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David Hume:
Epistemology and Metaphysics

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Helen Beebe · Markus Schrenk

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Hume on Knowledge of Metaphysical Modalities

Daniel Dohrn, Universität Konstanz

Abstract

I outline Hume's views about conceivability evidence. Then I critically scrutinise two threats to conceivability-based modal epistemology. Both arise from Hume's criticism of claims to knowing necessary causal relationships: Firstly, a sceptical stance towards causal necessity may carry over to necessity claims in general. Secondly, since – according to a sceptical realist reading – Hume grants the eventuality of causal powers grounded in essential features of objects, conceivability-based claims to comprehensive metaphysical possibilities seem endangered. I argue that although normal conceivability-based claims are defensible, they are *prima facie* vindicated.

Humes Ansichten über Vorstellbarkeit als Indikator für Möglichkeit werden zusammengefasst. Dann werden zwei Schwierigkeiten für eine auf Vorstellbarkeit basierende modale Erkenntnistheorie aufgeworfen. Beide entstehen aus Humes Kritik an Ansprüchen auf Wissen notwendiger kausaler Beziehungen. Erstens könnte sich eine skeptische Haltung gegenüber kausaler Notwendigkeit auf Ansprüche, notwendige Zusammenhänge zu kennen, im allgemeinen auswirken. Zweitens gesteht Hume gemäß einem skeptischen Realismus die Eventualität kausaler Kräfte zu, die in wesentlichen Eigenschaften der Dinge gründen. Dies scheint unvereinbar mit der auf Vorstellbarkeit gestützten Behauptung umfassender metaphysischer Möglichkeiten. Dagegen soll gezeigt werden, dass auf Vorstellbarkeit gestützte modale Wissensansprüche zwar widerlegbar, aber *prima facie* gerechtfertigt sind.

In recent years, the epistemology of modal judgements, judgements of possibility and necessity, has gained much attention.¹ But how do we come to know such modal claims? The classical answer to this question is to forge a link between what we can and cannot conceive and what is possible (cf. Yablo 1993, Tidman 1994). The most influential modern formula rendering the (in)conceivability-(in)possibility link is due to Stephen Yablo:

Thus *p* is conceivable for me if (CON) I can imagine a world that I take to verify *p*. Inconceivability is explained along similar lines: (INC) I cannot imagine any world that I don't take to falsify *p*. ... when I imagine a world of such and such a type, it appears to me that a world of that type could really have existed. But when I take it to verify *p*, I take it that if a world like that had existed, then *p* would have been the case. So, when I imagine a world which I take to verify *p* – and this is what it is to

conceive that *p* on the proposed account – I have it appear to me that *p* is possible. (Yablo 1993, 29–30)

The main historical source of this discussion is David Hume. However, it seems questionable whether Hume really endorsed the (in)conceivability-(in)possibility link. I maintain that to Hume conceivability is a guide to metaphysical modalities (section 1). I address two opposite problems for this view, which arise from Hume's reasoning about causality. Firstly, since our claims to causal necessity are doubtful, there are no metaphysical necessities imposing constraints on the world such as to rule out that the world be a certain way (section 2). Secondly, since according to a sceptical realist reading there might be causal powers rooted in the essence of things, possibility claims ruling out such causal powers cannot be upheld (section 3). This conflicts with conceivability being a guide to possibility.

1. Conceivability as a Uniform Guide to Modalities

1.1 *Conceivability and Inconceivability, Possibility and Impossibility*

In this section, I give a general outline of Hume's conceivability-possibility link:

'Tis an establish'd maxim in metaphysics, That whatever the mind clearly conceives includes the idea of possible existence, or in other words, that nothing we imagine is absolutely impossible. We can form the idea of a golden mountain, and from thence conclude that such a mountain may actually exist. We can form no idea of a mountain without a valley, and therefore regard it as impossible. (THN 1.2.2.8, 32)

Hume seems to endorse the following principle:

(CP) If it is clearly and distinctly conceivable that *p*, it is possible that *p*.²

It is quite undeniable that Hume thinks that conceivability, suitably qualified, reveals metaphysical possibility' (Kail 2007, 94). Furthermore, Hume also seems to endorse an inconceivability-impossibility link:

(IM) If upon trying to clearly and distinctly conceive *p*, *p* turns out to be inconceivable, it is not possible that *p*.

As the example of the mountain already shows, Hume takes the conceivability-possibility link to go beyond relations among ideas. Ideas inevitably are about objects:

If this therefore be absurd in *fact and reality*, it must also be absurd in *idea*; since nothing of which we can form a clear and distinct idea is absurd and impossible. But to form the idea of an object, and to form an idea simply is the same thing ... Now as 'tis impossible to form an idea of an object, that is possess of quantity and quality, and yet is possess of no precise degree of either; it follows that there is an

¹ One main reason is that philosophical judgements such as 'knowledge is justified true belief' usually involve modal claims (cf. discussion in Williamson 2007, 179–208). There cannot be a case of justified true belief that does not amount to knowledge.

² The conceivability-possibility link has been attacked by some of Hume's contemporaries. For an excellent discussion and rejection of Reid's criticism see van Woudenberg (2006).

equal impossibility of forming an idea, that is not limited and confined in both these particulars. (THN 1.1.7.6, 19–20)³

Here Hume repeats the conceivability-possibility link (CP) and relates it to objects. Since ideas purport to be about objects, conceivability must be suited to provide evidence about independent metaphysical possibilities in order to meet our expectations.

1.2 Varieties of Inconceivability

In this section, I address doubts as to whether inconceivability is a reliable guide to impossibility (IM): ‘... Hume rejects the claim that whatever is inconceivable is impossible’ (Lightner 1997, 114).⁴ For there might be possibilities that are not clearly and distinctly conceivable. A person who is blind cannot conceive a particular colour, and a person who has not tasted pineapple cannot conceive the taste of pineapple: ‘We cannot form to ourselves a just idea of the taste of a pineapple, without having actually tasted it’ (THN 1.1.1.9, 5).

Such persons fail to conceive things and hence to appreciate possibilities which are a matter of course to people who are sighted or acquainted with pineapples.⁵ Thus, we have a certain epistemic asymmetry between possibility and impossibility.

However, Hume treats possibility and necessity alike. We can conceive a golden mountain; hence it is possible. We cannot conceive a mountain without a valley; hence it is impossible. One way out of this difficulty is to further qualify inconceivability. There is inconceivability due to lack of representational resources; as we will see, there might be inconceivability due to careless thinking; and there is inconceivability due to detecting a contradiction (THN 1.3.3.3, 79–80, see below): ‘... if forming an idea of something would involve forming a contradictory idea, then that thing is impossible. Hume accepts this latter principle’ (Lightner 1997, 114). On trying to conceive a mountain without a valley, we detect a contradiction. Hence it is impossible that there be a mountain without a valley. In contrast, a blind person is not tempted to deem it absurd that colour properties are not reducible to other properties: ‘... as if a blind man should pretend to find a great many absurdities in the supposition, that the colour of scarlet is not the same with the sound of a trumpet, nor light the same with solidity’ (THN 1.3.14.25, 168). Whenever we detect a contradiction on trying to combine clear and distinct ideas, we may infer this combination to be impossible. Now the question

³ However, Hausman maintains that even claims to know essences of objects ‘... need not be interpreted to apply only to objects “out there” or impressions like color spots ... [instead, one may take Hume’s] use of object pronominally, plugging in whatever are his objects at the time – sometimes external objects, sometimes ideas, sometimes impressions, sometimes properties’ (Hausman 1975, 56). So one might doubt that Hume talks about mind-independent objects. But ‘in fact and reality’ indicates that he also deals with objects ‘out there’.

⁴ From a more systematic perspective, other philosophers also defend the conceivability-possibility link but reject the inconceivability-impossibility link (cf. van Woudenberg 2006).

⁵ Hume does not explicitly draw this consequence, but Locke does, as Lightner notes (Locke 1690, IV.III.23; Lightner 1997, 113).

is how to select cases of inconceivability due to contradiction and not due to other reasons. The parallel case of conceivability suggests the following sufficient condition: For every combination of items A, B, \dots , which turns out to be inconceivable, whenever we possess sufficient representational resources to clearly and distinctly represent the items to be combined separately, i.e. the idea of A , the idea of B, \dots , inconceivability is due to contradiction. The main advantage of this view is that both conceivability and inconceivability evidence rest on the same sort of mental operation: using sufficient representational resources of representing p to conceive p . When p turns out to be conceivable, the operation succeeds; when p turns out to be inconceivable, the operation fails. But we have enough representational resources to start with the operation.⁶ In contrast, in the case of inconceivability due to lack of resources, we simply cannot develop a suitable representation. Usually we can judge when we are in a position to clearly and distinctly represent something, although our judgement is defeasible.

A further advantage of this view is that it is able to avoid difficult issues of accounting for a contradiction. Take the case of causal necessity: where is the alleged contradiction in the idea of the purported cause not following the idea of the purported effect? I propose that it consists in a felt inability to conceive the one as obtaining without the other, given clear and distinct ideas of both. Another example: what is absurd in an object being red all over and green? It is our inability to conceive an object being red all over and green given clear and distinct ideas of being red and being green.⁷

2. Asymmetry between Statements of Possibility and Necessity: the Case of Causality

In this section, I will discuss the intimation that claims to necessity do not track independent modalities. Possibility and necessity can be judged by (in)conceivability evidence which is readily available. Nothing excludes that in principle possibility and necessity are independent of our verdict. However, Hume apparently treats possibility and necessity very differently: ‘... an important theme in Hume’s work is the mind-dependence of necessity ... The modern reader may wonder why Hume does not say the same about possibility’ (Gendler and Hawthorne 2002, 15); ‘... something is necessary because the mind treats it as such’ (Gendler and Hawthorne 2002, 32).

⁶ In my opinion, examples forwarded by Michael Huemer against the standard approach to epistemic possibility show that epistemic possibility is beset by a parallel problem of accounting for representational resources. The question is whether some p we cannot think of due to lack of representational resources may count as an epistemic possibility for us (cf. Huemer 2007; Huemer uses his examples to make a different point).

⁷ For a contemporary conception of the necessity that p in terms of $\neg p$ leading to contradiction see Williamson (2007, 157). In my view, Williamson also has difficulties to account for the above examples. The conceivability-based solution proposed may allow him to cope with them.

A straightforward explanation of the asymmetry is this: whereas Hume deems conceivability a reliable guide to independent possibility, the same does not seem to hold for necessity. When we reckon some necessary connection to obtain *in re*, among objects, we take some constraint to be imposed on independent objects. There are ways these objects cannot be. But all we can know is that there is some determination of the mind to proceed from one idea to the other; this determination prompts us to judge that there is a connection *in re*. It is open whether objects as they are *in re* are constrained by such a connection. I choose this way of putting the problem in order to evade issues about projectivism or anti-realism.⁸ The shibboleth of an interpretation of Hume on modality is whether modalities are a less suitable guide to the world than anything else we claim to know. The question is: as far as we can know them at all, are things free to be in the way envisaged by a conceivability-based possibility claim, and are they limited in the way envisaged by inconceivability-based claims to necessity?

2.1 *Uncertainty of Causal Claims*

In this section, I trace the asymmetry puzzle to its source, the argument about claims to causal necessity. Hume considers the possibility of providing a demonstrative proof of causal relationships:

We can never demonstrate the necessity of a cause to every new existence, or new modification of existence, without shewing at the same time the impossibility there is, that any thing can ever begin to exist without some productive principle; ... Now that the latter proposition is utterly incapable of a demonstrative proof, we may satisfy ourselves by considering, that as all distinct ideas are separable from each other, and as the ideas of cause and effect are evidently distinct, 'twill be easy for us to conceive any object to be non-existent this moment, and existent the next, without conjoining to it the distinct idea of a cause or productive principle. The separation, therefore, of the idea of a cause from that of a beginning of existence, is plainly possible for the imagination; and consequently the actual separation of these objects is so far possible, that it implies no contradiction nor absurdity; and is therefore incapable of being refuted by any reasoning from mere ideas, without which 'tis impossible to demonstrate the necessity of a cause. (THN 1.1.3, 79–80)

There can be no demonstrative proof of causal relationships. A general causal law that every event must have a cause must rest on the following claim: it is impossible for something to come into existence without something producing it. In order to sustain this claim, the ideas of the purported cause and the purported effect must not be separable in imagination. Yet, any idea can be separated from

⁸ For a thorough projectivist reading of Hume on modality see Blackburn (1993). One main problem for Blackburn's reading is that he does not distinguish claims to necessity which are problematic, e.g. claims to causal necessity, and modal claims in good standing, e.g. those concerning the possibility of golden mountains and the impossibility of a mountain without a valley. Passages like the argument against infinite divisibility considered below cast doubt on Hume drawing a distinction between realist regions and a projectivist modal region of discourse.

any other that is distinct from it. One can have the one without the other. Hence the objects of these ideas can be separated; one can exist without the other.⁹

Since there is no demonstration of necessary causal relationships, how do we come to maintain these necessities? The claim to necessity arises from the following mechanism:

'Tis natural for men, in their common and careless way of thinking, to imagine they perceive a connexion betwixt such objects as they have constantly found united together; and because custom has render'd it difficult to separate the ideas, they are apt to fancy such a separation to be in itself impossible and absurd. (THN 1.4.3.9, 223)

Thinking carelessly, people feel unable to separately imagine the ideas of objects that regularly succeed each other. Consequently they take the corresponding objects to be necessarily causally related. They deem separate existence of such objects to involve an absurdity, i.e. a contradiction. Hence they take the criterion of a necessary causal connection to be fulfilled.¹⁰ Hume's argument can be interpreted in a weaker and a stronger way:

Weak Reading (WR): In order for claims to causal necessity to be vindicated by demonstration, ideas of causally related objects must not be separable. Since all ideas of objects are separable, claims to causal necessity are doubtful.

⁹ This argument must be qualified, however. Helen Beebe argues that in mathematical reasoning, there might be an intuitive or demonstrative connection among ideas notwithstanding their separability:

... the appropriate test in the case of intuition and demonstration, I claim, is not separability at all, but conceivability ... for each pair of ideas, we can call to the mind one without the other. But if we do call both ideas to mind and consider them under the relevant relation (greater than, darker than, congruent with) we cannot conceive of the relation failing to obtain (Beebe 2006, 29–30).

Here a further role of conceivability becomes obvious. It is the ultimate test of whether there are certain connections among ideas which give rise to modal verdicts. Conceiving is a special mental operation which must be distinguished from merely entertaining ideas. In order to figure out whether *A* and *B* necessarily stand in a certain relation, we must try to entertain ideas of *A* and *B* under a certain relation and then try to imagine them not standing in this relation. Yet causal reasoning is special: 'The case of causation, however, is special, because my coming to know by demonstration that *c* is necessarily connected to *e* would require that the ideas of *c* and *e* be inseparable' (Beebe 2006, 30). Since the only way to demonstrate causal relationships is that the idea of the cause and the idea of the effect inevitably follow each other, their separability refutes the alleged connection. I am not sure to what extent this reasoning counts in favour of the weak reading of Hume's argument, perhaps my above presentation of inconceivability will have to be modified to cope with it. Furthermore, perhaps my above presentation of inconceivability will have to be adapted by taking into account the relationship to be represented.

¹⁰ The counterfactual import of Hume's notion of causality is often neglected. Harris objects to Hume: '... our ordinary conception of causality is based not just on observation of a regular sequence, but also on a consideration of what we imagine would have happened had circumstances been different' (Harris 2000, 119). But Hume's conceivability argument must rest on imagining what would have happened had circumstances been different, namely had the alleged effect not followed the alleged cause.

Strong Reading (SR): According to claims to causal necessity, it is impossible for objects that are purportedly causally related to exist without each other. But since it is conceivable that they do, it is possible.¹¹

2.2 *The Strong Reading: Conceivability Argument vs. Causal Claims*

In this section, I will further elaborate the strong reading (SR), although I do not claim that the weak reading (WR) is inappropriate.

Hume takes a crucial step: he proceeds from conceiving the alleged effect without jointly conceiving the alleged cause, to the possibility of the effect obtaining without the cause. He exploits a suitable relationship between separability of ideas and difference of objects:

First, we have observed, that whatever objects are different are distinguishable, and that whatever objects are distinguishable are separable by the thought and imagination. And we may here add, that these propositions are equally true in the *inverse*, and that whatever objects are separable are also distinguishable, and that whatever objects are distinguishable are also different. (THN 1.1.7.3, 18)

Just when objects are different, the ideas clearly and distinctly representing them are separable by the imagination. Perhaps the separability-difference link can be put as follows: a feature which ideas purport to share with the objects they represent is their separability. It is part of the natural representing function of ideas that if they can be separated from each other, they purport to represent their objects as being able to exist independently of each other. Hence entertaining two ideas independently of each other amounts to conceiving their objects as being independent of each other. Hume envisages a copy-and-paste procedure:¹² But as all distinct ideas are separable, 'tis evident that there can be no impossibility of that kind. When we pass from a present impression to the idea of any object, we might possibly have separated the idea from the impression, and have substituted any other idea in its room' (THN 1.3.6.1, 87). The upshot of these considerations is Hume's *principle of plenitude*:

(PP) For any clear and distinct ideas that can be separated, the objects of these ideas can exist independently of each other.¹³

Even if the weaker reading (WR) of Hume's argument is preferred, the quotes considered yield evidence that Hume accepts (PP).

¹¹ Peter Kail seems committed to (SR) (cf. Kail 2007, 88).

¹² *Ch#*: If we imagine a region that is (intrinsically) *F* adjacent to a non-overlapping region that is (intrinsically) *G*, then it is possible that there is a region that is *F* in a world where no non-overlapping region is *G*.

Paste₂: If we can imagine a region that is (intrinsically) *F*, and we can imagine another region that is (intrinsically) *G*, then it is possible that there is a region that contains two adjacent sub-regions, one *F*, another *G*, ... it is on the basis of *Ch#*, that Hume derives the conclusion that any material particle can exist in the absence of any other, distinct quality. (Gendler and Hawthorne 2002, 22)

¹³ Given my discussion of Beebe, perhaps I should rather say that objects do not have to stand in a certain relationship whenever we can conceive of this relationship not obtaining.

In the strong reading (SR), central to Hume's argument, is a conflict in modal reasoning. On the one hand, there is the felt inability to imaginatively conceive a separation between different objects; on the other hand, there is the ability to always imaginatively separate these objects. Hume insists that we can conceive any alleged cause without its alleged effect and vice versa. This is sufficient to put into doubt the claim of a necessary connection.¹⁴ Now Hume's argument can be understood in two ways:

(i) as a thought experiment:¹⁵ we experience a connection as coercive. We conclude that there is a necessary connection between objects. Since we find it inconceivable that these objects are not connected, we conclude that their connection is necessary. In order to test our claim, we assiduously try whether we can break this connection in imagination. We succeed. Hence contrary to first appearance, the connection was not coercive. Our inconceivability claim was erroneous. It is conceiving itself which refutes an inconceivability claim.

(ii) as arising from reflection: by philosophical reflection on the nature of our mind and its ideas and the workings of both, we come to a general conclusion: we can always separate objects we are prone to associate which each other whenever we have suitably distinct ideas of them. Without actually running the test whether we can break the connection we have felt to be coercive, we know that if we performed the test, we would be successful. An inconceivability claim is countered

¹⁴ I am grateful to an anonymous referee for suggesting that Hume is more confident that there are causal relations than that there are metaphysically necessary connections between causes and effects. This view is supported by Hume's notion of a cause as enshrined in various definitions: constant conjunction seems sufficient to conform to this notion (cf. Garrett 1993). While I am happy to grant the point, I find it difficult to reconcile with some of Hume's other convictions. One way of distinguishing confidence in causal relations from confidence in their metaphysical necessity would be to separate causal claims from claims to causal necessity. Yet Hume insists: 'According to my definitions, necessity makes an essential part of causation; and consequently liberty, by removing necessity, removes also causes, and is the very same thing with chance' (THN 2.3.1.18, 407, cf. Harris 2003, 452). Another way of maintaining the distinction would be to deem causal necessity different from metaphysical necessity. I will consider this alternative below. My result will be that – provided necessity and certainty do not coincide – there is only one kind of necessity. The difference between mathematical and causal necessity is that the former is certain, the latter is not. A third way of maintaining that Hume is more confident in causal relationships than in their metaphysical necessity is to say that, in everyday life, we accept causal relationships without being concerned about their metaphysical necessity. Taking into account that Hume often prefers a psychological to a normative stance towards epistemological questions, we may account for our confidence in causal relationships along the lines of Hume's statement about the mind's causal powers: 'To explain the ultimate causes of our mental actions is impossible. 'Tis sufficient, if we can give any satisfactory account of them from experience and analogy' (THN 1.1.7.11, 22).

The ultimate causes of mental actions cannot be explained but satisfactorily accounted for. Although conceivability evidence countervails claims to causal necessity and consequently tends to diminish their certainty, this does not have to undermine their providing psychologically satisfactory guidance in everyday life.

¹⁵ Sorensen accounts as follows for thought experiments: 'An experiment is a procedure for answering or raising a question about the relationship between variables by varying one (or more) of them and tracking any response by the other or others' (Sorensen 1992, 186). 'A thought experiment is an experiment [...] that purports to achieve its aims without the benefit of execution' (Sorensen 1992, 205). However, it seems doubtful that thought experiments are not executed. They are executed in the mind, by conceiving a situation in which the respective variable is varied.

by a competing conceivability claim which does not rest on conceivability itself. We may wonder what justificatory standing reflection has.¹⁶ But in any case, Hume does not have to bother. For if he is right, one would merely have to perform the test and one would succeed. In both interpretations the picture is this: a claim that one is unable to conceive something is overridden by a claim that one is able to do so.¹⁷

2.3 *The Essence of Necessity?*

In this section, I discuss whether Hume's argument about causal necessity applies to necessity in general. Hume does *not* say that possibility is something that exists merely in the mind. In contrast, he proceeds from something's being conceivable to its being possible. Possibility claims seem to render ways things could turn out to be. Quite the contrary for necessity. Consider Hume's own way of putting his result:

This therefore is the essence of necessity. Upon the whole, necessity is something, that exists in the mind, not in objects; nor is it possible for us ever to form the

¹⁶ I always find it difficult to use normative vocabulary in reconstructing Hume's epistemology. Terms like 'certainty' which do not bear normativity on their face often seem more appropriate. As my discussion of our confidence in causal relationships in spite of countervailing evidence indicates, sometimes purely psychological vocabulary might be most apt to capture what Hume has in mind. In spite of such worries, I will sometimes adhere to normative vocabulary.

¹⁷ Does the inconceivability claim rest (i) on real inconceivability or (ii) the mere appearance of inconceivability?

(i) It is really inconceivable that objects are separated which purport to be causally related. Our feeling of coercion is identified with a lack of conceivability. Then this incapability is or could be overcome. As a result, we become capable of conceiving objects as not being related. Only in this view, we have genuine conceivability evidence in favour of causal necessity. There are conflicting conceivability claims. We may ask why one defeats the other. In this case, it is not enough to actually perform a separation of ideas in order to refute the alleged inability to separate them. One must also provide a reason why the exhibited ability to separate objects has a better standing than the manifest inability to separate them. One such reason is a general reflective inquiry into the workings of our mind which shows that the purported inability is due to 'common and careless ways of thinking' while the contrasting ability is not. This reason could be backed by an error theory which explains how we come to careless ways of thinking and why they are to be blamed epistemically. Another possibility is an *experimentum cricis*: fixing epistemic optimality conditions under which a showdown between the inconceivability and the conceivability claim actually takes place, conceivability prevails.

(ii) Instead of direct (in)conceivability evidence, evidence which is owed to (in)conceivability, we at best have genuine evidence that something is inconceivable. It only appears inconceivable that the objects in question be separated. It is never really inconceivable. Consider Yablo's proposal: 'Without suggesting that Hume would go quite so far, I take the idea to be that conceiving is in a certain way analogous to perceiving. Just as someone who perceives that *p* enjoys the appearance that *p* is true, whoever finds *p* conceivable enjoys something worth describing as the appearance that it is possible' (Yablo 1993, 5). This reading may put constraints on seeming conceivability. For surely someone maintaining causal claims enjoys the appearance that their breaking is impossible.

Or perhaps the evidence that something is inconceivable is merely spurious. Genuine conceivability evidence or reflection uncovers that there was no genuine evidence of inconceivability. The challenge to this view is to distinguish genuine from spurious evidence. Again, one way is reflection on the workings of the mind which leads to an explanation why we are misled about conceivability; another is an *experimentum cricis* which reveals merely seeming evidence.

most distant idea of it, consider'd as a quality in bodies. Either we have no idea of necessity, or necessity is nothing but that determination of the thought to pass from causes to effects and from effects to causes, according to their experienced union. (THN 1.3.14.20, 165–166)

Here, one might take Hume to express a general limitation of claims to necessity. Necessity does not exist in objects. Either we have no idea of it, or necessity is limited to the realm of thought. Necessity exists in the mind. It is a determination of thought. Some connection which really exists in the mind is projected into the world, and taken to exist between objects.

I want to argue against the following sceptical consequence:

Sceptical Hypothesis (SH): Claims to necessity are not suited to track ways things could not turn out to be.

For several reasons, we should hesitate to endorse (SH).

(i) Hume here deals merely with causal necessity. Is necessity really reducible to the necessity of causal relationships? It seems as if it is: '... the terms of *efficacy, agency, power, force, energy, necessity, connexion, and productive quality, are all nearly synonymous ...*' (THN 1.3.14.4, 157). But are there no mathematical necessities? In the *Dialogues Concerning Natural Religion*, Philo characterises an arithmetic calculation: '... a skillful Algebraist immediately concludes it to be the Work of Necessity, and demonstrates, that it must forever result from the Nature of these Numbers' (Hume 1779, 218). The algebraist does not project necessity into the nature of numbers; she traces their nature. Now one might suspect that the necessity associated with causal claims and the necessity claim enshrined in mathematical judgement are distinct.¹⁸ For instance, today many philosophers are inclined to regard mathematical statements as metaphysically necessary and causal claims as at most nomically necessary.¹⁹ If there were a difference, my case against denying *in re* necessities would be strengthened; arguments that put into doubt causal necessity do not pertain to claims to metaphysical necessity. Anyway Hume insists that metaphysical necessity is essentially the same as causal necessity:

Thus as the necessity, which makes two times two equal to four, or three angles of a triangle equal to two right ones, lies only in the act of the understanding, by which we consider and compare these ideas; in like manner the necessity or power, which unites causes and effects, lies in the determination of the mind to pass from the one to the other. (THN 1.3.14.21, 166)

Both kinds of necessity lie in the determination of the mind. To be sure, it is so far not completely excluded that, in the case of mathematical necessity, we can be

¹⁸ This would allow Hume to be more confident about causal relations than about their metaphysical necessity.

¹⁹ One way of spelling out the difference is in terms of the difference between essential and non-essential features of the items standing in a relation: '... those relations are necessary which depend on the essential nature of the objects related' (Hausman 1975, 56). As already indicated, Hausman emphasises that claims to essentiality do not have to relate to the essence of *mind-independent* objects.

confident that there is something more than the mere determination of the mind: a relation among essences. Yet if there were different modalities involved, this would have been the place to make it clear. Since Hume does not do so, he seems to think that claims to mathematical and claims to causal necessity aim at the same kind of necessity. Nevertheless there is a deep divide between mathematical and causal claims. The first ones are certain:²⁰

All certainty arises from the comparison of ideas, and from the discovery of such relations as are unalterable, so long as the ideas don't change. These relations are *resemblance, proportions in quantity and number, degrees of any quality, and contrariety*; none of which are imply'd in this proposition, *Whatever has a beginning has also a cause of existence*. That proposition therefore is not intuitively certain. (THN 1.3.3.2, 79)

Furthermore, mathematical reasoning reveals relations of objects: 'All kinds of reasoning consist in nothing but a comparison, and a discovery of those relations, either constant or inconstant, which two or more objects have to one another' (THN 1.3.2.2, 73).²¹ If mathematical claims to necessity are due to a determination of the mind, this does not mean that they do not amount to knowledge of objects as far as we can know anything about objects. Mathematical necessities lie in the mind just as the claim that there can be no married bachelor lies in our concept of a bachelor. But just as our notion of a bachelor does, they impose constraints on the world as far as we can know it. There cannot be a mountain without a valley. One cannot be a bachelor while being married. And there can be no triangular objects such that their three angles are not equal to two right angles. In contrast, we cannot be certain that our causal claims impose such a constraint on the world.²²

(ii) Possibility and necessity are complementary: Hume envisages a close relationship between necessity and impossibility, i.e. negated possibility. Our careless way of thinking makes us think it impossible that something comes into existence without cause. Hence we take it to be necessary that nothing comes into existence

²⁰ Hume describes the epistemic difference thus: contrary to the denial of a causal claim, the denial of a true mathematical statement is not distinctly conceivable. If a mathematical statement is distinctly conceivable, it is true (EHU 12.27 (subsection III), 164). A problem of this proposal can be derived from Waxman, who notes: 'Hume regarded both mathematical and causal relations as relations between items – quantities in the one case, existents in the other – presupposed as distinct according to the criterion of the separability principle' (Waxman 2005, 501). If the items the relation of which grounds mathematical statements are separable, why can't we conceive of their relation not obtaining? When we test with regard to a certain relationship whether it is conceivable that the relata not be so related, in the case of causal claims, we realise that separation is sufficient for conceiving objects as not being causally related; in the mathematical case, we realise that it is not.

²¹ Again one may take Hume's use of 'object' pronominally. Objects do not have to be objects 'out there'. But it is more plausible to assume that mathematical judgements pertain to mind-independent objects too.

²² It might be argued that what we know is not the modal claim but a modally unqualified mathematical statement. But I do not think that Hume can make room for this distinction. The modal claim is just the way we appreciate mathematical truths.

without cause. This shows that we take the impossibility of $\neg p$ to be necessary and sufficient for the necessity of p . Furthermore, the conceivability of p (probably defeasibly) proves both that p is possible and that it is not impossible. Hence $\neg p$ being possible is sufficient for its not being necessary that p . But how can that be if the essence of necessity is a determination of thought while possibility is not? If necessity is determination of thought, the necessity of a connection in thought can stand together with the possibility that there is no connection out there *in re*. Of course, it conflicts with conceivability evidence which allows to break the determination of thought. But at least in the stronger reading (SR), it is not merely conceivability evidence but the ensuing possibility that conflicts with the alleged necessity.

A consequence of this argument could be to reject *in re* modalities altogether:

If even logical necessity has its source 'in the act of understanding' – and, Hume insists, 'that there is but one kind of necessity' [THN 1.3.14.31, 171], why not think the same is true of possibility? After all, for P to be possible is just for it not to be necessary that not- P . Though Hume never confronts the issue directly, one might extend his views on necessity as follows: the possibility of a given proposition is constituted by the capacity of the fancy to imagine its holding. (Gendler and Hawthorne 2002, 15)

If this verdict is to have any bite, possibility and necessity judgements cannot impose non-trivial constraints on objects (or release them): '... we project something essentially 'inner' onto the external world, and come to the mistaken belief that the concept of necessity we have applies to propositions in virtue of the objective properties of ideas and, as a consequence of this, we mistakenly believe that modal judgements can be true or false' (Forbes 1985, 218).

There is a decisive argument against this consequence:

(iii) Hume uses the (in)conceivability principle in order to make unrestricted *in re* modal claims in areas different from causality. Consider his argument against the infinite divisibility of extended things:

But our ideas are adequate representations of the most minute parts of extension; and thro' whatever divisions and subdivisions we may suppose these parts to be arriv'd at, they can never become inferior to some ideas, which we form. The plain consequence is, that whatever appears impossible and contradictory upon the comparison of these ideas, must be *really* impossible and contradictory, without any further excuse or evasion ...

If ... any finite extension be infinitely divisible, it can be no contradiction to suppose, that a finite extension contains an infinite number of parts. And *vice versa*, if it be a contradiction to suppose, that a finite extension contains an infinite number of parts, no finite extension can be infinitely divisible ... I first take the least idea that I can form of a part of extension ... I conclude, that whatever I discover by its means must be a *real quality of extension*. I then repeat this idea ... were I to carry on the addition *in infinitum*, I clearly perceive, that the idea of extension must also become infinite ... (THN 1.2.2.1, 29–30, penultimate emphasis mine)

Hume's argument *by reductio* may be resumed as follows: we have adequate ideas of the smallest parts of finite extended things. Since these ideas of the smallest parts are not infinitely small, they represent their objects as not being infinitely

small. Imaginatively putting finite objects together from infinitely many such parts would yield infinite objects.²³

Hume's inconceivability argument aims to establish that it is impossible for extended things to be infinitely divided. It is necessary that extended things have ultimate parts, if any. Things are such as to limit division. Hume insists that whatever he discovers by means of the least idea of a part of extension is a *real quality* of extension, at least if anything is. This discovery is a modal impossibility claim.

I conclude that the consequence should not be scepticism about necessity but at most about the necessity of causal relationships.

2.4 *Old Hume – New Hume*

In this section, I defend my results against a classical reading of Hume. Kenneth Winkler raises a deeper concern associated with the New Hume debate: Hume insists that it is not possible for us ever to form the most distant idea of necessity considered as a quality in bodies. If all our thinking about such matters as necessity rests on forming ideas, we seem unable to ponder any sort of necessity that is not reducible to a determination of the mind:²⁴ '... when we say we desire to know the ultimate and operating principle, as something, which resides in the external object, we either contradict ourselves, or talk without a meaning' (THN 1.4.7.5, 267). If Hume here only deals with causal necessity, this inability is confined to causal relationships. We cannot even think about necessary causal relationships as something that is independent of the mind. I have two answers to this concern:

(i) It does not follow that modal verdicts are in danger. For it is still open to hold that it is not the modal notion of necessity as such that is in trouble. Rather it is the idea of a causal relationship being necessary. Notwithstanding such subtleties, the capacity of thinking of *in re* causal powers may be taken as a crucial case of generally thinking about *in re* modality.

²³ In order to sustain his hypothesis that inconceivability does not imply impossibility, Lightner interprets Hume's argument as not depending on the adequacy assumption:

It looks as though Hume is making a very strong inference from the existence of minimal ideas to the existence of minimal objects, but he actually is not. What he does with his last idea of extension is say that if he were to repeat it an infinite number of times, and put them all together, this would lead to an idea of an infinitely divisible extension that is infinite in length, and so is contrary to the idea of a finite extension. And it is from these contradictory ideas that Hume concludes that space cannot be infinitely divisible. ... Hume's argument may not be a good one in the final analysis, but it does not proceed via the adequacy of our ideas, nor via the Inconceivability principle. (Lightner 1997, 120)

However, considering ideas as being the last ideas of extension and figuring out what would happen were they infinitely repeated, probably must amount to (in)conceivability evidence. Furthermore, there seems to be perfectly good reason why Hume should care about adequacy. If we assume that there may be objects which are smaller than minimal ideas, it is open to us to grant that infinite divisibility into smallest ideas requires an infinite extension while denying that infinite divisibility into smaller and smaller objects does.

²⁴ Winkler argues at length against Galen Strawson's and other New Humeans' view that we may use a notion of causal power that is not derived from ideas (Winkler 1991, 552–60).

(ii) Note that Winkler's main target is causal realism, according to which Hume believes that there are causal powers residing in objects; nevertheless his reservations about a notion of causal powers as residing in objects also apply to an agnostic stance towards such causal powers. Indeed it applies to any stance towards them. If we do not have a suitable notion of causal powers, we do not seem to be in a position to even formulate agnosticism.

Yet Winkler grants 'that Hume admits we have an idea of necessary connection, and that it comes to more than constant conjunction (even if it arises out of our experience of such conjunction)' (Winkler 1991, 573). Now this seems to be exactly what an advocate of causal realism such as Galen Strawson requires, 'causal power conceived of in some essentially non-Regularity-theory way' (Strawson 1989, p. vii), at least if such a causal power amounts to more than a determination of the mind. However, Winkler insists: 'Hume's theory of ideas is relevant to all of our conceptions. And it is a consequence of the theory (joined to his emphasis on our projective tendencies) that we have no conception at all of causation as it is in objects' (Winkler 1991, 573). On the one hand, we have a notion of causality according to which there is more to causality than mere constant conjunction. On the other hand, we do not have a notion of causality as rooted in objects. To be sure, even if, according to our notion, causality is not reducible to constant conjunction, it does not follow that we have a notion of it as rooted in objects.²⁵ Now passages from Hume which Winkler later quotes require a way of thinking about causal powers as something residing in objects: 'According to the early sections of Hume's *Natural History of Religion*, there is a natural tendency to attribute powers to invisible intelligent agents who are distinct from the bodies they inhabit' (Winkler 1991, 574).

The passage from Hume is this:

And thus, however strong men's propensity to believe invisible, intelligent power in nature, their propensity is equally strong to rest their attention on sensible, visible objects; and in order to reconcile these opposite inclinations, they are led to unite the invisible power with some visible object. (Hume 1757, 38)

If we do not possess some vehicle of thinking about causal powers of independent objects, how can there be a tendency to believe in them? Ascribing this tendency requires that one can identify a tendency of believing in causal powers. Hence one must know what it is to represent independent causal powers. Notwithstanding the difficulties Hume associates with musing about causal powers, it seems as if he must grant that there are ways of representing them. Of course, these considerations are not sufficient to refute the Old Hume reading. But at least there is a case for modal realism in Hume. So it is interesting to see how it squares with other realistic readings of Hume.

To sum up section 2: there is no principled asymmetry between necessity and possibility. Nor do we have to accept that modal judgements as such do not carve

²⁵ For instance, Winkler might refer to the impression of reflexion which, over and above constant conjunction, consists in the propensity, which custom produces, to pass from an object to the idea of its usual attendant ... (THN 1.3.14.18, 165).

out the way things are. The robust (in)conceivability-(in)possibility link claimed by (CP) and (IM) is not in danger.

3. Sceptical Realism and Scepticism about Modal Knowledge

3.1 *Plenitude of Metaphysical Possibilities vs. Deep Causal Powers*

In this section, I address doubts about the conceivability-possibility link (CP) arising from sceptical realism about causation. I begin (3.1) with outlining the conflict between the principle of plenitude (PP) and the eventuality of deep causal powers. Peter Kail asks how (PP) squares with the sceptical realism favoured in recent literature on Hume: 'His "sceptical conclusion" is that we cannot grasp *in re* necessity, not that there is no necessity' (Kail 2003, 43). According to sceptical realism, there might be independent essences grounding causal powers, while the ways we usually form causal judgements are not suited to trace these causal powers. Regarding deep causal relationships, Hume endorses a modesty claim: '... we can never penetrate so far into the essence and construction of bodies, as to perceive the principle, on which their mutual influence depends' (THN 2.3.1.4, 400). We cannot figure out the ultimate essence of things in order to judge their influence on each other. For all we know, there might be causal powers grounded in the essence of bodies. The causal relationships that hold by dint of these powers must be necessary.

By Hume's lights, it might be that the nature of things could not be otherwise: '... may it not happen, that, cou'd we penetrate into the intimate nature of bodies, we shou'd clearly see why it was absolutely impossible, they cou'd ever admit of any other Disposition?' So dangerous is it to introduce this Idea of Necessity into the present Question! (Hume 1779, 218–19).²⁶ For the argument to follow, it is sufficient that Hume does not rule out the epistemic possibility of deep causal powers, be it due to impossibility or lack of meaning. Old Humeans will resist ascribing sceptical realism to Hume. My task is only to figure out what happens to modal realism if the epistemic possibility of causal powers is granted. The eventuality of such powers conflicts with the extensive possibilities manifested in the power to imaginatively separate distinct ideas. When we know these possibilities, we can rule out the necessity of causal relations among things. Kail proposes the following solution (Kail 2003, 43–50): surely clear and distinct ideas give rise to assertions of *in re* possibility. But it is open whether these assertions pertain to an eventual realm of independent essences that contain causal

relationships. Conceiving concerns relationships among ideas in the first place. When we ask if it concerns an eventual realm of essences and the causal powers associated with them, we must ask whether these ideas *adequately* represent essences.²⁷ Possibility judgements can be justifiably applied to essences, and hence are incompatible with deep causal powers, only if they do:

Wherever ideas are adequate representations of objects, the relations, contradictions and agreements of the ideas are all applicable to the objects ... The plain consequence is, that whatever *appears* impossible and contradictory upon the comparison of these ideas, must be *really* impossible and contradictory, without any farther excuse or evasion. (THN 1.2.2.1, 29)

The principle of plenitude (PP) rests on ideas that might be clear and distinct without being adequate. These ideas give rise to possibility judgements which nevertheless do not pertain to deep causal relationships: 'a potential gap opens up between some state of affairs being metaphysically possible and some state of affairs only seeming so' (Kail 2003, 50). What remains of the argument about causality? (PP) contradicts claims to necessity. The most radical consequence of Kail's consideration could be that (PP) itself must be put into abeyance when we are concerned with the ultimate nature of things. At least the epistemic possibility of essential causal powers *in re* is granted.²⁸ (PP) cannot yield modal knowledge about essences. Moreover, since Hume denies that we can penetrate into the ultimate essence of things, our ideas never are adequate such as to yield knowledge of this ultimate essence. As far as *in essentia* modalities are concerned, neither claims to necessity nor claims to possibility seem properly warranted. Yet Hume's

²⁷ Lightner denies that there is an adequacy constraint. Instead, he draws a sharp distinction between issues which qualify for being known and issues which do not:

In the *Treatise*, Hume takes knowledge to be of relations between objects ... Knowledge involves certainty, and is not possible where the objects are related by time or place, identity, or causation. Knowledge is only possible in cases where objects are related by resemblance, contrariety, degrees in quality, or proportions in quantity or number. The notion of adequacy is not mentioned when Hume presents his theory of knowledge. The foundation of human knowledge, according to Hume's theory, appears to be the immutability and necessity of particular kinds of relations, rather than the adequacy of the ideas related. (Lightner 1997, 119)

The question is how Lightner's result squares with modal judgements: It seems as if the conceivability-based principle of plenitude (PP) could not amount to knowledge. This result would solve Kail's problem. There might be causal relationships as there is no (PP) with which they could conflict. The price would be to restrict modal claims.

²⁸ Cf. the notion of epistemic possibility developed by Keith DeRose:

(FH) S's assertion, 'It is possible that P_{ind} ', is true if and only if (i) No member of the relevant community knows that P is false, and (ii) There is no relevant way by which members of the relevant community can come to know that P is false, where both the issue of who is and who is not a member of the relevant community and what is and what is not a relevant way of coming to know are very flexible matters that vary according to the context of the utterance of the epistemic modal statement ... (DeRose 1999, 396)

I do not want to ascribe this notion to Hume but use it as a reconstructive tool. If in order for P (there are causal powers) to be epistemically possible, one must not know that $\neg P$ ('It is not the case that there are causal powers'), which follows from the principle of plenitude (PP), (PP) must not be known to apply to essences.

²⁶ The context of this passage makes clear that the necessary disposition involves causal powers. Note that Hume here talks about an epistemic possibility which depends on introducing the idea of causal necessity in a certain dialectical situation. This does not involve that he really grants this epistemic possibility, but only that people introducing the idea of necessity in a certain way are committed to granting it. However, if Hume really denied the epistemic possibility of necessary essential dispositions, he should draw a stronger conclusion. It is not merely dangerous but a *reductio ad absurdum* if a position leads to accepting the epistemic possibility of necessary dispositions.

reasoning about causality can be sustained even on the strong reading (SR) without endorsing claims to possibility. For (PP) must only follow from the ideas on which necessity claims are based. We may put the reasoning about causality as a disjunction: either ideas on which necessity claims are based are adequate. Then (PP) casts doubt on any claims to the necessity of causal relationships. Or these ideas are not adequate. Then they are not suited to sustain any claims to *in re* necessity, including those dealing with the necessity of causal relationships.

3.2 The Threat of Modal Scepticism

The most radical conclusion to draw is pervasive modal scepticism. In this section, however, I note several caveats:

Hume seems to accept the principle of plenitude (PP). And there are further conceivability arguments that require a more favourable stance towards possibility statements. Hume suggests the adequacy constraint to be met in his argument against the infinite divisibility of spatial objects. Of course, from our having adequate ideas of the tiniest parts of objects, as far as their extension is concerned, it does not follow that we have adequate ideas of objects composed of them. Nevertheless there cannot be a general ban on conceiving as a guide to modal behaviour of independent objects. In contrast, adequate ideas of things which necessarily are the finest parts of objects place quite demanding constraints on scepticism regarding our knowledge of objects and their modal properties. Furthermore, we must be in a position to judge that our ideas are so far adequate. Hence even if we endorse Kail's interpretation, no pervasive modal scepticism ensues.

Modal scepticism is not only philosophically unattractive; it does not square either with arguments such as the one just rehearsed or with statements like the prominent passages about golden mountains and mountains without valleys. We seem warranted in reckoning a golden mountain possible and a mountain without a valley impossible. Both judgements concerning paradigms of possibility and impossibility/necessity seem exactly analogous. The resulting task is to reconcile Kail's results with a more favourable epistemology of *in re* modalities; the latter saves knowledge of golden mountains being possible and mountains without valleys being impossible while allowing for agnosticism about essential causal relations.

3.3 Dissolving Modal Scepticism

3.3.1 Essential Features and Everyday Objects

In this section (3.3), I explore two strategies of preventing modal scepticism. In section 3.3.1, I distinguish knowledge of essential and inessential features. This proposal is to cash out the intuitive contrast Hume draws between on the one hand modal knowledge of mountains and the like and on the other hand modal ignorance of essential features. Hume draws a dismal picture of our ability to know the innermost nature of things. But there are certain indications of a more favourable picture. We have already seen Hume granting quite a demanding access

to deep modal mereological features of things. Furthermore, we seem to know a lot about the powers of our own mind.²⁹

One way of reconciling these concessions with our inability to penetrate into the ultimate essence of things is this: the former mainly concern knowledge about the surrounding world which allows us to successfully deal with it, whereas we cannot hope to provide a suitable account of the essences underlying the things we encounter.

A more thorough way of cashing out the intuitive distinction between essential and other features of things is given by the following distinction of Winkler's:

... we are ignorant of certain *objects* whose behavior is constantly conjoined with the behavior of the objects we observe. The objects we observe are 'actuated' by these unobserved objects, just as our limbs (according to the passage itself) are 'actuated' by muscles and nerves beneath the skin. These unobserved objects are probably the parts and particles of eighteenth century natural philosophy. (Winkler 1991, 548)

Winkler refers to the following passage from the *Natural History of Religion*:

... could men anatomize nature, according to the most probable, at least the most intelligible philosophy, they would find, that these causes are nothing but the particular fabric and structure of the minute parts of their own bodies and of external objects; and that, by a regular and constant machinery, all the events are produced, about which they are so much concerned. But this philosophy exceeds the comprehension of the ignorant multitude, who can only conceive the unknown causes in a general and confused manner. (Hume 1757, 29)

This looks like the distinction between everyday objects 'we observe' and their deep structural features, which are hidden. Modal claims may relate to the former but not to the latter as far as we do not have sufficient access to them. As I will argue below, this restraint does not extend to features like divisibility.

My proposal to account for the *in re* possibility of golden mountains and the impossibility of mountains without valleys is that ideas like that of a mountain should be treated differently from ideas which purport to track an essence. The result is a distinction between a level of everyday objects and the deeper level of essences somehow underlying the former. This distinction does not have to

²⁹ There are passages where Hume draws a parallel between knowing independent objects and knowing the mind by suitable experiments: '... the essence of the mind being equally unknown to us with that of external bodies, it must be equally impossible to form any notion of its powers and qualities otherwise than from careful and exact experiments' (THN Introduction 8, 21, cf. THN 1.1.7.11, 22 as quoted above). We may conclude that there is at least one object whose causal powers and properties can be satisfactorily accounted for: the mind. If the mind has causal powers, it is difficult to reconcile this contention with the principle of plenitude (PP). Apparently one cannot hold both: (PP) and a satisfactory account of mental powers. One plausible consequence is that (PP) is restricted and overridden by an account of mental powers. A rationale for this solution is that reflection on mental processes must rest on a satisfactory account of the mind. As indicated in my discussion of Hume's reasoning about causality, many verdicts which rest on (PP) seem to depend in turn on reflection to a certain extent. An alternative to this view would be to recur to a psychological interpretation: Our account of mental powers can be satisfactory even if it is counteracted by (PP). In addition, Hume grants coherence of perceptions to allow inferences as to whether they represent independent nature: 'We may draw inferences from the coherence of our perceptions, whether they be true or false; whether they represent nature justly, or be mere illusions of the senses' (THN 1.3.5.2, 84).

amount to a strict separation. It may have to do with properties such as relative stability, naturalness and so on. Arguably, our normal concept of a mountain does not aim at some essence; if there is an essence, it may remain hidden from us. Disregarding perceptual illusions and issues of vagueness, it cannot happen to us that we retract our judgement that something is a mountain; at least in the same way as it may happen that we have to retract our judgement that something is water because it turns out to lack a certain deep structure. Nevertheless our idea of a mountain is sufficiently well-carved to forge a necessary connection with the idea of a valley.³⁰ Since ideas of everyday objects like mountains are not aimed at a hidden essence, such ideas are not likely to be inadequate despite being clear and distinct. This may be the reason why Hume omits the adequacy criterion when considering them.³¹

To summarize: *in re* modal claims regarding everyday objects of which we have a clear and distinct idea enjoy defeasible warrant. Hence there can be golden mountains and there cannot be mountains without valleys. But it does not follow that the same holds for modal judgements insofar as they require our ideas to be adequate to essences.³² A radical consequence of sceptical realism is that such judgements are unwarranted – insofar as we do not have reasons to deem the ideas they rest on adequate. A less radical consequence would be that their standing is not as good as the standing of modal judgements regarding everyday objects; verdicts like the principle of plenitude (PP) enjoy some warrant, but not enough warrant to exclude the epistemic possibility of deep causal powers.³³ Furthermore, even modal claims of a sort that is usually warranted may be overridden by

³⁰ When there is no essence to be tracked, there probably are no hidden causal powers either. Mountains do not have hidden causal powers. We do not detect mountains reacting with sulphuric acid. But we may detect water doing so.

³¹ Now in the notion of a golden mountain, there still is the idea of gold involved, which at least today is seen as aiming at a hidden essence. However, though surely features of everyday objects in a way depend on essences, usually there will be no eligible necessary causal relationships which connect essences like the deep structure of gold and everyday objects like mountains. Knowledge of surface qualities will be sufficient to guide conceivability verdicts. It is not to be expected that the deep structure of gold somehow interferes with the possibility of there being a golden mountain. Criteria for mountainhood are simply too flexible to exclude a golden mountain. In saying this, I do not want to deny that there are complex disjunctive nomic relationships. Of course sometimes our judgements may lead us astray; a hidden causal power of gold may emerge such as to interfere with the possibility of a golden mountain, notwithstanding the notion of a mountain being flexible. For instance, gold may turn out to be too heavy to form a stable mountain. But normally our ideas are sufficiently reliable guides to the modal behaviour of everyday objects.

³² A somewhat parallel claim is made by Peter van Inwagen. A moderate modal sceptic, he grants conceivability evidence regarding everyday objects we are acquainted with. But he denies that our capacities are apt to judge modal issues which involve essences such as the question whether there can be naturally purple cows. For in order to come to a considered verdict, we would have to know a lot about the deep structure of cows being reconcilable with being purple or not (van Inwagen 1998, 78).

³³ This contention can be reconciled with DeRose's understanding of epistemic possibility if the principle of plenitude (PP) does not enjoy enough warrant to be known.

necessities originating in the deeper layer of essences. An advantage of this view is that it keeps in touch with current views about the limits of conceivability.³⁴

However, the difference between essential and non-essential features is not likely to account for the epistemic difference in modal status between causal and mereological judgements. In order to cope with this difference, I want to supplement the reconciliatory strategy just developed.

3.3.2 Causal and Other Features of Things

In this section, I explore a second strategy for preventing modal scepticism: distinguishing knowledge of causal and other features of things.

With regard to causal claims to necessity, Hume wants to show that our cognitive capacities are not suited to knowing for sure the necessity of causal relationships between objects. Yet there are arguments such as the consideration against the infinite divisibility of the very same objects. These arguments presuppose that our capacities are suited to knowing the respective features of objects. It is not that causal relationships are somehow more deeply rooted in essences than other features. Rather, Hume seems to presume that our perceptual capacities are less apt to apprehend the necessity of causal relationships than the modal status of features such as geometric shape or mereological structure. This greater or lesser aptness to apprehend actual features of things carries over to modal claims. By scrutinising our ideas, we can to some extent evaluate their aptness to know certain features of things including the modal behaviour of these features. Hume's arguments concerning the deep structure of causality in contrast to mereological issues show that we are in a position to judge the aptness of our capacities to maintain modal claims. If we cannot suitably perceive causal influence in such a way as to judge its modal status, we cannot come to a conceivability-based verdict which definitely excludes the epistemic possibility of deep causal relationships. Either such a verdict cannot be warranted at all, or there is no sufficient warrant to exclude that there might be deep causal relationships. In contrast, in perceiving mereological relations, we may be in a position to form manifestly adequate ideas. Due to their adequacy, the relationships these ideas exhibit can be transferred to counterfactual variations to which objects represented are susceptible.

To sum up, we may be in a better position to gain modal knowledge by dint of (in)conceivability evidence regarding certain non-causal properties of objects such as shape and spatial structure. Both strategies (3.3.1, 3.3.2) can be combined to form a differentiated epistemology of the modalities. In principle, we can know independent possibilities and necessities. However, this knowledge is limited because our ideas are limited with regard to their clarity and distinctness and their adequacy. There are classes of natural features of which we can form ideas which are not only clear and distinct but adequate. There are other classes of features, namely causal ones, regarding which we are not in such a favourable position. Either we do not possess a sufficient amount of adequate information to judge

³⁴ Cf. van Woudenberg (2006, 218–20) on the issue of whether *a posteriori* necessities are reconcilable with the conceivability-possibility link.

the modal status of these features at all, or the warrant we have is not sufficient to exclude certain epistemic possibilities. We usually are in a position to judge the adequacy of ideas. Hence we are in a position to reflectively evaluate modal claims.

3.3.3 Conclusion: Conceivability Evidence under Proviso?

I conclude by discussing whether conceivability evidence must be restricted. Does the conceivability-possibility link (CP) hold *tout court* or is it subject to an adequacy proviso? This question is important as the latter alternative threatens the use of conceivability evidence. We cannot advance from p being conceivable to maintaining its possibility. Instead, we can only maintain some conditional: 'if our ideas are adequate, p is possible'. If there are no additional reasons to deem the proviso fulfilled, conceivability evidence is restricted to cases in which we are warranted to reckon our ideas adequate. However, Hume's example of the golden mountain counts in favour of a stronger alternative: (CP) holds (though defeasibly), as long as there are no special reasons to deem our ideas inadequate. We are sensitive to such reasons. If there are no such reasons, we may simply rely on conceivability evidence. As Yablo puts it: 'The maxim [illustrated by the golden mountain example] seems to say that conceivability suffices for possibility. This is implausible, so I propose to (mis)interpret it as claiming only that the conceivable is *ordinarily* possible and that conceivability is *evidence* of possibility' (Yablo 1993, 1–2). In the case of causal relationships between essences, there are reasons why our ideas are insufficient guides to facts of the matter. Assume there are causal relationships among essences. Such relationships are necessary. The only way we could get in touch with such causal relationships and their modal standing is by association of ideas. Since reflection on our ideas shows that we can always separate them, our apprehension of essential relationships so far cannot be expected to adequately covary with facts of the matter.³⁵ Either we cannot draw warranted consequences regarding the (im)possibility of essential causal relationships at all, or the principle of plenitude yields a certain evidence against them, but not enough to exclude that they might exist. In contrast, in other cases there is no such general motive for doubt regarding the capacity of our ideas to track necessities. In such cases, conceivability can be taken at face value.³⁶

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³⁵ Cf. Pust 2004 on problems that claims to necessity pose for covariance accounts of knowledge.

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