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Does the Case of the Missing Shade of Blue Defeat the Copy Principle?

In the *Treatise*, Hume raised a very important objection (known as the "Case of the Missing Shade of Blue") to the Copy Principle, his assertion that impressions give rise to ideas. With this strange move, he sparked a controversy which has prompted more ink to be spilled than lesser philosophers could hope to provoke with even the most well reasoned arguments. In part I of this paper I will outline Hume's vocabulary regarding impressions and ideas, construct working definitions of CP and CMSB, and demonstrate the critical issue in their interaction. In part II I will attempt to outline the problem represented by CMSB in such a way as to show where a potential solution might exist. In part III I will explain the mechanics of my proposed solution, which I call the Meta Copy Principle (MCP), and in part IV I will use MCP to develop what I feel is a satisfactory answer to the problem of CMSB.

I.

Before I can go into detail about why CMSB does not disprove CP, I should probably outline the core principles in concrete terms. For Hume, impressions are forceful and lively perceptions that arise from the senses, passions, and emotions; ideas are the less forceful and lively copies of our impressions which we store for use in thinking and reasoning. Impressions and ideas come in two varieties, simple, which are irreducible, and complex, which are an aggregate of simples. What has become known as the Copy Principle is proposed by Hume in

Treatise I.i.1 as the principle that "all our simple ideas in their first appearance are derived from simple impressions, which are correspondent to them, and which they exactly represent," (Hume, Kindle Locations 201-202). On reflection, this would seem to be more or less correct, for as Hume points out, it appears quite impossible to form ideas of things which we have not experienced. For instance, a deaf person cannot have an idea of the sound of a bird chirping, a blind person cannot have an idea of the color red, and a person who has never tasted pineapples cannot have an idea of what a pineapple tastes like. This being said, Hume introduces CMSB as an example of a situation which he believes could be used to show that it is possible for an idea to precede an impression.

Hume asks us to imagine a person who has "become perfectly well acquainted with colours of all kinds, excepting one particular shade of blue," (Hume, Kindle Locations 225-226) and to imagine that this person is presented with every shade of blue except for the one they have never seen arranged in order from lightest to darkest. Where the shade of blue the person has never seen would be, there will be a blank spot which they will be able to fill in through an analysis of the surrounding colors, producing the idea of the missing shade of blue in their mind without their ever having actually seen that particular shade of blue. Should it prove true that the person in the thought experiment is, in fact, able to develop the idea of the missing shade without ever having seen it, it would appear that for all Hume's insistence "that [the] instance is so particular and singular, that it is scarce worth our observing, and does not merit that for it alone we should alter our general maxim," (Hume, Kindle Locations 231-232) we are obligated to reject CP with the following *modus tollens* argument:

1) If CP is true, then P cannot form the idea of the missing shade,

- 2) P can form the idea of the missing shade,
- 3) Therefore CP is false.

II.

It is strange in light of the potentially devastating effect CMSB has upon CP, the very foundation upon which Hume builds his arguments upon throughout the *Treatise*, for Hume to move on from this issue so quickly and with as little explanation for his doing so as he does. In Knowledge and Perception, H.A. Prichard sees this breezy treatment as nothing less than "effrontery on [Hume's] part and not mere naiveness [sic] to ignore an instance so dead against a fundamental doctrine of his own. And if he had considered the idea of cause as also to be ignored as being an isolated exceptional case, he would have had no reason to write the Treatise at all," (Prichard 177). What is more, CMSB does not appear, to me at least, to be as isolated a case as Hume would have us believe. There exist multiple cases where reasoning and consideration based upon patterns and sets could potentially lead a person to develop an idea of a thing before they had had an impression of it. For instance, a person acquainted with every tone in the C major scale but for "A" could be presented with the following sequence of tones: C, D, E, F, G, , and B and asked to hum the missing tone, or for a person acquainted with every symbol but for "▼" to be presented with the sequence ▲ ▶ ■ and be asked to fill in the blank. It is reasonable to assume that the first person could come up with the idea of "A" to hum and that the second person could develop the idea of "▼" to draw in the blank space.

So what are we to make of CMSB? How are we to reconcile ourselves to an acceptance of CP if we know that it falls prey to missing-shade-type arguments such as those outlined

¹ H. A. Prichard, Knowledge and Perception (Oxford: Clarendon, I950).

above? I am of the opinion that we can maintain an acceptance of CP even after examining missing-shade-type arguments because the ideas generated in those cases are complex ideas, not simple ideas like those with which CP is concerned, and as such do not fall under its purvey. Hearkening back to the conditions of CMSB, we see that the person charged with developing the missing shade of blue is presented with all the other shades of blue. Let us assume for simplicity's sake that instead of every shade of blue being set before the person there are instead four cards in the order B₋₂, B₋₁, B₊₁, and B₊₂ (where B represents the the missing shade).

When the subject looks at the four cards, four ideas are brought to the forefront of their mind, call them D₋₂, D₋₁, D₊₁, and D₊₂ (where D represents the idea of the missing shade). Now, since according to Hume the subject is acquainted with all colors, including B₋₂, B₋₁, B₊₁, and B₊₂, it would appear that the subject does not *develop* the ideas D₋₂, D₋₁, D₊₁, and D₊₂, on being shown the cards, but rather re-enlivens or refreshes them in the presence of impressions B₋₂, B₋₁, B₊₁, and B₊₂ which share the simple property of B₋₂ness, B₋₁ness, B₊₁ness, and B₊₂ness with the original impressions M₋₂, M₋₁, M₊₁, and M₊₂. Once B₋₂, B₋₁, B₊₁, and B₊₂ refresh ideas D₋₂, D₋₁, D₊₁, and D₊₂ which were developed from impressions M₋₂, M₋₁, M₊₁, and M₊₂, the stage is set for the subject to develop D (the simple idea of the missing shade). What I will now endeavor to prove is that this is utterly impossible under Hume's conception of the memory and imagination because of a process I like to call the Meta Copy Principle (MCP) and that the best that they can possibly do is to develop a complex idea of the shade (C), not the simple idea of the shade (D). Furthermore, I will endeavor to show through that even though C might be *very* close to the D which B would give rise to, C can *never* be equal to D.

In order to understand the process of MCP, it is essential that we understand the difference between the memory and the imagination in Hume's reasoning. For Hume, there exist

two places where ideas can appear in the mind once formed, and these are the memory and the imagination. An idea in the memory "retains a considerable degree of its first vivacity, and is somewhat intermediate betwixt an impression and an idea...[is] much more lively and strong than [an idea] of the imagination ...[is painted] in more distinct colours...[and] preserves the original form, in which its objects were presented," (Hume, Kindle Locations 259-269). An idea in the imagination has "entirely [lost] that vivacity, and is a perfect idea...[its] perception is faint and languid, and cannot without difficulty be preserved by the mind steddy and uniform for any considerable time... is not restrained to the same order and form with the original impressions; while the memory is in a manner tied down in that respect, without any power of variation," (Hume, Kindle Location 260-69). Hume goes on to establish the following functions of the memory and imagination: "[t]he chief exercise of the memory is not to preserve the simple ideas, but their order and position," (Hume, Kindle Location 273) and the imagination has "the liberty...to transpose and change its ideas," (Hume, Kindle Location 275).

We can all agree that D₋₂, D₋₁, D₊₁, and D₊₂ are probably not preserved in their original form in the mind of the subject prior to their being presented with B₋₂, B₋₁, B₊₁, and B₊₂. If they were, they would reside in the memory, available for perfect recall at any time. This is something which I very much doubt. The reason I say this is because I myself cannot recall every shade of blue I have ever seen to mind exactly, and I doubt there exists a person who could. The best most people can hope to do is to call to the imagination the idea of something blue and lighten or darken it. The problem with this is that after a certain point, beyond just a few steps of brightness or contrast in either direction, I can no longer "see" the color I am thinking about in my imagination; instead I see the original color and ascribe to it an adjective

such as "light," "dark," "very light," "very dark," "lighter than," or "darker than." This is good enough for day to day work, but is insufficient for developing a missing shade.

III.

We can all agree that there is a distinct difference between seeing something for the first time and seeing something again. If this was not the case, every time I saw a shade of blue, felt sandpaper, or even saw a friend, I would develop a separate and distinct idea about it, something which I do not perceive that I do. I would think of every single thing which I perceived as a completely different person, something which I do not do. What I do perceive myself doing when I perceive things is that I compare my mental picture of them (which must be an imagination-type idea in that I can perform the mental gymnastics of "comparison" upon it, see Hume, Kindle Locations 291-292) to the impression I see in front of me and adjust it to account for any changes my idea of the impression has undergone since the last time I perceived it, much like a client program patches itself when an update is released. The patch creates a high resolution memory-type file which is "much more lively and strong than [the one in my] imagination," (Hume, Kindle Location 262) and which undergoes minor patches at rapid intervals while I am actively perceiving a thing. If I were a skilled artist, for instance, a painting of a scene involving a particular shade of blue that I produced while looking at the scene would be closer to the actual scene and shade of blue than a painting of the same scene I produced a week later.

The reason for this is the Meta Copy Principle, which is the principle that "all the ideas in our imagination are in their first appearance derived from memories, which are correspondent to them, and which they most closely represent in the presence of the impressions which formed the

memories. Over time, in the absence of those impressions, the ideas in the imagination lose their resemblance to the ideas in the memory which gave rise to them as the memories fade." This process is best understood with the help of a visual aid:

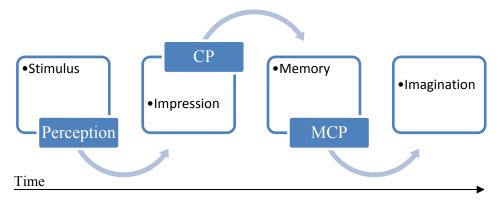


Fig. 1, Flow of Ideas Including the Meta Copy Principle

When the subject is presented with a stimulus, their perception delivers an impression to the mind. The Copy Principle then kicks in and creates a corresponding idea of the impression in the memory. From there, the Meta Copy Principle creates a corresponding idea of the memory in the imagination. When the stimulus is not present, the Copy Principle has nothing to operate on, and "turns off." The Meta Copy Principle, however, continues to operate, copying the memory into the imagination over and over again. Over time, the memory degrades, which results in more and more corrupted information being transferred to the imagination with each cycle of the MCP. The idea in the imagination's identity will always approach the idea in the memory asymptotically, but because of the time delay represented by the delivery of the metacopied memory from the memory to the imagination, the two can never be exactly the same, and what is more, the idea in the imagination will always have less force and vivacity than the memory, which will always have less force and vivacity than the impression, which will always

have less force and vivacity than the perception, which will always have less force and vivacity than the original stimulus.

IV.

That's all well and good, but how does it provide a solution to CMSB? The answer is truly simple. For the subject to come up with the idea of the missing shade, they would have to break multiple rules outlined here and in Hume's philosophy. First, they would have to operate on multiple simple ideas in the imagination not identical with the shades of blue they are presented with to develop this idea in the imagination in order to develop D without creating a complex idea. Second, they must find a way to inject that idea into the memory from the imagination, against the flow of both CP and MCP. I will deal with each of these absurdities in turn.

A) Creating a Simple Idea from Multiple Simple Ideas

This is quite simply impossible. In order to develop D, the subject will perform the mental equivalent of the equation $\frac{D-2+D-1+D+1+D+2}{4}$. It would seem to me that the resulting idea would *not* be the simple idea D, but rather the complex idea C, represented by $\frac{D-2+D-1+D+1+D+2}{4}$. C supervenes upon D₋₂, D₋₁, D₊₁, and D₊₂ for its existence in the mind; it is not separate and distinct from them, nor can it possibly be so. This is because without the presence of D₋₂, D₋₁, D₊₁, and D₊₂, C's value would be $\frac{0}{4}$, which resolves to zero. In other words, since it seems reasonable to assume that the subject cannot develop C in a vacuum, i.e. without being presented with other shades of blue to refresh their ideas of those shades enough to allow them to perform an evaluation of $\frac{D-2+D-1+D+1+D+2}{4}$ that is as close as possible

to $\frac{M-2+M-1+M+1+M+2}{4}$, it is ludicrous to believe that any idea which they come up with as being the missing shade would be anything more than a complex C which closely approaches the simple D in appearance, but which is entirely different in composite structure.

Even if I am incorrect about this, and it turns out that a person can in fact develop simple ideas from the consideration of other simple ideas, MCP would suggest that since $B_{-2}=/=D_{-2}=/=M_{-2}$, $B_{-1}=/=D_{-1}=/=M_{-1}$, $B_{+1}=/=D_{+1}=/=M_{+1}$, and $B_{+2}=/=D_{+2}=/=M_{+2}$, the evaluation of $\frac{D-2+D-1+D+1+D+2}{4}$ would result in something necessarily different than the D which would arise from impression M or B. In other words it is impossible for

$$\frac{D-2+D-1+D+1+D+2}{4} = \frac{M-2+M-1+M+1+M+2}{4} \text{ or } \frac{D-2+D-1+D+1+D+2}{4} = \frac{B-2+B-1+B+1+B+2}{4} \text{ to}$$
 ever obtain because no D can ever exactly equal an M or a B under MCP. Even in the immediate presence of B₋₂, B₋₁, B₊₁, and B₊₂ or M₋₂, M₋₁, M₊₁, and M₊₂, D₋₂, D₋₁, D₊₁, and D₊₂which the subject is manipulating to supply the missing shade will invariably lag slightly behind the impressions because of the interaction of CP and MCP. This leads me to believe that it is not possible for the subject to ever develop the missing shade independent of having had an impression of that shade.

B) Injecting D into the Memory

Suppose that someone were to reject my logic and stubbornly maintain that the subject can develop D from B₋₂, B₋₁, B₊₁, and B₊₂ or M₋₂, M₋₁, M₊₁, and M₊₂. To them I would reply with the following argument: even if I am somehow wrong about MCP, the way that D is created, the interaction of simple ideas, and every single other thing I have presented above, does it not seem to you that by Hume's own description of the memory and imagination any D that the subject

was able to develop would be "faint and languid?" Even if I were to allow that the subject could come up with some idea of D, it wouldn't have the same intensity and vivacity that an idea developed through the flow of ideas which Hume describes would have. It seems that in order to "see" the missing shade properly in their thoughts, the subject would have to move the bundle of adjectives and values that they know would produce the shade from the imagination where it was born into the memory, something which Hume *expressly* says cannot happen, for though "the imagination is not restrained to the same order and form with the original impressions...the memory is in a manner tied down in that respect, without any power of variation," (Hume, Kindle Locations 268-269). Even if the subject could develop D they *could not* ever see it clearly because they *had never* seen it clearly. It would exist merely as a phantom of the imagination which would almost instantly vanish in the absence of D₋₂, D₋₁, D₊₁, and D₊₂ having no memory from which to copy itself, only other wisps of imagination.

V.

In conclusion, the Case of the Missing Shade of Blue is not a valid counterexample to the Copy Principle by virtue of the fact that it is impossible, under any application of the Meta Copy Principle and a reasoned review of Hume's ideas about the memory and imagination, for a person to arrive at a complete, self-sufficient idea of the missing shade. I acknowledge the need for further examination of the motives for Hume to include CMSB in the *Treatise*, but I believe that this is perhaps not a worthwhile pursuit in consideration of the fact that based upon the reasoning I have presented, he later offered arguments which when extended served to show that he was incorrect about CMSB's ability to defeat CP.