**Hume’s Principle for Humeans**

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**1. A Question for Humeans**

It is a near consensus among contemporary philosophers that Hume’s empiricism (or empiricism in general) is untenable. Since Quine’s attack on empiricism, it is no longer held that all there is to the world is semantically or epistemologically reducible to what is given to our immediate experience. Philosophers today believe that no a priori philosophical tenet (whether empiricist or rationalist) serves as a final epistemological tribunal, and that our ontology should be determined by our best theory whose choice is vindicated in terms of an overall consideration of its theoretical virtues. Now we live in a naturalist era.

Nonetheless, there remains Hume’s legacy in naturalist philosophy. Hume famously denied necessary connections. For Hume, every object can exist without any other existing. Many contemporary philosophers believe that there is something right about Hume’s denial of necessary connections, so they take the Humean ban on necessary connections as something of normative force which sets a constraint on what can be an acceptable metaphysical view. Let me call those contemporary philosophers Humeans.

Hume may not have believed that there are sets because such entities may not be allowed in his empiricism. But, Humeans believe that there are sets. Once they believe in sets, it seems they must admit necessary connections. A set is one thing. Its member is another. Nonetheless, there seems to be a necessary connection between them: a set cannot exist without its member existing. Similarly, since they accept mereological sums, it seems Humeans also must admit necessary connections between sums and their parts as well. The Humean ban on necessary connections is restricted.

Humeans often makes such a restriction with no qualm. But, the restriction naturally raises a question. If Humeans admit necessary connections in these cases, is there a principled way of restricting the scope of the Humean ban in which, despite their admission of necessary connections in those cases, they can legitimately reject necessary connections in others? To make things simpler, let us assume that Humeans allow necessary connections only between sets and members and between sums and parts.[[1]](#footnote-1) What then is it about the two cases in virtue of which necessary connections are allowable only in those cases?

Let me call this oft-ignored question the criterion question. To understand the criterion question more clearly, it is necessary to divide it into two parts. First, what is a principled criterion of things such that those things and only those things have a necessary connection? And, secondly, is it really the case that sets and their members and sums and their parts meet the criterion while others don’t? Let us call the former question the primary criterion question or the primary question; and the latter the secondary criterion question or the secondary question. The secondary question depends on the primary one: one can answer the secondary one only after answering the primary one. So, though I will consider the secondary question as well whenever necessary, my primary concern here will be with the primary question.

The importance of the criterion question has not been sufficiently appreciated. Perhaps such ignorance is due to the intuitive plausibility of the thought that sets can exist only if their members exist, and sums can exist only if their parts exist. Indeed, it seems to be intuitively hard or even unintelligible to deny necessary connections in those cases. How would it be even possible to think that the set of Socrates, say, can exist without Socrates existing; and that the sum of Socrates and Plato exists without Socrates existing? So, on the basis of the intuitive plausibility, Humeans might dismiss the criterion question by proposing the following as an “answer” to the primary question:

**Dismissive Answer**: x and y have a necessary connection if and only if either x is a part of y or x is a member of y.

But Dismissive Answer misses the point of the criterion question. It is not the point of the criterion question whether there are necessary connections in the two cases. The point is rather whether Humeans can make the restriction on the Humean ban on necessary connections without undermining its normative force. Consider a non-Humean who endorses the view that effects are necessarily connected to their causes. On the face of Dismissive Answer, the non-Humean can legitimately demand an explanation of what makes it the case that causal necessary connections are unacceptable while set-membership and mereological ones are acceptable. Of course, it is consistent for Humeans to insist on Dismissive Answer without meeting the demand. But, they then would have no non-question begging reason for their rejection of causal necessary connections. And, the Humean ban would lose its normative force. To those who are content with being consistent, I have nothing more to say. If, however, the Humean ban is to be more than a merely consistent view, then Humeans must answer the criterion question in a non-dismissive way.

The legitimacy of the criterion question presupposes the thought that there are mereological and set-theoretical necessary connections. If Humeans give up on the thought and accept the wholesale rejection of necessary connections, then they can dismiss the criterion question as unmotivated.[[2]](#footnote-2) However, this seems to be not a good move for Humeans to make. For one thing, as we considered, set-membership necessary connections and mereological necessary ones are too sensible to deny. Moreover, it seems to be a psychological datum that we find those necessary connections unproblematic or at least much less problematic than causal necessary connections. If set-membership relation and part-whole relation on the one hand and causal relation on the other are not necessary connections alike, why do we have different attitudes? Humeans should not make this move except as a last resort. Or so I will assume.

If the Humean ban is to serve as a principled constraint as Humeans assume it to do so, Humeans must answer the criterion question. My aim in this paper is to offer Humeans a partial answer to the criterion question by offering an answer to the primary question which will serve their purposes. Before proceeding, it is worth noticing that the task of answering the primary question in a Humean spirit is much more difficult than it might first appear. In the next section, I will consider some possible attempts to answer the primary question and show that they fail to be an answer Humeans can accept with good conscience. The consideration of such non-Humean answers, I hope, will also provide us with a guiding direction in which a Humean answer to the primary question should be explored.

**2. Some non-Humean Answers**

To perceive the sum of Socrates and Plato, you must perceive Socrates. Your perception of the sum includes your perception of Socrates. Let us say that two things have a perceptual connection just in case the perception of one includes the perception of the other. The sum and Socrates are then perceptually connected. Perhaps, sets are where their members are.[[3]](#footnote-3) And we may perceive sets by perceiving their members.[[4]](#footnote-4) Or so let’s assume. To perceive the set of Socrates, you must perceive Socrates. The set of Socrates and Socrates are perceptually connected. This observation seems to give some plausibility to the following:

**Perceptual Connection**: x and y have a necessary connection if and only if x and y have a perceptual connection.[[5]](#footnote-5)

It might be thought that Perceptual Connection cannot be an answer to the primary question because it is obviously false. The set of the null set cannot exist without the null set existing, so they have a necessary connection. Nonetheless, they are not perceptually connected because they are beyond perception. So, Perceptual Connection is false. To avoid this problem, Humeans might have to restrict the scope of Perceptual Connection to the effect that, for any perceptible things, Perceptual Connection holds.

Is this restriction something Humeans can make without qualm? Let me put this question aside. What I want to claim is rather that Perceptual Connection, even thus restricted, seems to be false. Suppose that a cup instantiates a universal whiteness. To perceive the cup, you must perceive the whiteness. The cup and the whiteness are perceptually connected. So, given Perceptual Connection, they must have a necessary connection. But, a particular is not necessarily connected to a universal it instantiates.[[6]](#footnote-6) Perceptual connection is not sufficient for necessary connection.

What if Humeans revise Perceptual Connection into the following?

**Strong Perceptual Connection**: x and y have a necessary connection if and only if, in all conceivable situations, x and y have a perceptual connection.

In some conceivable situation, the cup and the whiteness are not perceptually connected: it is conceivable that the cup is black so that we perceive the cup while not perceiving the whiteness. The cup does not have a strong perceptual connection to the whiteness. So, Strong Perceptual Connection entails, correctly, that the cup is not necessarily connected to the whiteness.

However, it is unclear whether Strong Perceptual Connection gets the mereological case right. Since the sum of Socrates and Plato and Socrates are necessarily connected, given Strong Perceptual Connection, it must be the case that the sum and Socrates, in any conceivable situation, have a perceptual connection. But, is it really the case? Our actual perception of the cup includes our actual perception of the whiteness. This does not entail that, in some conceivable situation, our perception of the cup does not include that of the whiteness. This being the case, what then makes it wrong to conceive a situation where the sum has Socrates\* instead of Socrates or the sum loses Socrates so that our perception of the sum does not include that of Socrates? I do not have a strong intention to insist that there is really such a conceivable situation where only the sum but not Socrates is perceived. But, the point is that we need an explanation as to what is wrong with assuming that there is such a situation.

In any event, it seems Humeans cannot help themselves to Strong Perceptual Connection as their own answer. Given Strong Perceptual Connection, the Humean ban on necessary connections becomes a principled ban on necessary connections between perceptually disconnected things: no perceptual connection, no necessary connection. This would be a welcome result for Hume as it would be well-motivated in Hume’s empiricism. But, Humeans are not empiricists. As long as they do not rely on empiricism, they cannot reject necessary connections for the simple reason that such connections are not perceptible. Strong Perceptual Connection might be an answer for Hume. But, it is not for Humeans. If there is a Humean answer to the criterion question, it must not make the Humean ban an empiricist one. Humeans must pursue an answer to the primary question in some other direction.

In recent years, we have seen the revival of an Aristotelian view in metaphysics. What is most peculiar to the Aristotelian view is that it presupposes the metaphysical structure of prior and posterior.[[7]](#footnote-7) On this Aristotelian view, there is a distinctively metaphysical sense in which there are things that depend on others and there are things that ground others. When one thing depends on another in this metaphysical sense, the former, say defenders of the Aristotelian view, *ontologically* depends on the latter.

Though it is a matter of controversy exactly what ontological dependence is, one thing is certain: if one ontologically depends on another, the former can exist only if the latter exists – i.e. an ontological dependence relation between things entails a necessary connection between them. Let us say that one thing is ontologically connected to another just in case one ontologically depends on the other or vice versa. Ontological connection is then a necessary connection. This observation might lead one to attempt to answer the primary question as follows:

**Ontological Connection**: x and y have a necessary connection if and only if x and y have an ontological connection.

Set-membership relation and part-whole relation are widely accepted as two paradigm cases of ontological connection: sets ontologically depend on their members and sums ontologically depend on their parts (or, parts ontologically depend on their sum[[8]](#footnote-8)). On the other hand, ontological dependence is often contrasted with causal dependence. Indeed, some philosophers take it as a principal characterization of ontological dependence that it is distinct from causal dependence.[[9]](#footnote-9) If Ontological Connection is adopted as an answer to the primary question, then it would be easier for Humeans to answer the secondary question.

This might tempt Humeans to accept Ontological Connection as their answer to the primary question. However, Humeans should resist the tempting idea. As well-recognized in the literature, ontological dependence cannot be understood in modal terms. The set of Socrates and Socrates necessarily co-exist: necessarily, the singleton Socrates exists only if Socrates exists and vice versa. But ontological dependence is an asymmetric dependence relation: the singleton Socrates ontologically depends on Socrates but not vice versa. What explains the asymmetrical dependence relation between necessarily co-existent things? How is ontological dependence to be understood? There are two main answers to this question. But, as we will see, neither one seems to be an option for Humeans.

According to one prominent view of ontological dependence, ontological dependence is primitive.[[10]](#footnote-10) Defenders of this view often point out that one should not dismiss some proposed notion simply because it is a primitive one. Their point seems right to me. Clearly we have or must have primitive notions. So, Humeans should not dismiss primitive ontological dependence for the simple reason that it is primitive.

Nevertheless, the problem with this view in the present context is that, if ontological dependence is primitive, then Ontological Connection cannot serve Humeans’ purposes. What is it for the singleton Socrates to ontologically depend on Socrates? On this account, it is primitive. There is nothing more about the singleton and Socrates in virtue of which the set ontologically depends on its member: sets are just things such that they ontologically depend on their members, period. Similarly, there is nothing more about the sum of Socrates and Plato and Socrates in virtue of which the sum ontologically depends on Socrates: sums are just things such that they ontologically depend on their parts, period. Thus, given that ontological dependence is primitive, Ontological Connection ends up with the following:

**Primitive Ontological Connection**: x and y have a necessary connection if and only if x and y have a primitive ontological connection: either x is a part of y or x is a member of y.

Recall that the non-Humean who endorses the view that effects are necessarily connected to their causes demands an explanation of what makes it the case that only sets and sums are necessarily connected to their members and parts while causes and effects are not. If Humeans adopt Primitive Ontological Connection as their answer to the primary question, then they would have nothing to say other than that, as opposed to sets and sums, causes and effects are just things such that they are not necessarily connected. Primitive Ontological Connection collapses into Dismissive Answer, which jeopardizes the normative force of the Humean ban. For Humeans’ purposes, the view that ontological dependence is primitive is of no use. So, if Ontological Connection is to work out as a Humean answer to the primary criterion question, ontological dependence must not be primitive.

According to the other view, ontological dependence should be explained in essentialist terms. It should be clear that, in order for ontological dependence to be explained in terms of essences, essences should not be understood in modal terms because, as we considered, ontological dependence cannot be explained in modal terms. The observation that essentiality cannot be understood as necessity is mainly due to Kit Fine’s pioneering work on ontological dependence.[[11]](#footnote-11) Fine’s main contention is that, to make sense of ontological dependence, one must commit oneself to essences in a non-deflationary sense. What are essences in the robust sense?

A thing has properties. Those properties are intuitively divided into two groups. The singleton Socrates has the property of containing Socrates as its member. It also has the property of being an object of my thought. But, there is an intuitive sense in which the former property is an “important” one while the latter is not. In Fine’s essentialism, such an intuitive distinction has an objective foundation, for the importance of the former property is based on the essence of the singleton Socrates: it is only the former property but not the latter one that is had by the singleton Socrates *in virtue of its essence*. The essence of a thing is something that determines essential properties of the thing.

What to be also noted is that, according to Fine, the essence of a thing is in some metaphysical sense prior to the existence of the thing. I exist. But, I do not exist essentially. (Otherwise, I would necessarily exist.) According to Fine, “what an object is, its nature, need not include existence as a part.”[[12]](#footnote-12) My essence is what I am. And my existence is not part of it but is a property I accidentally acquired in this world. Essence in Fine’s sense “precedes” existence.[[13]](#footnote-13)

Taking these considerations into account, we can understand essences in Fine’s sense as beings which are prior to existence and which determine essential properties of things having the beings. Henceforth, by ‘essences,’ I shall mean essences in Fine’s sense; and by ‘essentialism’ a metaphysical framework that relies on essences in that intended sense. Essentialism thus understood is compatible with the view that no object has an essential property. If, for every object, it has a haecceity which excludes every property of the object, the haecceity serves as the essence of the object: the haecceity is prior to the existence of the object and it is in virtue of the haecceity that no property is essential to the object. Essentialism is also compatible with the view that every object essentially has all properties it has except existence. If, for every object, there is a Leibnizian monad which includes every property of the object except existence, the monad serves as the essence of the object: the monad is prior to the existence of the object and it is in virtue of the monad that every property is essential to the object. Fine’s essentialism is a moderate kind: for any object, there is an essence in a broadly Aristotelian sense which is prior to the existence of the object and in virtue of which the object has its essential properties in an intuitive way.

We are now in a position to understand Fine’s account of ontological dependence. Fine’s essentialism allows him to separate out essences of objects from their existence. This separation enables him to consider objects without presupposing their existence, which makes room for determining the dependence of one thing upon another even when they necessarily co-exist. Fine writes:

Once we are armed with the notion of essence, however, the unwarranted reference to existence can be avoided, and a better fit with our informal understanding of the notion of dependence can thereby be achieved. For we may take x to depend upon y if y is a constituent of a proposition that is true in virtue of the identity of x or, alternatively, if y is a constituent of an essential property of x. Thus for the purposes of achieving fit, we may identify the being or essence of x with the collection of propositions that are true in virtue of its identity (or with the corresponding collection of essential properties). The being of an object, as opposed to the object itself, will then depend upon another object in the sense of involving that other object; it will appear as a constituent of a component proposition or property. (1995: 274-5)

Consider all essential properties of x. (Or, consider all propositions which are true in virtue of the essence of x.) And consider if, among those properties, there is one which involves reference to y. (Or, consider if, among those propositions, there is a proposition that includes y as its constituent.) If so, and only if so, may we say, x essentially depends on y. For example, among others, claims Fine, it is true in virtue of the essence of the singleton Socrates that it contains Socrates as its member. So, the singleton Socrates essentially depends on Socrates. Ontological dependence, according to Fine, is essential dependence in this sense.

Let us say that one thing is essentially connected to another just in case one essentially depends on the other or vice versa. If ontological dependence and ontological connection are understood in terms of essential dependence and essential connection, Ontological Connection becomes the following:

**Essential Connection**: x and y have a necessary connection if and only if x and y have an essential connection.[[14]](#footnote-14)

If Essential Connection can be adopted as an answer to the primary criterion question, the secondary one may be able to be answered somewhat easily. What is it about sets and their members in virtue of which they are necessarily connected while causes and effects are not? On the basis of Essential Connection, one can answer the question by claiming that sets and their members have a necessary connection because sets by their essence contain their members (similarly for sums and their parts) whereas effects and their causes lack an essential connection. Of course, the view that, when an effect is causally related to its cause, their causal relation is not by their essences may have to be further vindicated. But, the view is popular. Essential Connection forces one to deny necessary connections between causes and effects unless one rejects the popular view.

But, is it possible for Humeans to have Essential Connection as their answer to the primary criterion question? It seems not. At least, they cannot do so *qua Humeans*. Before the advent of modern science, Aristotelian essentialism held sway in philosophy. What characterizes Aristotelian essentialism is that, in the Aristotelian framework, individual essences or substantial forms play a central role in explaining natural phenomena. But modern science made a massive impact on philosophy by showing a possibility to explain natural phenomena without relying on such “philosophical” beings, which provided “progressive” philosophers with a new philosophical task of explaining things without purely philosophical beings – beings which are neither qualitative nor quantitative.[[15]](#footnote-15) Empiricism may be understood as one attempt to take up the task: empiricists attempted to explain things only with recourses given to our immediate experience. We know that empiricism fails. But, this should not encourage the “progressive” philosophers to return to traditional essentialism. Their new task should be rather to enrich their resources so as to include also entities and qualities provided by other naturalist disciplines such as physics and mathematics and explain things without recourse to essentialism. Humeans, I presume, are among those philosophers who are willing to take up the new task. If Humeans commit themselves to essentialism to answer the criterion question, then they would thereby give up on the Humean project. Humeans cannot embrace Essential Connection.

David Lewis as I understand him is a paradigmatic Humean. Lewis characterizes his philosophical project as follows:

Humean supervenience is named in honor of the great denier of necessary connections. It is the doctrine that all there is to the world is a vast mosaic of local matters of particular fact, just one little thing and then another. (But it is no part of the thesis that these local matters are mental.) We have geometry: a system of external relations of spatiotemporal distance between points. Maybe points of spacetime itself, maybe point-sized bits of matter or aether or fields, maybe both. And at those points we have local qualities: perfectly natural intrinsic properties which need nothing bigger than a point at which to be instantiated. For short: we have an arrangement of qualities. And that is all. There is no difference without difference in the arrangement of qualities. All else supervenes on that. (1986: ix-x)

Behind Humean Supervenience is the idea that all we need for our explanatory inquiry are a spatiotemporal structure and fundamental qualities distributed in the structure. The spatiotemporal structure is given by geometry. Fundamental qualities are given by our best scientific theory – perhaps, physics. In this picture, there is no room for philosophical beings such as essences – beings that we cannot reach except by an “ontological insight” which seems to be not open to rational scrutiny.[[16]](#footnote-16)

 Humeans cannot dismiss the criterion question. But it is unclear how Humeans can answer the question. If there is a Humean answer, it must be neither empiricist nor essentialist but, it must be naturalist and existentialist. Indeed, a Humean task of answering the primary question is much more difficult than it appeared. But, I think it is not an impossible task. In the remainder of the paper, I will take up the task and offer an answer which will serve Humeans’ purposes. To this end, first, I will return to and take a closer look at Hume’s own denial of necessary connections and, on that basis, propose my answer to the primary question. Then, in the last section, I will attempt to vindicate my proposal on Humean grounds.

**3. A Proposal**

Humeans confronts the criterion question – the question of whether they can admit necessary connections in some cases in a principled way without undermining the normative force of their denial of necessary connections in other cases. But, Hume might not face this question. Hume would not think that sets exist. Perhaps, Hume did not believe that mereological sums exist either because, for Hume, arguably, any alleged mereological sum is not an object because it is a mere multitude and lacks a true unity: all things are mereologically simple.[[17]](#footnote-17) If Hume is really a mereological nihilist, then it would be a misguided question to ask why sums are necessarily connected to their parts because, for Hume, there are no mereological sums in the first place.

Is Hume really a mereological nihilist? I am in no position to settle this interpretive matter. Nevertheless, I will assume that Hume is a mereological nihilist so that Hume has no motivation for restricting the scope of his denial of necessary connections. Whether or not this assumption is correct, I believe that, for our purposes, it will prove fruitful to take this interpretive possibility seriously and reconsider Hume’s denial under that assumption.

The role of the term ‘distinct’ employed in the Humean ban is to restrict the denial: there is no necessary connection between wholly distinct things, but there may be one between other things.[[18]](#footnote-18) But, Hume may have used the term ‘distinct’ for some other purpose. If all things are mereologically simple and thus Hume has no reason to restrict his denial, Hume’s use of ‘distinct’ must have a different role other than that of scope restriction. What was the purpose that his use of the term ‘distinct’ serves in Hume’s denial? Hume writes:

The mind can never find the effect in the supposed cause, by the most accurate scrutiny and examination. For the effect is totally different from the cause, and consequently, can never be discovered in it. (1748/1975, §4, Part I)

Here Hume claims that the mind can never find the effect in the alleged cause and thus that there is no ground for thinking that the alleged cause has a necessary connection to the effect. And right after stating the claim, he goes on to provide his reason for the claim: it is because they are “totally different” – i.e. they are in Hume’s intended sense distinct or Hume-distinct. Here Hume’s use of ‘distinct’ seems to be meant to indicate his *reason* for his denial of necessary connections: no object has a necessary connection to any other *because* they are Hume-distinct.

Once we see that Hume denied necessary connections between things because they are Hume-distinct, we realize that Hume’s denial of necessary connections needs to be divided into two more theses. Hume’s denial is that no object has a necessary connection to any other because they are Hume-distinct. So, Hume’s denial is committed to Hume’s metaphysical doctrine that all objects are Hume-distinct.[[19]](#footnote-19) But Hume’s doctrine alone does not entail Hume’s denial. What is presupposed in Hume’s denial is a conditional claim: no objects have a necessary connection *if* they are Hume-distinct. Let us call the conditional claim which licenses Hume to infer from Hume’s doctrine to his denial Hume’s principle. Hume’s denial is a consequence of Hume’s doctrine and Hume’s principle.

Hume’s principle is something Hume takes for granted. Clearly, it serves as a principle for Hume. I think it can serve as a principle for Humeans as well. According to Hume’s principle, if x and y are Hume-distinct, x and y do not have a necessary connection. Once we get clearer on what it is for things to be Hume-distinct, as I will show, the converse of Hume’s principle turns out to be obviously true. What I will propose is that Hume’s principle combined with its converse will give us an answer to the primary criterion question: x and y have a necessary connection if and only if x and y are not Hume-distinct. With this in mind, let us take a close look at what Hume-distinctness is.

In Hume’s doctrine, Hume claims that all things are Hume-distinct. So, once we clarify Hume’s doctrine, we thereby will be able to clarify what Hume-distinctness means. In the following famous passage, Hume gives us an answer:

’Tis easy to observe, that in tracing this relation, the inference we draw from cause and effect, is not deriv’d merely from a survey of these particular objects, and from such a penetration into their essences as may discover the dependence of the one upon the other. There is no object which implies the existence of any other if we consider these objects inthemselves, and never look beyond the idea which we form of them. Such an inference wou’d amount to knowledge, and wou’d imply the absolute contradiction and impossibility of conceiving any thing different. But as all distinct ideas are separable, ‘tis evident there can be no impossibility of that kind. (1739/1978, I.3.6: pp. 86-7)

Hume’s claim is this: no matter how thoroughly we may examine a cause and its effect, claims Hume, we do not find anything that entitles us to infer from one to the existence of the other. But, Hume’s claim would be obviously false if the “survey” of the cause and the effect is wide enough to include relational aspects about them. Clearly the effect has some relation to the cause. From the fact that the effect has the relation to the cause, we can infer that the cause exists because the effect would not have the relation without the cause.

So, Hume must have had in mind some narrower examination so as to exclude relational facts about the cause and the effect. Then how narrow is the Hume examination? Surely, it should be not too narrow to exclude some important aspects of them. So, the Hume examination must be neither too broad nor too narrow. When then would the Hume examination be adequate? Hume’s remarks in the passage suggest that the Hume examination should focus on the cause and the effect *in themselves* or on their “*essences*.” Hume’s claim is then that, for any objects, no thorough examination of their “essences” gives us any ground for an existential inference.

 This consideration suggests that Hume claims that all things are Hume-distinct in the sense that their “essences” do not give us any ground for an inference from one to the existence of the other. But this suggestion must be understood with caution. Note that ‘essence’ in Hume’s use does not mean essence in the current sense. Essences are beings which are prior to existence, and which ground essential properties of things. So, essences are not the kind of beings we can grasp by senses (together with memory or imagination): our grasp of those beings would require some peculiar representational faculty (something like the Cartesian intellect) which Hume dismisses.[[20]](#footnote-20) Thus, for Hume, essences are only intellectual fictions. Hume is an existentialist.

So, we need some terminology by means of which we can express Hume’s claim without ascribing essentialism to him. To this end, I will use the term ‘identity’ to express a theoretically neutral notion whose essentialist interpretation is essence. In philosophical discourse, the dominant use of the term ‘identity’ is to pick a relation – a relation anything bears just to itself. But, my use of the term ‘identity’ shall depart from the dominant use. When I use the term ‘identity,’ I shall mean rather something with which we are concerned when we talk about personal identity, cultural identity, and national identity and so on. (For the relation anything bears just to itself, I will use the phrase ‘identity relation.’) A thing has features. Among them are privileged ones – privileged in the sense that the thing is that particular thing it is in virtue of those features so that, in absence of any of them, the thing would not be the same. I call such privileged features of a thing the *identity* of the thing.

For essentialists, the identity of a thing amounts to the essence of the thing: the essence of the thing is the being in virtue of which the thing is that thing it is. Indeed, Fine (1995) also uses terms ‘identity’, ‘essence’, and ‘being’ interchangeably because, on Fine’s essentialism, essences are the same as identities. If, however, essentialism is not presupposed, we should distinguish the use of ‘identity’ from that of ‘essence.’ For existentialists, beings are in no metaphysical sense distinct from existence. So, they reject essences as unreal. Nonetheless, existentialists still can talk about identities of things insofar as identities of things are existents. So, in the present context, identities must be distinguished from essences.

Now Hume’s claim can be rephrased in existentialist terms: all things are Hume-distinct in the sense that their identities do not give us any ground for an inference from one to the existence of the other. This claim itself is an epistemological one: whether things are Hume-distinct depends on *our consideration* of their identities. But clearly Hume’s intention is to make a metaphysical claim via this epistemological one. What claim is Hume making with this epistemological counterpart? As we already considered, if the identity of a thing includes its relation to some other, we can infer from the former to the existence of the latter. If, on the other hand, no relation between them is part of their identities, there would be no ground for an existential inference. Let us say that one thing is *alienated* from another just in case no relation between them is part of their identities. Hume’s claim becomes then what we may call Hume’s doctrine of alienation: all things are Hume-distinct in the sense that all things are alienated.

Hume’s doctrine of alienation helps us see what Hume-distinctness is: what it is to be Hume-distinct is to be alienated. With the clarified notion of Hume-distinctness in hand, I can now articulate Hume’s principle which is my main concern: No things have a necessary connection if they are alienated. Note that Hume’s principle is a conditional denial of necessary connections: things do not have a necessary connection conditional upon the alienation between them. If the condition is not met – i.e., if the identity of one thing includes some of its relations to another or vice versa, then Hume’s principle is compatible with their having a necessary connection. Let us say that x internally depends on y just in case the identity of x includes some of its relations to y; and that x and y are internally connected just in case x internally depends on y or vice versa. Alienation is then internal disconnection. What Hume’s principle tells us is that no internal connection, no necessary connection.

The converse of Hume’s principle is that if things are internally connected, they are necessarily connected. This is obviously true. Suppose that x and y have an internal connection – more specifically, x internally depends on y – i.e. the identity of x includes some relation R to y. If y does not exist, since x would not have any relation to y, x would not have R to y. Since it is part of the identity of x that x has R to y, x would not be the same. Nothing exists without identity. So, x would exist only if y exists. There is no world where x exists without y existing. So, necessarily, x exists only if y exists. If x and y have an internal connection, then x and y have a necessary connection.[[21]](#footnote-21)

Hume’s principle and the converse of Hume’s principle entail the following:

**Internal Connection**: x and y have a necessary connection if and only if x and y have an internal connection.

My proposal is then this: Internal Connection is a Humean answer to the primary criterion question. As we have just seen, it is obvious that the right-to-left direction (i.e. the converse of Hume’s principle) is true. But it has yet to be considered whether the left-to-right direction (i.e. Hume’s principle) can be a Humean principle – more specifically, whether it can be well-motivated on naturalist and existentialist grounds. This will be my main concern in the next section. But, before proceeding, let me consider first how Humeans could answer the secondary criterion question with Internal Connection in hand.

Suppose that Internal Connection is a correct Humean answer to the primary question. While admitting necessary connections in set-membership and mereological cases, Humeans deny necessary connections in other cases. What is it about the two cases in virtue of which they are necessary connected while causes and effects are not? Given Internal Connection, Humeans’ answer must be that it is because, first, (S1) sets and sums are internally connected to their members and parts respectively; but, second, (S2) causes and effects are not internally connected or alienated.

Can (S1) and (S2) be well-justified? This question is worthy of close examination. But, I won’t and can’t pursue this question in detail here. Instead, I will be content with uncovering some possible sources of the intuitive appeal the two claims have. Let me begin with (S1).

Consider the set of Socrates. It has a relational feature: the singleton Socrates contains Socrates as its member; it has a set-membership relation to Socrates. Is this relation part of the identity of the singleton? It seems hard to answer in the negative. If the singleton does not include the relation to Socrates in its identity, it is unclear how we can conceive the singleton itself in the first place. Consider the set of Plato. If the singleton Socrates does not include the relation to Socrates in its identity, by parity, the singleton Plato does not include the relation to Plato in its identity. How can we then differentiate the first singleton *as it is* and the second one *as it is*? These difficulties, however, disappear if we think that the singleton Socrates and the singleton Plato, in their identities, include the relation to their member respectively. Of course, this consideration might not be conclusive. But, at the very least, the claim that sets are internally connected to their sums – more specifically, the claim that sets internally depend on their members seems to have strong intuitive appeal. (Similarly, the same goes for the claim that sums are internally connected to their parts.)

I should emphasize that the claim that the singleton Socrates internally depends on Socrates does not require “purely philosophical beings.” The claim is committed to Socrates, the singleton Socrates, and the set-membership relation between them all of which are already in our theory. The only peculiar element in the claim is the sub-claim that the identity of an object (the identity of the singleton) can include its *relation* to another (Socrates). Admittedly, the sub-claim may sound unfamiliar to us. But, the unfamiliarity should not be problematic. It is unfamiliar not because it expands our ideology or ontology but just because it has been ignored. Indeed, the idea that the identity of an object includes its relation to other object should not be something completely exotic to us. On origin essentialism, it is essential to an organism that it has its biological origin. This familiar origin essentialist idea is an essentialist rendering of its existentialist counterpart: the identity of an organism includes the relation to its biological origin.

Let us turn now to (S2). Consider an effect. It has a relational feature: it has a causal relation (or some other one) to its cause. Is the causal relation part of the identity of the effect? Intuitively, it seems that the effect remains the same without the causal relation to its cause because, even if we do not consider the causal relation to the cause, we may conceive the effect through its intrinsic features. So, unlike set-membership and mereological cases, we seem to feel no strong need to include the causal relation in the identity of the effect. And the same goes for the cause. Our intuition is also in support of (S2).

The claim that causes and effects are alienated is a natural consequence of one popular conception of material things to which many philosophers are (at least, implicitly) committed. Let us say that one thing is regionally connected to another just in case there is a common spatiotemporal region they occupy. Suppose that, for two material things, they are regionally disconnected. They have a spatiotemporal relation.[[22]](#footnote-22) Is the spatiotemporal relation part of the identity of either one? Clearly, Hume would think not. For Hume, it seems to be the case, the identity of an object includes only its sensible qualities whose distinctive characteristic is that “these qualities are all complete in themselves, and never point out any other [object]”: everything is complete in its identity independently of any other.[[23]](#footnote-23) Cartesian mechanistic philosophers would think not. For mechanistic philosophers, a material thing is by nature an extended being whose identity is exhausted by its geometrical features. Lewis would think not. For Lewis, the identity of a material thing seems to be exhausted by its fundamental qualities (provided by physics) that “need nothing bigger than a point at which to be instantiated” (Lewis 1986: x). Despite differences, the common ground among them is what we may call the local conception of material things, according to which the identity of a material thing is locally determined within the spatiotemporal region it occupies. On the local conception, thus, for any material things, they are alienated if they are regionally disconnected. Causes and their effects, whether they are objects or events, are regionally disconnected material things. Given the local conception, it follows that causes and their effects are alienated. Thus, for anyone who is committed to the local conception of material things, (S2) would be true.

 I have considered some possible sources of the intuitive appeal of (S1) and (S2). But, what I have said about (S1) and (S2) is sufficient for justifying (S1) and (S2). The fact that (S1) and (S2) are intuitively solid does not mean that they are true.[[24]](#footnote-24) But, in any event, what matters is to note that, given Internal Connection, Humeans can avail themselves of (S1) and (S2) which seem to be widely accepted. Thus, as long as Hume’s principle is well-motivated on Humean grounds, Humeans should be willing to embrace Internal Connection. Can Hume’s principle be a principle for Humeans?

**4. A Humean Vindication of Hume’s Principle**

One possible attempt to argue that Hume’s principle is well-motivated on Humean grounds is to show that Hume’s principle enables Humeans to vindicate what they want to have. The idea behind this attempt is clear: the Humean reason for Hume’s principle is the benefit Humeans can enjoy by accepting Hume’s principle. This is the line of thought in which Jessica Wilson attempts to motivate what she calls Hume’s Dictum which is an analogue of Hume’s principle.[[25]](#footnote-25) According to Wilson, a combinatorial account of the range of metaphysical possibilities, which is perhaps the best one, requires Hume’s Dictum. This fact, argues she, provides Humeans with good reason for Hume’s Dictum.

 But this is not the way I will argue that Hume’s principle is well-motivated on Humean grounds. According to Wilson, Humeans’ reason for Hume’s Dictum is the benefit of accepting it. But, Humeans’ reason for Hume’s principle which I will offer is the cost of rejecting Hume’s principle. If one rejects Hume’s principle, one commits oneself to necessary connections between alienated things or, for short, alienated necessary connections. I will argue that Humeans cannot accept alienated necessary connections in their philosophical spirit.

We should first note that Hume’s principle is not logically or analytically true: it is no contradiction to claim that there are alienated necessary connections. Suppose that two things are alienated. Then, nothing in their identities dictates a necessary connection between them: they by themselves have no necessary connection. From the claim that they *by themselves* have no necessary connection, however, it does not follow that they have no necessary connection *tout* *court*: they might have a necessary connection as a matter of brute fact or on some ground other than themselves. Rejecting alienated necessary connections is rejecting the two cases as illegitimate. But, no amount of logical or semantic analysis can show that the two cases are contradictory. Rejecting the two cases requires a substantive argument. What I will attempt to do in what follows is to present such an argument.

The first possible attempt to admit alienated necessary connections which I will consider is to claim that some alienated things have a necessary connection as a matter of brute fact. Let us suppose that x and y have a necessary connection while they are alienated. Since x and y are alienated, x and y by themselves remain to be modally unconnected. In virtue of what, then, is it the case that x and y have the necessary connection? According to this attempt, nothing grounds the necessary connection. It simply happens that x and y are necessarily connected. Nothing explains it, period. Let us call this possible attempt the BF view.

I cannot dismiss the BF view simply for the reason that it is committed to brute facts. Unless we believe that every fact is sufficiently explainable, we should live with brute facts anyway.[[26]](#footnote-26) There is something. Why then is there something rather than nothing? Perhaps there is no explanation for the fact.[[27]](#footnote-27) The nucleus of U238 does alpha-decay with objective chance. Why then does it alpha-decay when it actually does? Perhaps there is no explanation for the fact. Indeed we may have to embrace brute facts.

Even if we acknowledge that there are brute facts, however, the alleged brute fact at issue should not be one of them. When we admit something as a brute fact, it has a powerful epistemic force which is hard to reasonably resist. No reasonable epistemic agent would deny that there is something. Though it might be controversial whether it is really unexplainable, it is beyond reasonable doubt that the nucleus of U238 does alpha-decay when it actually does. In standard brute facts, we do have reliable means to affirm those facts. What we lack is an explanation of them, not the facts. However, the alleged necessary connection between x and y fails to meet this qualification for being a brute fact. The alleged necessary connection is not something beyond reasonable doubt. Rather it is the very alleged necessary connection that is being called into reasonable question. What we lack is not just an explanation of the alleged fact that x and y have a necessary connection. We do not have reliable means to affirm the alleged fact either.

We may have to live with brute facts. But we should not generate them when their existence itself is reasonably questioned. Otherwise, what would rationally prevent one from taking anything as a brute fact? The BF view, I conclude, is not an option one can reasonably take. This leaves us with the second possible attempt to admit alienated necessary connections, to which I will now turn.

It can’t be a brute fact that, when x and y are alienated, x and y have a necessary connection. In virtue of what, then, do they have a necessary connection? Since they are alienated, there is nothing in them in virtue of which they have a necessary connection. So, there must be something else other than x and y in virtue of which they are necessarily connected. Let us call the something else the connector. The second attempt that I will consider is then that x and y have an alienated necessary connection in virtue of the connector. Let us call this answer the connector view.

To argue that the connector view is problematic, I will defend what I will call the main thesis – i.e., if one accepts the connector view, one must posit unnecessary primitives. The main thesis can be divided into two parts. First, the main thesis includes the following thesis:

**The First Thesis**: If one accepts the connector view, then one must posit primitives.

Clearly we do want to explain things within our theory. We should not posit things beyond our theoretical reach if it is unnecessary to do so or unless those primitives are indispensible for certain theoretical roles. Thus, if the First Thesis is true, then it will provide us with a pro tanto reason for rejecting the connector view.[[28]](#footnote-28) What is more, we will have not just a pro tanto reason but decisive reason for rejecting the connector view if the following thesis is also true:

**The Second Thesis**: Primitives one must posit by accepting the connector view are unnecessary.

In what follows, I will vindicate the main thesis by defending the First Thesis and the Second Thesis.

Before I argue for the First Thesis, I need to clarify what the First Thesis means. First, let me get clearer on the notion of primitive employed in the First Thesis. Let us say that something is ideologically primitive just in case its *notion* is not definable in terms of other notions. But not all ideologically primitive things are problematic. Similarity might well be ideologically primitive. But that can’t be good reason for denying the reality of similarity. Look at an apple and an orange. And you will see their similarity. When I say that the proponent of the connector view must posit primitives, I do not mean that those entities are ideologically primitive. What I mean is rather that they are entities that we cannot affirm or understand with our theoretical (ideological or ontological) resources.[[29]](#footnote-29)

So, the First Thesis presupposes what our theoretical resources are. For empiricists, all legitimate theoretical resources we’ve got are ones whose source is solely experience (senses, memory and imagination). It is clear that the connector is not something we can reach by our experience. So, relative to empiricist resources, the connector should be primitive. For essentialists, on the other hand, our theoretical resources include also purely philosophical beings such as essences. So, relative to essentialist resources, the connector may not be primitive. The First Thesis is meant to claim that the proponent of the connector view must posit primitives relative to theoretical resources which are richer than empiricist resources but more economical than essentialist ones – i.e., relative to resources rich enough to include ones provided by naturalist disciplines such as physics and mathematics but economical enough to exclude purely philosophical beings.[[30]](#footnote-30)

To argue for the First Thesis, let me now assume that there exists the connector in virtue of which x and y are necessarily connected. We should then think that the existence of the connector *implies* that x and y have a necessary connection because, otherwise, we would not understand the sense in which x and y have a necessary connection *in virtue of* the connection. So, the existence of the connector implies the necessary connection between x and y. That is, the existence of the connector implies that, if x and y exist, x and y are necessarily connected.[[31]](#footnote-31) Since I will make crucial use of this consequence of positing the connector in the following argument, let me call it the crucial consequence.

Let us now ask whether or not the connector is alienated from x or from y. Suppose that the connector is alienated from x. Is the connector then necessarily connected to x? Suppose that the connector is necessarily connected to x. Since the connector was assumed to be alienated from x, we have another alienated necessary connection between the connector and x. Since the alienated necessary connection between x and y requires the connector, by parity, the alienated necessary connection between the connector and x also requires something else (call it the connector\*) in virtue of which the connector and x have a necessary connection. And, by the same reasoning, we are required to posit the connector\*\*, the connector\*\*\*, and so on ad infinitum. We run into an infinite regress. But, this infinite regress seems to be unacceptable.[[32]](#footnote-32) So, under the supposition that the connector is alienated from x, it must be the case that the connector is not necessarily connected to x.

So, suppose that the connector is not necessarily connected to x. And the connector can exist without x existing: there is a world *w* in which the connector exists while x doesn’t. But this possibility looks strange. In *w*, x does not exist. Nonetheless, there is a fact about x in *w*. It is because, in *w*, the connector exists and thus, by the crucial consequence, the existence of the connector implies that there is the fact that, if x and y exist, x and y are necessarily connected. But, how could it be the case that there is a fact about x though x does not exist? This would be possible if one assumes either that, in *w*, there is x though x does not exist or that, in *w*, x can have a relation to y without existing there (while existing at the actual world). One can make sense of neither case unless one is committed to essences.[[33]](#footnote-33) If the proponent of the connector view makes either assumption, then she would have to posit something primitive.

Hence, if the proponent of the connector view supposes that the connector is alienated from x, then she faces infinite regresses or she must posit primitives. To avoid admitting primitives, she must assume that the connector is not alienated from x. Similarly, she must assume that the connector is not alienated from y.

Now suppose that the connector is alienated neither from x nor from y: the connector is internally connected to x and y. This generates four logical combinations:

(i) The connector internally depends on x, and the connector internally depends on y.

(ii) The connector internally depends on x, and y internally depends on the connector.

(iii) x internally depends on the connector, and the connector internally depends on y.

(iv) x internally depends on the connector, and y internally depends on the connector.

It is easy to see that (ii) and (iii) can’t be true. According to (ii) or (iii), the connector internally depends on only one of x and y. But, it seems arbitrary to think so in view of the fact that we know nothing about the connector. Secondly, if we plausibly assume that internal dependence is transitive, then, from (ii), it follows that y internally depends on x. But this contradicts the supposition that x and y are alienated. (ii) is contradictory. Similarly, so is (iii).

Let us consider (iv). If we assume (iv), since x internally depends on the connector, the existence of x implies the existence of the connector.[[34]](#footnote-34) By the crucial consequence, the existence of the connector implies the necessary connection between x and y. So, it follows that the existence of x implies the necessary connection between x and y. This contradicts the supposition that x and y are alienated and thus they by themselves do not have a necessary connection. (iv) can’t be true either.

This leaves us only with (i). Given (i), the connector internally depends on x and y. If x and y are the only things on which the connector internally depends, since all the connector requires for its identity are its relations to x and y, x and y would be sufficient for implying the existence of the connector. But, if the existence of x and y implies the existence of the connector, by the crucial consequence, it follows that the existence of x and y implies that x and y have a necessary connection. But this contradicts the supposition that x and y are alienated and thus they by themselves do not have a necessary connection. Hence, x and y are not the only things on which the connector internally depends. That is, there must be something else on which the connector internally depends. What would be such a thing? Whatever it may be, clearly, it seems to be something that we cannot grasp except by “ontological insight.” It is primitive. Hence, if one assumes that the connector is internally connected to x and y, one has to accept something primitive.

What we have considered shows that whether or not the proponent of the connector view assumes that the connector is alienated from x or y, she must think that the connector, if such there be, is something primitive. This completes my defense of the First Thesis. If one accepts the connector view, then one must posit primitives. So, the connector view is potentially in jeopardy.

The First Thesis alone fails to be decisive reason for rejecting the connector view. If primitives are indispensible for certain theoretical roles, we should not dismiss them simply because we do not have powerful enough theoretical means to accommodate them. Our theory might evolve so as to explain them later. Or, perhaps, our world includes things we might not be able to grasp with any possible theoretical resources. However, we would have good reason for rejecting the connector view if it is not necessary to posit primitives to which the connector view commits us – i.e., if those primitives are not indispensible for any theoretical roles.

I shall not attempt here the probably impossible task of examining all relevant theoretical roles and showing that alleged primitives are not indispensible for the roles. To defend the Second Thesis, I will rather provide a general strategy for arguing that primitives are avoidable. Recall that the connector was assumed to allow for alienated necessary connections. If we need the connector, it is because we need necessary connections. Suppose that, for whatever reason, we need causal necessary connections. But, from the need of causal necessary connections, we do not have to conclude that causal necessary connections are alienated necessary connections if we only give up the idea that causes and effects, as opposed to the local conception of material things, are alienated, and admit that, for example, effects internally depend on their causes.[[35]](#footnote-35) Of course, Humeans then would have to disagree with Hume on Hume’s fundamental contention that causes and effects are alienated and thus not necessarily connected. But Humeans already departed from Hume’s empiricism. Then it is unclear why they would or should admit primitives that seem to undermine their philosophical project in order to hold onto the alienation between causes and effects. If there is something in Hume that Humeans must save, it is Hume’s principle, not Hume’s empiricist doctrine.

Thus, whenever the proponent of the connector view claims that we need primitives to save some necessary connections indispensible for certain theoretical roles, one can show that those roles can be served by what we already have in our theoretical resources only if we realize that what we have intuitively thought to be alienated are not really alienated. It is unnecessary for us to live with primitives to which the connector view commits us. The Second Thesis vindicated as well. So, if one accepts the connector view, then one must posit unnecessary primitives.

If my argument is right, then anyone who rejects Hume’s principle must posit either illegitimate brute facts or unnecessary primitives. This argument might not convince those who are willing to include purely philosophical beings in their theoretical resources. But, this should give Humeans very strong reason for holding onto Hume’s principle.

**5. Conclusion**

The Humean ban on necessary connections is influential in contemporary metaphysics. In order for the Humean ban to be something of normative force, Humeans must provide a principled criterion of things that have necessary connections. I have offered Humeans Internal Connection as the criterion. Internal Connection consists of Hume’s principle and the converse of Hume’s principle. Since the latter is obviously true, the substantive element of Internal Connection is Hume’s principle: no internal connection; no necessary connection. Behind Hume’s principle is the naturalist aspiration to explain things without recourse to a “first” philosophy. We should note that the naturalist aspiration is in nature methodological. It must not be conflated with Hume’s doctrine of alienation: all things are alienated. It must be separated from Humeans’ doctrine of restricted alienation: some are alienated and some are internally connected. It also must not be taken to rule out the doctrine of no alienation: all things are internally connected. Which doctrine should one accept? It needs separate discussion. In any case, Hume’s principle can serve its role as a metaphysical guideline for Humeans.

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1. There might be other (arguable) cases where Humeans may allow necessary connections. See Wilson (2010: 603). [↑](#footnote-ref-1)
2. See, for example, Bohn (2008: 167-8). [↑](#footnote-ref-2)
3. Kim (1981). [↑](#footnote-ref-3)
4. Maddy (1990). [↑](#footnote-ref-4)
5. I am indebted to Hwan Sunwoo for this possible answer. [↑](#footnote-ref-5)
6. The universal whiteness may have a necessary connection to some *unspecific* particular if universals cannot exist without being instantiated. (For more on this, see MacBride 1999.) But, even if universals cannot exist without being instantiated, the universal whiteness does not have a necessary connection to a *specific* particular. [↑](#footnote-ref-6)
7. For more on the Aristotelian view, see Schaffer (2009). [↑](#footnote-ref-7)
8. Schaffer (2010) argues that the world as a maximal mereological sum of actual concrete things is such that everything else ontologically depends on the world. His arguments would support the more general view that parts ontologically depend on their sums. [↑](#footnote-ref-8)
9. For example, Lowe writes: “For there are various ways in which one being may be said to depend upon one or more other beings, in a sense of ‘depend’ that is distinctly metaphysical in character and that may be contrasted, thus, with various causal senses of this word” (2008). See also Audi (forthcoming). [↑](#footnote-ref-9)
10. See Schaffer (2009); Rosen (2010). [↑](#footnote-ref-10)
11. See Fine (1994; 1995). For an excellent motivation for non-causal and yet objective metaphysical dependence relations, see also Kim (1994). [↑](#footnote-ref-11)
12. Fine (1995: 274). [↑](#footnote-ref-12)
13. Essence in Fine’s sense may transcend existence. In Fine’s essentialism, there is in principle room for objects whose essence excludes existence (Fine 1995: 274). If there is a Meinongian round square whose possibility is not ruled out by Fine’s essentialism, it does not exist in virtue of its essence. So, there can be an object that does not exist. Fine’s essentialism is compatible with rejection of actualism, according to which necessarily, everything that is exists. [↑](#footnote-ref-13)
14. Socrates cannot exist without 2 existing because it is necessary that 2 exists. Nonetheless, Socrates has no essential connection to 2. Essential Connection is false. So, Essential Connection must be restricted. From the fact that 2 necessarily exists, it logically follows that, for any object x, x cannot exist without 2 existing. So, the fact that Socrates cannot exist without 2 existing is a logical consequence of some necessary truth which does not involve reference to Socrates. Intuitively, Socrates plays no particular role in the fact that Socrates cannot exist without 2 existing. If, and only if, the fact that there is a necessary connection between x and y is a logical consequence of some necessary truth that does not involve reference to x or y, let us say that the necessary connection between x and y is a derivative one; and that a necessary connection is primary just in case it is not a derivative one. We may then qualify Essential Connection: x and y have a primary necessary connection if and only if x and y have an essential connection. But, I will leave Essential Connection unqualified, assuming that derivative necessary connections are excluded in the context. The main discussion will not turn on this complication. [↑](#footnote-ref-14)
15. For a variety of skeptical views about Aristotelian essentialism in the early modern period, see Banach (2007) and Hill (2007). [↑](#footnote-ref-15)
16. Of course, Lewis (1968) thinks that objects have essences or essential properties in some sense: that x essentially has F means that every counterpart of x has F. But note that “essences” in Lewis’s terminology do not mean essences in the current sense. “Essentialism” in Lewis’s sense is existentialist. [↑](#footnote-ref-16)
17. This is Baxter’s interpretation (2008: 25-8). For a competing interpretation, see Garrett (1997). [↑](#footnote-ref-17)
18. See Lewis (1993). Cf. Lewis (1991). [↑](#footnote-ref-18)
19. To be more precise, Hume’s doctrine is that *there are many objects* and all objects are Hume-distinct. Throughout the paper, I will assume that there are many things in the world. The assumption might sound trivial. But, this is not universally accepted. See Horgan and Portč (2008). [↑](#footnote-ref-19)
20. See Garrett (1997). [↑](#footnote-ref-20)
21. But, strictly speaking, the argument is not valid. More specifically, from the claim that there is no world where x exists without y existing, it does not logically follow that, necessarily, x exists only if y exists unless a specific modal theory is assumed. Given Lewis’s counterpart theory, even when x internally depends on y, it can still be the case that x can exist without y existing in the sense that there is a world in which x’s counterpart exists without y’s counterpart existing, which is not contradicted by the internal connection between x and y. But I will set aside counterpart theory here. It is not because I think counterpart theory is wrong but because I think Humeans would not want their answer to the criterion question to rely on counterpart theory. [↑](#footnote-ref-21)
22. This is so because the two things are material things. If they were not material things, there would be regionally disconnected not because they occupy separate spatiotemporal regions but because they do not occupy any spatiotemporal region at all. So, they might have lacked any spatiotemporal relation. But, since they are material things, they occupy spatiotemporal regions and thus have some spatiotemporal relation. [↑](#footnote-ref-22)
23. Hume (1748/1975: Sect. VII, Pt. I, p. 63). [↑](#footnote-ref-23)
24. I think that there is good reason for thinking that (S2), despite its intuitive plausibility, is wrong. As I argue elsewhere, the reason is that the doctrine of alienation behind (S2) faces what I call the problem of alienation. [↑](#footnote-ref-24)
25. See Wilson (2010; forthcoming). [↑](#footnote-ref-25)
26. But one might dismiss the BF view because he rejects brute facts altogether. See, for example, Della Rocca (2010). [↑](#footnote-ref-26)
27. On some modal theories, it is necessary that there is something. But, even if this is so, one might doubt that we thereby have an explanation of why there is something. See Lewis (1986a: 73-4). [↑](#footnote-ref-27)
28. That is, it will give us the kind of reason that “has genuine weight, but nonetheless may be outweighed by other considerations” (Kagan 1989: 17n). [↑](#footnote-ref-28)
29. If the First Thesis is true, the connector view will turn out to be the primitive connector view. The primitive connector view should be distinguished from the BF view. On the BF view, there is nothing *whatsoever* in virtue of which x and y have a necessary connection. On the primitive connector view, however, there is something which is responsible for the necessary connection. The kind of commitment the proponent of the primitive connector view makes is epistemological: there is something beyond our epistemic reach. [↑](#footnote-ref-29)
30. I have used the term ‘naturalism’ somewhat in a loose way. One way to make it more precise would to articulate what makes a discipline a naturalist discipline. (For more on this, see Maddy 2005.) I cannot pursue this articulation here. But, I believe naturalism understood in this loose and intuitive sense is sufficient for my purposes. [↑](#footnote-ref-30)
31. Though the existence of the connector implies the necessary connection between x and y, it does not have to imply the existence of x or the existence of y. So, the existence of the connector implies that, *if x* *and y exist*, they have a necessary connection. [↑](#footnote-ref-31)
32. Not all infinite regresses are vicious. But, I think that this one is vicious. Why is it so? I cannot get into the details of this question here. So, I will just leave the claim at an intuitive level. [↑](#footnote-ref-32)
33. If one accepts the former, one must reject actualism, according to which, necessarily, everything that is exists. If one accepts the latter, one must reject serious actualism, according to which, necessarily, everything has a property only if it exists. [↑](#footnote-ref-33)
34. Since x internally depends on the connector, the identity of x includes its relation to the connector. Without the connector, x would not have the relation to the connector, which implies that x would not be the same. So, if the connector were not to exist, x would not exist. If x exists, the connector must exist. [↑](#footnote-ref-34)
35. Spinoza famously espoused this view. Shoemaker (1979; 1980), I believe, can be understood as a contemporary espouser of this view. [↑](#footnote-ref-35)