewise communicates to them a share of its force and vivacity*" (T 1.3.8.2). Therefore, as Helen Beebee (2006, 62) argues, Humean causal beliefs must include "the kind of 'inference' that we make almost all the time: the constant forming of expectations based on current experience". Whenever we take a footstep, for example, we will habitually experience a lively idea of the ground supporting us. Given the sheer quantity of impressions that Hume thinks we experience every waking moment, he surely cannot believe that we reflect on the perceptions involved in every such process, or even that we are conscious of all the processes themselves. I therefore agree with Beebee (2006, 62) that Hume understands associative *processes* to be entirely non-conscious.

Paradigmatic causal reasoning is thus, for Hume, a fast, automatic, and seemingly non-conscious process. Furthermore, *general rules* are produced via just such processes. They are "judgments concerning cause and effect" that are "deriv'd from habit and experience", such that whenever we are "accustom'd to see one object united to another, our imagination passes from the first to the second, by a natural transition, which precedes reflection, and which cannot be prevented by it" (T

9. Hume also thinks that, because we are aware of the "determination of the mind" to form lively ideas of effects whenever causes are "presented to us", we will come to believe in a "necessary connexion" between cause and effect (T 1.3.14.29). However, as I do not think this idea plays any important role in Hume's account of *general rules*, I will largely ignore it in this paper. For discussion, see, e.g., Beebee (2006, 89), Millican (2009), and Stroud (1977, 85).
10. Hume often neglects to mention his thesis that beliefs can acquire liveliness from memories (Garrett 2015, 43).

11. Ainslie (2015, chapter 4) offers an interesting comparison between Locke's and Hume's uses of the term 'reflective'. As Ainslie argues, Hume does not consistently use it in the sense just discussed.

1.3.13.8).¹²

So, what, if anything, distinguishes *general rules* from other unreflective causal beliefs? Hume possibly thinks they are *implicit* beliefs. For example, he argues that because we prefer three guineas to two guineas, we will be led by *general rules* to believe that a thousand guineas are preferable to nine-hundred-and-ninety-nine guineas, simply because the two cases resemble one another (T 1.3.12.24). In this case, our *general rules* appear to play the role of a *heuristic*, along the lines of "the more money we contemplate, the greater our desire for it". Hume thinks that we *do* desire a thousand guineas more than we desire nine-hundred-and-ninety-nine guineas.¹³ However, he believes that we cannot observe "so small a difference" in our desires by introspection. Instead, he thinks, the mind habitually "transfers" its experiences with smaller amounts of money, in which the difference in our desires is easily discernible, to cases involving larger amounts. He does not appear to think that we will *recognize* that we are reasoning in this way. Perhaps, therefore, he would classify our *general rules* in this case as being among those "views and sentiments" that are "so implicit and obscure, that they often escape our strictest attention, and are not only unaccountable in their causes, but even unknown in their existence" (T 1.3.15.11).

More fundamentally, *general rules* appear to be causal beliefs that are psychologically independent of any reflectively produced beliefs. Hume suggests this during his discussion of various kinds of "unphilosophical probability": those judgments of probability that are *not* considered to be "reasonable foundations of belief and opinion" (T 1.3.13.1–7). The

12. An anonymous reviewer suggests that Hume uses the italicized term '*general rule*' to refer to at least one *reflectively* produced belief: the belief that any lively ideas produced via "feign'd resemblance and contiguity" with our impressions are "fictions" (T 1.3.9.6). I agree that the passage is unclear. However, Hume later claims that we "correct the appearances of the senses" by a similar process (T 1.3.10.12). This process is typically mistaken for "sensation", which implies that it is unreflective (T 1.3.9.11). I therefore suggest the former passage should be read similarly.

13. As Gill (2006, 223) observes, Hume thinks that *general rules* at least sometimes play useful roles in our thinking. This is a nice case in point.

relevant kind is the fourth, which consists of precisely those judgments of probability that are:

deriv'd from *general rules*, which we rashly form to ourselves, and which are the source of what we properly call PREJUDICE. An *Irishman* cannot have wit, and a *Frenchman* cannot have solidity; for which reason, tho' the conversation of the former in any instance be visibly very agreeable, and of the latter very judicious, we have entertain'd such a prejudice against them, that they must be dunces or fops in spite of sense and reason. (T 1.3.13.7)

If we encounter a witty Irishman, then "sense and reason" will suggest he is witty, but *general rules* will suggest otherwise. Similar examples occur throughout the *Treatise*. We feel esteem for a rich person because of the *general rule* that wealth causes happiness, even if we know that she is too bad-tempered to enjoy her money (T 2.1.6.8). We feel sympathetic embarrassment for foolish people because of the *general rule* that foolish behavior causes embarrassment, even when we believe that the foolish person in question is entirely unembarrassed (T 2.2.7.5). We approve of the benevolent desires of an imprisoned person who clearly cannot please anyone, because of the *general rule* that benevolence causes pleasure (T 3.3.1.19–20).¹⁴

To explain such cases, Hume discusses a man who is suspended "from a high tower in a cage of iron", and who experiences a lively idea of falling, although he "knows himself to be perfectly secure from falling" (T 1.3.13.10). Hume explains this as follows:

When an object appears, that resembles any cause in very considerable circumstances, the imagination naturally carries us to a lively conception of the usual effect, tho' the object be different in the most material and most efficacious circumstances from that cause. (T 1.3.13.12)

14. I have argued elsewhere that Hume thinks that *general rules* of this kind are involved in the production of *all* moral judgments (Chamberlain 2022).

Hume thus argues that *general rules* can lead us to engage in poor analogical reasoning, such that we infer effects from objects that closely, but immaterially, resemble those effects' typical causes. Yet this alone cannot explain much. As Hume makes explicit in his first *Enquiry*, he believes that *all* "reasonings concerning matter of fact are founded on a species of ANALOGY, which leads us to expect from any cause the same events, which we have observed to result from similar causes" (E 9.1). The problem for the man in the cage is that even once he *has* recognized the obvious disanalogy between his situation and those in which people fall, he still possesses a lively idea of falling. Why might this be?

Hume offers only a brief answer to this question. He argues that whenever the man in the cage thinks about falling, his "imagination runs away with its object, and excites a passion proportion'd to it" (T 1.3.13.10). This "passion" – of fear – then "returns back upon the imagination and enlivens the idea" (T 1.3.13.10). Lorne Falkenstein (1997, 39) interprets this to mean that the man's fear *directly* transmits "vivacity" to the idea. I think Hume means instead that the fear caused by the man's visual impressions of the ground below him will focus his attention on *just* these impressions, which will then *repeatedly* activate lively ideas of falling. In short, his feeling of fear will motivate him to keep looking at the ground, which will cause him to experience lively ideas of falling, which will increase his fear, and so on.

According to Hume, reflective reasoning involves distinguishing those features of our "circumstances" that are "essential" – that play a causal role – from those that are "superfluous" (T 1.3.13.9). For example, the circumstance of being high above the ground is superfluous whenever one is supported by strong iron bars. Nevertheless, Hume argues that whenever the:

superfluous circumstances are numerous, and remarkable, and frequently conjoin'd with the essential, they have such an influence on the imagination, that even in the absence of the latter they carry us on to the conception of the usual effect, and give to that conception a force and vivacity, which make it superior to the mere fictions of the fancy. (T 1.3.13.9)

Regardless of *any* reflective reasoning, then, *general rules* will occur whenever the "superfluous circumstances" possess three features that increase their "influence on the imagination". Unfortunately, Hume does not discuss these features in any detail. Nevertheless, he clearly believes that all three features are present in the circumstances in which the man in the cage finds himself, such that he can see the ground far below his feet. I suggest that we should understand these features as follows. First, the relevant "circumstances" are "numerous": the man's visual field includes many impressions of the ground far below him. Second, being high above the ground is a "remarkable" experience: it is one we *care* about, such that it will cause a passion of fear. And third, experience shows that the circumstances of being high above the ground are "frequently conjoin'd" with those of falling to the ground.

The first two of these features will dispose this man to keep looking at the ground far below him. The third will ensure that *every time he does this*, his impressions of the ground will produce a lively idea of falling "by a natural transition, which precedes reflection, and which cannot be prevented by it" (T 1.3.13.8).¹⁵ This "transition" occurs too quickly to interact with any reasoning processes that might be activated by "the contrary circumstances of support and solidity, which ought to give him a perfect security" (T 1.3.13.10). Therefore, these lively ideas will occur even "in opposition to the judgment" (T 1.3.13.9). In other words, the man in the cage will *keep* experiencing lively ideas of falling, regardless of any reflective beliefs that he might form concerning his situation.

So, it seems the name '*general rules*' is seriously misleading: they are not really *rules* at all (although I will continue to follow Hume in calling them "*general rules*"). I suggest that they are best understood as follows:

General Rules Those lively ideas that are repeatedly produced, via exceptionally fast, automatic processes of customary association, whenever we experience *numerous* lively perceptions of one kind of object that has been *frequently conjoined* with another kind of object that we *care* about.

15. Presumably, this process will cease if the man becomes accustomed to being high up.

They are thus ideas of the "usual" effects of objects, which come to mind even under circumstances in which such effects *cannot* occur. Hume thinks we can "correct this propensity by a reflection on the nature of those circumstances; but 'tis still certain, that custom takes the start, and gives a bias to the imagination" (T 1.3.13.9). However, if *general rules* are produced via automatic, unreflective processes, then they presumably cannot be directly altered or prevented by reflective reasoning.

In section 2, I will argue that Hume understands this kind of correction in the following way. He thinks that, although we cannot directly influence our *general rules* by reflective reasoning, we can correct for their effects by resisting our inclination to focus only on the perceptions that cause them, and by paying attention to the other features of our general situation. For example, the man in the cage can refrain from looking at the ground below him, and he can focus his attention instead on the bars that support him. This will increase the number of unreflective causal reasoning processes caused by his impressions of the iron bars, many of which will then strengthen his lively idea that he will *probably not fall*.

2. Correcting for general rules

Anyone suspended in a cage above the ground will keep experiencing lively ideas of falling. However, Hume argues that we are capable of "rejecting" these *general rules* (T 1.3.13.12). This requires the "influence of general rules" of a *second* kind (T 1.3.13.11). Unlike *general rules*, Hume understands these as genuine rules. I will return to them later, but their primary influence is to prompt us to "take a review of" the reasoning process, or "act of the mind", that produced our *general rules*, and so recognize that similar processes have previously been unreliable or "irregular" (T 1.3.13.12).

If the man in the cage is prompted to recognize the irregularity of his lively ideas of falling, then he will want to engage in reflective reasoning about his situation, to better "distinguish the accidental circumstances from the efficacious causes" (T 1.3.13.11). However, Hume believes that "all reasonings are nothing but the effects of custom; and custom has no influence, but by enlivening the imagination, and giving us a strong conception of any object" (T 1.3.13.11). For this and similar reasons, Owen

(2002, 216) interprets Hume as arguing that *all* causal beliefs, including our most reflective causal beliefs, are produced via "internal mechanisms", which we can consciously influence only by altering their "inputs". I think Hume's account of *general rules* supports this interpretation. Hume argues that we can only "correct" for the influence of our *general rules* by altering the inputs to the psychological "mechanisms" that produce our causal beliefs.

Hume argues earlier, in a short but important passage, that we can "assist the custom and transition of ideas" that occur during causal reasoning by engaging in a process of "reflection" (T 1.3.8.14). Reflective processes can occur either "*expressly*" or "*indirectly*". Hume contrasts these processes with ones that occur *tacitly* and *directly*, which I take to be unreflective processes. Admittedly, Owen (2002, 171) understands *express* reasoning as a kind of unreflective reasoning. However, Hume argues that express reasoning involves "expressly" considering "past experience", and so I understand it as the process of *consciously reflecting* on one's memories. In contrast, "tacit" reasoning processes presumably occur without our consciously noticing the involvement of our memories.

Hume's initial discussion of "indirect" reasoning concerns only a subset of cases: those in which we can "attain the knowledge of a particular cause merely by one experiment" (T 1.3.8.14). By reflecting on a situation in which one unfamiliar object was followed by another, Hume argues, we can come to believe that the former object *caused* the latter. He claims that any such belief will rely on a "principle", produced via "many millions" of experiences, that "*like objects, plac'd in like circumstances, will always produce like effects*". I am persuaded by Marie Martin (1993, 249) that this is not a *belief*, but rather a *habitual principle*: the "higher-order... custom of causally relating objects of which we have had little or no past experience".

On Martin's interpretation, Hume thinks we employ this principle to inform our reflective, higher-order reasoning processes. Instead, however, Hume appears to think that once this "principle has establish'd itself by a sufficient custom", it will ensure that we *unreflectively* infer, from the existence of two unfamiliar objects in an otherwise familiar setting, to the conclusion that the two objects are causally related (T 1.3.8.14). We

habitually expect *all* objects to have causes, and experience shows that familiar objects in familiar circumstances never produce unfamiliar effects. Therefore, if we encounter an unfamiliar object, and if we recognize that just *one* other unfamiliar object preceded it, then we will habitually form a lively idea of the two as cause and effect.

According to Hume, any such inference "must be made with judgment, and after a careful removal of all foreign and superfluous circumstances" (T 1.3.8.14). Presumably, by this, he means that if we encounter an unfamiliar object and want to "attain the knowledge" of its cause, then we can do so only by carefully examining our surroundings, to identify other unfamiliar objects as potential causes, and to rule out familiar objects as "superfluous". If we successfully identify just *one* other unfamiliar object, then we will habitually form a lively idea of the two unfamiliar objects as cause and effect.

An example might help. Say I see that a leaf on my houseplant is covered in strange holes, and I want to know what caused them. If I have good "judgment", then I will look over and around the plant for any other "unusual" objects. Whenever I identify familiar objects, like other leaves, the stem of the plant, and so on, I will habitually form lively ideas that these are *not* the cause of the holes. But if I see an unfamiliar insect, then I will habitually form a lively idea of the insect as the cause of the holes. The more objects that I rule out as potential causes, the more certain I will feel that the insect *did* cause the holes.

From all that Hume says, it seems that the *only* reflective process involved in this kind of inference is that of the "careful removal of all foreign and superfluous circumstances". Therefore, indirect reasoning seems to be simply the process of carefully attending to the general surroundings, or set of "circumstances", in which we find any potential cause or effect. By such careful attention, we will experience more impressions than we otherwise would, and so we will experience more unreflective reasoning processes than we otherwise would. Hume therefore believes that we can reflectively *activate* processes of customary associations of ideas, albeit only in "an *oblique* and *artificial* manner" (T 1.3.8.14).

Now note that, just before he discusses *unphilosophical* probability,

Hume argues that "philosophical" reasoning about probabilities typically requires us to activate causal "reasonings. . . in an *oblique* manner" (T 1.3.12.7). He summarizes this "manner" by claiming that we "take knowingly into consideration the contrariety of past events; we compare the different sides of the contrariety, and carefully weigh the experiments, which we have on each side". In other words, we engage in *express* reasoning: we consciously reflect on our memories of similar cases.

Hume distinguishes two kinds of philosophical probabilities – those of "chance" and "causes" – but this is merely a superficial distinction because "what the vulgar call chance is nothing but a secret and conceal'd cause" (T 1.3.12.1). In Hume's view, all "philosophical" beliefs about probabilities are "always of the same kind, and founded on the same principles" (T 1.3.12.6). They are complex, lively ideas, typically produced by distinct reasoning processes interacting with one another.¹⁶ Whenever we form beliefs about probability, Hume argues, there is a "transition or union of forces" (T 1.3.12.23). By this, he means that several associative processes interact and combine to produce a single complex idea, rather than several simpler ideas.

Hume offers the following example. If we see a ship leave dock, and if we recall that we have previously seen nineteen out of twenty ships return from their voyages, then we will come to believe in the ship's *probable* return (T 1.3.12.11). Hume argues that we will, at least initially, habitually form one idea of the ship failing to return and a further nineteen ideas of it returning. However, because these are "disagreeing images", the "impulse" to form them will be such that each image, or idea, "partakes an equal share of that force and vivacity, that is deriv'd from the impulse" (T 1.3.12.10). If we were to simply form the twenty different ideas, then each idea would have one twentieth of the feeling of force and vivacity that is possessed by a "proof":

16. Another kind of "philosophical" probable reasoning can occur if we have seen one kind of object frequently but inconsistently producing another. If we see a new object of the former kind, then we will habitually form "a kind of hesitating belief" that an object of the latter kind will appear (T 1.3.12.6). However, Hume thinks this explains only a "few instances" of our "probable reasonings" (T 1.3.12.7).

the kind of causal belief that is "entirely free from doubt and uncertainty" (T 1.3.11.2). However, Hume argues that the division of vivacity that occurs in this case will "change the *first form* of our ideas, and draw together the divided images presented by experience" into a single complex, lively idea (T 1.3.12.11). This idea will have "only... that force, which remains after substracting the inferior" vivacity of any "contrary" ideas: in this case, the idea of the ship's future absence (T 1.3.12.19). In short, our idea of the ship's return will have a degree of liveliness such that it *feels* probable.

According to Hume, experience shows that "the belief, attending any reasoning, consists in one conclusion, not in a multitude of similar ones, which wou'd only distract the mind" (T 1.3.12.19). He therefore argues that probable reasoning *always* involves our combining ideas of relevant past experiences into a single complex idea:

It remains, therefore, as the only reasonable opinion, that these similar views run into each other, and unite their forces; so as to produce a stronger and clearer view, than what arises from any one alone. This is the manner, in which past experiments concur, when they are transferr'd to any future event. (T 1.3.12.19)

We can now apply Hume's arguments concerning philosophical probability to the case of the man in the iron cage. If he engages in "indirect" reasoning, then he will do so by attending not just to the ground below him, but also to other features of his situation, including the strong iron bars that surround him. This will increase the number of ideas of being safely supported that will occur to him, because every impression of strong iron will produce an idea of this kind via customary association. Furthermore, if he "expressly" remembers similar cases, then he will form many ideas of objects being safely supported by iron, and only a few, if any, ideas of objects falling through iron. By engaging in both kinds of reflective procedures, he will "obliquely" activate many unreflective processes of causal reasoning. These will then combine to inform his complex, lively idea of his (very) *probable* safety. He will thus "correct" for his *general rule* by "a reflection on the nature of [his] circumstances" (T 1.3.13.9).

This man will now possess two, conflicting kinds of lively ideas: an

unreflectively produced, simple, but very lively idea of falling – the *general rule* – and a reflectively produced, complex belief about his probable safety. The more he engages in reflective reasoning, the livelier and more complex his belief about probability will become. This belief cannot directly influence his *general rules*. Nevertheless, once it is lively enough, the man can confidently "ascribe" it to his "judgment" and so treat his lively idea of falling as the mere product of a vivid "imagination" (T 1.3.13.11).

Let us return to the second, *corrective* kind of "general rules" (T 1.3.13.11). I agree with William Morris (2006, 87) and Owen (2002, 2012) that these are identical with eight rules that Hume later sets out, and which he thinks it "proper" to follow whenever we engage in causal reasoning (T 1.3.15.2). Call these the "proper rules". The most important, at least for "philosophical" reasoning, is the fourth: "The same cause always produces the same effect, and the same effect never arises but from the same cause" (T 1.3.15.6).

According to Hume, the proper rules are "form'd on the nature of our understanding, and on our experience of its operations in the judgments we form concerning objects" (T 1.3.13.11). Presumably, therefore, Hume thinks that we formulate the fourth proper rule by recognizing that we have historically formed our most reliable beliefs by habitually acting on the principle that "*like objects, plac'd in like circumstances, will always produce like effects*". According to Hume, we have *never* seen a familiar object in a familiar situation produce an unfamiliar effect, or indeed a familiar object in a familiar situation failing to produce a familiar effect. Therefore, by engaging in express reasoning about our own "judgments... concerning objects", we can form a probable belief of the kind Hume calls a "proof": a complex, lively idea of similar past experiences in which there are *no* "contrary" ideas. Hume appears to think that the proof so produced can be expressed in the form of the fourth proper rule.

If we reflect on this proof, or rule, then Hume thinks we will be motivated to check whether our current beliefs were formed accordingly. We will therefore want to "expressly" remember any similar cases that we might have experienced in the past, to check whether we *have* seen like objects in like circumstances, and to remember what their effects were. We will also want to employ good "judgment" by engaging in "indirect" reason-

ing. Consequently, we will carefully examine our situation to identify any potential causes and remove "all foreign and superfluous circumstances" from our consideration.

So, if the man in the cage acts on the fourth proper rule, then he will observe that his *general rules* occurred before he had time to remember any similar occasions, or to pay much attention to the details of his circumstances. He will remember that many previous beliefs that were so "rashly" formed were "irregular". He will then be motivated to engage in express and indirect reasoning about his situation, as just discussed. This is, I believe, all the reflective, deliberative reasoning that Hume thinks we can usefully engage in to counter our *general rules*.

However, we still do not know why Hume *calls* these unreflective causal beliefs "*general rules*". In the next and final section, I will argue that Hume understands them as ideas that are verbally expressible only as *generic generalizations*.

3. *General rules as generic generalizations*

Over recent years, Sarah-Jane Leslie (2008) has argued that generic sentences, like "birds lay eggs", express inductive generalizations of a psychologically primitive kind. We can form such generalizations in infancy, *before* we can form generalizations that are expressible via quantified statements, like "many birds lay eggs". As anyone who has cared for young children might observe, people learn to say and understand generic statements, like "cows say moo", before they can say or understand quantified sentences.

Even as adults, Leslie (2008, 42) argues, we can only form *non-generic* generalizations by "inhibiting or overriding" these "default" generalizations. If we encounter anything sufficiently "striking" – or, as Hume might say, "remarkable" – then we will default to a generic generalization. We are therefore disposed to assent to any generic generalizations in which the "predicate expresses a property that is striking, often in virtue of being dangerous or appalling" (2008, 40). Leslie (2017, 395) calls such generic generalizations "striking property generalizations". For example, although very few tigers eat people, the property of eating people is clearly a striking one, and so people typically agree that "tigers eat people". In contrast, the state-

ment "tigers are female" seems clearly false, even though approximately half of all tigers *are* female.

Leslie (2017, 394) argues that, because we so readily assent to striking property generalizations, we are prone to a kind of "cognitive bias that has contributed to certain virulent forms of prejudice". That is, we are strongly disposed to assent to generics that involve a "strikingly negative action" that is associated with "a few members of a racial, ethnic, or religious minority" (2017, 399). So, to use Leslie's (2017, 394) example, we are disposed to assent to generics like "*Scots are violent drunkards*". Here, we need not consider all the details of her argument or of the suggested psychological mechanisms at play. It is sufficient to note Leslie's (2017, 396) claim that if we have seen or heard about just a few members of a certain group who exhibit a harmful or dangerous property, then we are liable to assent to a generic that attributes that property to the group.

I suggest that Hume was attentive to broadly these same psychological features. Of course, his philosophical and psychological theories differ in many important respects from any that we would endorse today. Nevertheless, I think we can usefully understand Hume's *general rules* as something rather like Leslie's "striking property generalizations".

Certainly, *general rules* appear to be psychologically primitive. Hume argues that unreflective beliefs occur to "children" and "mere animals" (T 1.3.16.3). Even a "dog... avoids fire and precipices" because it customarily associates these things with pain (T 1.3.16.5). Admittedly, Hume believes that the *very* young lack enough experience to form the kinds of causal beliefs of which we can feel certain, such that they amount to proofs. Before "any entire proof can exist", Hume argues, we must form a strong habitual association between two objects (T 1.3.12.3). This takes time, because habit must "acquire new force from each instance, that falls under our observation" (T 1.3.12.2). Yet Hume does not appear to think we need *very* many experiences with a "remarkable" causal relation for *general rules* to occur. A child who burns their hand in a fire will very quickly learn to associate fire with pain (E 4.23).

General rules are thus among the most psychologically primitive causal beliefs that we can experience, according to Hume. And, although he

does not say so, these psychologically primitive, unreflective beliefs seem unable to carry information about quantification. Consider a case in which we experience numerous visual impressions of fire. In this case, we will repeatedly experience *general rules*, each one of which will consist of nothing more than a lively idea of heat, produced by customary association with our impressions of fire. These *general rules* are surely too simple to form the belief that "*all fires cause heat*" or that "*some fires cause heat*". I think we can only plausibly understand them as deserving of the name '*general rules*' if we understand them as ideas that are expressible only as generic generalizations.

Here, we must ask how Hume would understand beliefs about quantification. Although he never discusses these in any detail, he would surely see them as complex ideas, and he would presumably think of them as closely related to beliefs about probability. For example, I think he could only coherently understand the belief that *most birds can fly* as a complex idea that comprises many ideas of flying birds and a few ideas of birds that cannot fly. This belief is clearly very similar to the belief that any randomly chosen bird can *probably* fly. As such, I think Hume would claim that the idea could only have been produced via a process in which several reasoning processes interact. To reflectively judge that "*most birds can fly*", we must engage in *express* reasoning, such that we recall many ideas of birds flying and far fewer ideas of birds being unable to fly. These ideas will then combine to form the complex, lively idea that most birds can fly.

As we have seen, Hume believes that *general rules* will immediately occur to us whenever we encounter numerous impressions of kinds that, in our experience, have frequently been conjoined with something that we care about. So, just as he argues that *general rules* occur too quickly to form any part of our complex beliefs about probability, I suggest that he would think they appear too quickly to form any part of our complex beliefs about quantification. Therefore, given Hume's understanding of language, they seem to be verbally expressible *only* as generic generalizations.

Unfortunately, Hume never offers us anything like a full theory of language. Nevertheless, he is clearly influenced by Locke's view that sentences

derive their meanings from the ideas that they express.¹⁷ According to Hume, we learn to apply "names" to "objects" by habitually associating the two (T 1.1.7.7). For example, if we associate the name "fire" with our idea of fire, then we will think of fire whenever we hear the word "fire". Similarly, if we see a fire, then we will habitually call it a "fire". Therefore, to say "fire" is to express our idea of fire to other speakers of English, because they too will habitually form the idea of fire on hearing the word.

Given this, I suggest that Hume would think that the above *general rules* – the lively ideas of heat that are repeatedly produced by customary association with impressions of fire – would be expressible only via a generic sentence, like "fires cause heat". The only ideas involved in these *general rules* are those of fire, causation (at least on Hume's second definition at T 1.3.14.31), and heat.¹⁸ And, as we have seen, Hume thinks that these *general rules* will occur too quickly to form a part of any other beliefs, including our beliefs about probability or quantification.

Therefore, I think we should understand Hume to believe that anyone who is sufficiently close to a fire will experience *general rules* that are expressible only via a generic sentence like "fires cause heat". Similarly, the man in the cage could only express the *general rules* that he experiences by uttering a generic statement like "being high up causes falling". Any set of similar *general rules* will, I think, comprise a generic generalization. Furthermore, because Hume believes that we will *only* experience *general rules* when we encounter "remarkable" objects, I think his *general rules* are, at least in their general outlines, notably similar to Leslie's "striking property generalizations".

As a final point, recall that Hume sees certain *general rules* as the "source"

17. E.g., T 1.4.2.26; T 1.4.3.10.

18. We might think that these *general rules* also involve an idea of our determination of the mind to think of heat, so that the relevant expression would be "fires necessarily cause heat". However, although a generic statement like "being high up causes falling" can plausibly be understood as a "*general rule*", the same cannot be said for "being high up necessarily causes falling". Furthermore, the latter statement is obviously false, whereas the generic generalization may well appear to be true. It is therefore only the generic statement, I suggest, that constitutes a Humean *general rule*.

of prejudice (T 1.3.13.7). This suggests that he possesses something like a theory of implicit bias. To return to his example, if we live in a society that treats Irishmen as witless, then, whenever we meet an Irishman, we will repeatedly experience something like the *general rule* "Irishmen cause witless remarks". That is, we will experience lively ideas of witless remarks, produced by customary association with our impressions of the Irishman. These ideas will automatically come to mind, regardless of any obvious wit that the Irishman might display or any reflective beliefs that we might have about the folly or immorality of treating all Irishmen as witless.

Yet Hume's claim that *general rules* are the "source" of prejudice suggests that he sees an important distinction between our being possessed of an implicit or cognitive bias towards a group and our being prejudiced against that group. Anyone in any society that treats Irishmen as witless will experience *general rules* of the kind just discussed.¹⁹ However, to be *prejudiced* against Irishmen, it seems, one must reflectively endorse this judgment. One must explicitly conclude from one's experience of such *general rules* that "an Irishman cannot have wit" (T 1.3.13.7).

Hume therefore seems to believe that we can avoid being prejudiced, at least if we reflect well enough, even if we cannot eradicate our *general rules*. We can avoid reflectively *believing* that all Irishmen really are witless. If we are "wise", then we will reject any lively ideas along these lines as the mere products of a lively imagination (T 1.3.13.12). Similarly, as we have seen, the man in the cage can refrain from believing that being high up always causes falling, or that *he* will fall. However, he cannot stop vividly imagining falling, because – as he is made repeatedly and vividly aware – being high up causes falling.

19. As an anonymous reviewer observes, Hume thinks our sympathies with the prejudiced opinions of those around us will *also* make us think of Irishmen as witless, because everyone finds it "very difficult to follow their own reason or inclination, in opposition to that of their friends and daily companions" (T 2.1.11.2).

4. Conclusion

In this paper, I have argued that Hume understands *general rules* as an important kind of causal belief. They are, I have argued, relatively simple causal beliefs, which are produced repeatedly, quickly, and automatically, such that they occur independently of all other beliefs, and such that they can be expressed only via generic sentences. They occur to us whenever we experience numerous lively perceptions of kinds that, in our experience, have frequently been conjoined with something that we care about. I have not here addressed the implications of this interpretation for our understanding of Hume's wider theories. Nor have I addressed Hume's intriguing suggestion that certain "sceptics" will be pleased by some unexplained implications of his account (T 1.3.13.12). However, I very much hope that future research will do so.²⁰

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