**Are identities unexplainable?**

**Towards a non-causal contrastive explanation of identities**

**Abstract**

Can an identity be the proper subject of an explanation? A popular stance, albeit not one often argued for, gives a negative answer to this question. Building from a contentious passage from Jaegwon Kim in this direction, we reconstruct an argument to the conclusion that identities, to the extent in which they are necessary, cannot be explained. The notion of contrastive explanation, characterized as difference-seeking, will be crucial for this argument; however, we will eventually find the argument to be unsatisfactory.

On the contrary, the discussion provides enough resource to sketch a very simple framework for a non-causal contrastive explanation of identities. Many instances will be provided, with different varieties of *explanans*, ultimately suggesting that certain entailment or biconditional principles involving identities (first and foremost, so-called two-level identity criteria) may indeed be taken to have an inherent explanatory value.

**Key-words**: identity, explanation of identities, contrastive explanation, non-causal explanation, identity-criteria,

1. **Introduction**

Can an identity, such as:

(1) Bruce Wayne is identical to Batman

be successfully explained? And if so, what kind of explanation can it receive? A somewhat popular take is to give a negative answer to the former question, thus making the latter moot. This reaction is instinctive amongst certain philosophers, thus we will call it the Knee-Jerk Reaction against the explanation of identities. How is this philosophically justified? Building from a crucial yet contentious passage from Jaegwon Kim, we reconstruct an argument against the explanation of identities revolving around a specific kind of explanation, (viz. *contrastive explanation*); yet we will also show how inconclusive this argument is. Building from the resources presented in the course of the paper (a generalized notion of contrastive explanation, encompassing both causal and non-causal explanation), we will finally present a sketch for a kind of contrastive explanation of identities, which is crucially non-causal in character. Many instances of non-causal contrastive explanations of identities will be provided, with different varieties of *explanans*. Although not universally applicable (viz., we do not claim that *all* identities can be explained), such an account paves the way for a new understanding of entailment or biconditional principles involving identities, first and foremost a certain subset of identity criteria --which may indeed be taken to have an inherent explanatory value.

Here is a brief summary of contents. In Section 2 we will briefly introduce our framework for talk of explanation; we will be particularly careful not to assume anything about the metaphysical nature of *explanans* and *explananda*. Over this background in Section 3 we will articulate the Knee-Jerk Reaction against the explanation of identities, and discuss the passage from Kim in its defence: we will then see how an argument to be reconstructed from it will most likely deploy a notion of *contrastive explanation*. Section 4 articulates the notion of (generalized) contrastive explanation, and shows how inconclusive the argument against the explanation of identities is. These Sections pave the way for a more positive discussion about the (non-causal) contrastive explanation of identities, which is articulated in Section 5, with the help of a plethora of examples. An objection will be discussed, based on the distinction between explanatory and evidential pairs of why-question and because-answer. This will also be an opportunity to explore non-causal contrastive explanation of identities closer to those that might appear in actual philosophical debates. Finally, some conclusions will be drawn in Section 6.

1. **About explanation**

As in van Fraassen (1980: 126ff), explanations are somewhat tied to our use of why-questions and because-answers in natural language; a question “why p?” warrants an answer “because q”, where p is the *explanandum* and q the *explanans*.

Explanations come in all shapes and sizes. In a successful causal explanation an *explanans* must involve some element in the *explanandum*’s causal history.[[1]](#footnote-0) For example,

(2Q) Why did Socrates die?

(2A) Because he drank hemlock

involves a successful causal explanation, as Socrates’ death most likely has Socrates’ drinking of the hemlock in its causal history. Yet not all explanations function in this manner. For one, consider the following

(3Q) Why can’t mom evenly distribute five candies between me and my sister?

(3A) Because five is not divisible by two.

In this case, five not being divisible by two explains why mom can’t evenly distribute two candies between me and my sister. It is, however, a case of non-causal explanation as “it does not work by virtue of describing the outcome’s causes or, more broadly, the world’s network of causal relations” (Lange 2016: 20). This case is but an example of a vast array of potentially non-causal explanatory endeavors.[[2]](#footnote-1)

This rough sketch needs of course some elaboration. Two points are worth discussing. Firstly, in which metaphysical category do *explanans* and *explanandum* fall? The use of why-clauses and because-clauses, which require sentential completion (just like that-clauses), may suggest that we are dealing with facts, propositions, or other items of the sort (Mellor 1995: 65; Trogdon 2013 also notes that Sider 2011: 189-190 may have been following a similar train of thought in claiming that no satisfactory explanatory answer to any question can be provided by simply listing names for entities, rather than offering a propositionally structured reply). This is, in our opinion, no knockdown argument. Although explanations can be offered with the help of the sentential connective “because”, explanation-sentences such as “...explains…” (or “...is explained by…”) require nominals on both sides to be completed. What is more, one may perceive that not all explanations are in the same boat here, and, more specifically, there might be a crucial difference between the (2Q)-(2A) causal explanation, and the (3Q)-(3A) non-causal explanation. Explanation-sentences for (2Q)-(2A) may be easily expressed through the use of perfect nominalizations (e.g., Socrates’ death, Socrates drinking of the hemlock), to obtain, say “Socrates’ death is explained by his drinking of the hemlock”; whereas explanation-sentences for (3Q)-(3A) are more easily obtained through the use of imperfect nominalizations (e.g., five not being divisible by two, the fact that five is not divisible by two). Furthermore, or so the story goes, perfect nominalizations stand for events, whereas imperfect nominalizations stand for facts (Vendler 1970). This distinction carves the right joints, to the extent that it respects the orthodoxy according to which causal explanation is between events, whereas many kinds of non-causal explanations are often said to occur between facts (for the first claim, Lewis 1986a: 215; for the second, Lange 2016 develops his framework for non-causal explanation largely in terms of facts).

Unfortunately, this is all too easy. Even if Vendler’s point about perfect and imperfect nominalizations was valid (see McCann 1979, Bennett 1988), that wouldn’t necessarily prove that causal explanation needs events, whereas non-causal explanation needs facts. After all, the most natural explanation-sentence corresponding to (2Q)-(2A) is “Socrates drinking hemlock explains his death”, where “Socrates drinking hemlock” is an imperfect nominalization; whereas it is not impossible, with some creativity, to express *explanans* and *explanandum* of (3Q)-(3A) through perfect nominals, e.g. “mom’s inability to evenly distribute five candies between me and my sister is explained by five’s indivisibility by two”.

Furthermore, the distinction can be objected on philosophical grounds. There have been in fact supporters of fact-causation (Mellor 1995), whereas others most interested in a more unified framework for explanation (e.g., Schaffer 2016), argued that although causation obtains between events, causal explanation does not (more precisely, fact-based explanations can be backed by causal relations between events). For the moment, in a pair of explanatory why-question and because-answer such as “why p?” “because q”, we will speak of the *explanandum* [p] and the *explanans* [q]; [...] is a nominalizing device which can be used to express facts, events, or what have you --starting from sentences.[[3]](#footnote-2) Thus the pair of sentences “why p?” “because q” state that [q] explains [p], while remaining neutral on the metaphysical status of both *explanans* and *explanandum*.

A second clarification is that pairs of why-questions and because-sentences are not in a one-to-one correspondence with explanations. Firstly, not all explanations need to be expressed in this way; e.g. Hitchcock (2012: 12) suggests that causal explanations may be elicited by how-questions (“how did George die?”), while Thompson (2019) suggests that metaphysical explanations are elicited by “what-makes-it-the-case”-questions (“what makes it the case that killing is wrong?” or, more shortly, “what makes killing wrong?”). Secondly, and more importantly for our current purposes, at least some uses of “why” and “because” are evidential rather than explanatory, in the sense that they are used to convey reasons for belief rather than an explanation proper. As in Schnieder (2010), we may walk by the Smiths’ house, and I may utter “the Smiths are home, because the lights are on”; [the lights are on] does not provide any genuine explanation of [the Smiths are home], causal or otherwise; it merely offers some evidence for believing that it is the case that the Smiths are home. As for “why”, Salmon (1989: 6) urges us to consider some why-question with evidential because-answers; but here, we take, the situation is slightly more complicated. Consider the following example, borrowed from Salmon:

(4Q) Why should I believe that Marilyn Monroe has died?

(4A) Because I read it on the newspaper.

(4A), as a because-answer to a why-question, indeed offers some evidence for believing that Marilyn Monroe has died. However, the why-question (4Q) is logically more complex than the simple why-questions in (2Q) and (3Q), and is explicitly provided with belief-locutions. On the other hand, the simpler pair

(4Q’) Why did Marilyn Monroe die?

(4A’) Because I read it on the newspaper,

sounds definitely off. This may suggest that simple “why p?” questions require proper explanations, whereas evidence-seeking why-questions have to be explicitly qualified as such, as in (4A). That said, it is not our our goal to claim that any and all utterances of evidential because-answers to why-questions like (4Q’)-(4A’) are inappropriate; some of them might very well be; e.g., in some context it might be appropriate to ask “why are the Smiths home?” and to answer with “because the lights are on”. To blurry the lines further, the existence of a multitude of non-causal explanations may make it increasingly harder to recognize an explanatory element in a because-answer; to put it bluntly (as suggested in Woodward 2018) the only thing to indicate that a because-answer is explanatory may be that it elicits an “aha!” feeling of understanding, in line with the preliminary (but not too indicative) remark that “to seek an explanation of something is to seek to understand it” (Kim 1994: 54). To avoid such complications, as a general rule of thumb, we should not assume right off the bat that any well-formed and appropriate why-question is explanation-seeking, and the relative because-answer provides a proper *explanans*, rather than, more weakly, some evidence for belief. As we will see, it is best to err on the side of caution.

Finally, we would like to dispel a potential source of ambiguity in the use of “explanation”. Firstly, “explanation” might be used to refer to a speech act one can perform, e.g. the utterance of a because-answer such as “because q” in response to the question “why p?”; secondly, it might be used to refer to the *explanans* [q], in the sense that something like an event, a fact, or a theory can count as an explanation; thirdy, and more abstractly, it might be used to refer to the properly explanatory relation between *explanandum* and *explanans*, [p] and [q]. We will use the term “explanation” solely in this third sense; explanation as a speech act (e.g., an utterance of “because q”) we will call “explaining”; as for [q] itself, we will simply call “*explanandum*”, viz., a *relatum* of an explanation proper. In this sense, a pair of why-question and because-answer is *explanatory* in the sense that it describes an instance of an explanatory relation; the utterance of the because-answer then counts as an explaining.

1. **The explanation of identities**

Now that we have a tentative grasp on the notion of explanation, we come to those explanations involving identities, and more precisely, those involving identities as *explananda*.

A knee-jerk reaction, we suspect, will be the following: identities cannot figure in a successful explanation as *explananda*; given a standard understanding of the identity relation, any instance of it is, loosely speaking, too unproblematic a thing to allow, let alone require, an explanation. E.g., according to Block and Stalnaker (1999: 24), “it does not make [...] sense to ask for an explanation of the identity. Identities don't have explanations”. Thus, an utterance of

(1Q) Why is Bruce Wayne identical to Batman?

may strike the reader as a moot question that really deserves no answer. To be sure, as Block and Stalnaker (1999: 24) clarify, there may be a story to tell as to how “Bruce Wayne” and “Batman” came to co-designate, but this is a different issue, albeit a related one. What we are asking is not why “Bruce Wayne” and “Batman” co-designate, but why Bruce Wayne and Batman are identical; and while the first question may be successfully answered, the second one cannot. This is what we will simply call the Knee-Jerk Reaction to the explanation of identities. Naturally, as claimed in the previous section, we might understand (1Q) as evidence-seeking, rather than explanation-seeking. E.g., put in front of three suspects for the secret identity of the Batman, and being told that, amongst them, he is in fact Bruce Wayne, commissioner Gordon may, in his bewilderment, utter a question as 1Q.[[4]](#footnote-3) Rather than an explanation of the identity between Bruce Wayne and Batman, what commissioner Gordon is asking for, is some ground for actually believing that Bruce Wayne is Batman, perhaps in the form of an inference to the best explanation, or more simply a clue (e.g., “because only Bruce Wayne is rich enough to afford those expensive gadgets”). Thus we could reframe the Knee-Jerk Reaction as follows: when understood as explanation-seeking, identity-involving why-questions such as (1Q) are ultimately moot.

At this point, one must wonder what kind of philosophical justification exists for the Knee-Jerk Reaction. Albeit not often elaborated, there are multiple ways to provide some theoretical underpinning for it. The necessity of identity may have something to do with it; in one of the few passages to explicitly expand on it, Kim (2008: 102) submits:

“[w]hat does the contingency or necessity of an identity have to do with the question whether it is a fit object of explanation? If p is a contingent truth, we can always ask the question: “What is it about this world that makes it the case that p?” —that is, “Why is this world one in which p is true rather than one in which p is false?” If p is a necessary truth, p is true everywhere and the question “What is it about this world that makes it the case that p?” [...] receives a put down answer “Nothing special —p holds everywhere.”

This is what we will refer to as Kim’s Passage, and it suggests that because, say, it is necessary that Bruce Wayne is identical to Batman, their identity may not open for explanation.[[5]](#footnote-4)

What is the argument here, if any? (It might be worth pointing out that we are not interested in the exegetical reconstruction of Kim’s, or anyone’s, thought process on the matter; in what follows, we will happily help ourselves with resources that they may or may not have intended to deploy). The use of the “rather than…” locution suggests that Kim is employing some kind of *contrastive explanation*, in which it is explained why something occurred, rather than something else. The background intuition then appears to be that, given that identities are necessary if true (and impossible if false), it really makes no sense to ask why Bruce Wayne is identical to Batman, rather than being numerically different from it, since the latter could not possibly obtain. Yet in order to refine this intuition into a proper argument against the explanation of identities based on contrastive explanation, we must first articulate the notion of contrastive explanation, which is the topic of the next Section.

Two crucial points needs to be made, however. Firstly, Kim’s Passage assumes that identity is a necessary matter; this is a standard assumption that we will preserve; thus, if *p* is a true identity sentence, *p* is never contingently true. Secondly, we will assume that explanation is factive, in the sense that if [p] explains [q], both *p* and *q* are true.[[6]](#footnote-5) False identities are not necessary; however, this shouldn’t be used to prove that, *contra* Kim, some identity questions elicit explanatory answers; for we reject that any “why *p*?” question in which *p* is false may elicit a successful explanatory answer.

1. **Contrastive explanation and Kim’s Passage**

With both assumptions in place, we can finally begin our investigation of contrastive explanation (of identities). Let us begin by introducing contrastive explanation *tout court*.

*4.1 Contrastive explanation*

Contrastive treatments of explanation, especially in the simplest, more ordinary cases of causal explanation, are at this point particularly promising. The key notion to remember is that explanations do not exist in a vacuum, but rather over a background of presuppositions and interests. For instance, a rookie detective may ask commissioner Gordon:

5Q) Why does Batman fight the Joker?

Commissioner Gordon might understand the question as presupposing that Batman is good and will fight criminals; yet there are many criminals in Gotham City, hence the question: why the Joker? (5Q) may elicit in commissioner Gordon the following answer.

5A) Because the Joker is the most dangerous criminal in Gotham City

Commissioner Gordon may have been wrong about the background presuppositions of the rookie detective. Perhaps the rookie detective doesn’t know that Batman is good; perhaps she is rather wondering why, given that both of them wear bizarre costumes and operate outside of the law, Batman feels the need to fight the Joker, or any other criminal. In that case, the rookie detective won’t be moved by (5A), because that still doesn’t explain why Batman fight criminals in the first place, no matter how dangerous they are. In that case, an answer that would satisfy the rookie detective might be the following:

5A’) Because Batman is good, and the Joker is evil.

Following Garfinkel (1981: 28-41) we may use contrastive stress to express similar presuppositions. Thus, the initial question (5Q) can be decomposed in at least two ways, in which contrastive stress is marked by italics:

6Q) Why does Batman fight *the Joker*?

7Q) Why does Batman *fight* the Joker?

Question (6Q) invites to explain why Batman fights the Joker, rather than some other criminal, say, Joe the Internet Scammer, as in:

6Qc) Why does Batman fight the Joker, rather than Joe the Internet Scammer?

Questions (Q6) and (6Qc) embed the presupposition that Batman is good and will fight criminals, and asks to explain why Batman fights one rather than another. (5A) satisfactorily answers that. On the other hand, the stress in (7Q) invites to explain why Batman fights the Joker, rather than helping him in his criminal endeavors. Which can be straightforwardly expressed as follows:

7Qc) Why does Batman fight the Joker, rather than helping him?

Questions (7Q) and (7Qc) embed the presupposition that both Batman and Joker wear bizarre costumes and operate outside of the law, and asks to explain why they fight each other. (5A’) satisfactorily answers that.

Contrastive stress may be applied in other ways to the initial question (5Q); a particularly hostile reporter might ask commissioner Gordon why does *Batman* fight the Joker, rather than legitimate police force. Therefore, the use of contrastive explanation is a way to make explicit an otherwise hidden subjective element in an explanation-seeking why-question: while the question “why does Batman fight the Joker?” does not *per se* clarify the assumptions and interests of the inquiring agent (and thus, does not reveal which answer would make for a genuine explaining), the use of contrast as in “why does *Batman* fight the Joker?” or “why does Batman *fight* the Joker?” reveal some of those assumptions and interest.

Furthermore, contrastive treatments of explanation appear to be particularly inviting in the case of causal explanation, given that causation is itself believed to be contrastive in nature (Mackie 1974: 34-35, Schaffer 2005). As in the case of presupposition, there is still not a consensus as to whether contrast is a semantic or pragmatic phenomenon (in fact, it may be argued that stress is a syntactic element)[[7]](#footnote-6), and thus it is not clear whether the logical form itself of (causal) explanation requires further elaboration.

For our current purpose, we may take contrastive causal explanation to decompose the *explanandum* into a *focus* and a *foil*; e.g., in (6Qc) the focus is the event *Batman fighting the Joker*, and the foil is the event *Batman fighting Joe the Internet Scammer*. In (7Qc) the focus is event *Batman fighting the Joker*, and the foil is the event *Batman helping the Joker*.[[8]](#footnote-7)

Rather than model event-causal explanation as usual (event C explains event E), we may model it as follows: event C explains event E, rather than event E1. If, in virtue of the factivity of explanation the question “why p?” presupposes that p is true, then the question “why p rather than q?” presupposes that p is true, and q is false.[[9]](#footnote-8)

Following van Fraassen (1980: 111) we will take explanation to be contrastive on the side of the *explanandum*; but of course, explanation might be contrastive in both sides: e.g., in the case of causal explanation event C, rather than event C1, causally explains event E, rather than E1 (Hitchcock 2012: 18). Later in this paper we will consider the explanation of identities as contrastive in *both* positions.

What is most interesting for our current purposes, contrastive treatments of explanation easily extend beyond the ordinary causal explanations considered so far. We may thus try to explore a generalized notion of contrastive explanation, that covers both causal and non-causal explanation. For example, the question

8Q) Why could mom evenly distribute *six* candies between me and my sister?

invites the contrast between mom evenly distributing six candies between me and my sister, and mom evenly distributing five candies between me and my sister. The very simple kind of non-causal explanation previously offered for questions like this may very well be contrastive in both positions: mom could evenly distribute six candies between me and my sister, rather than five, because six, but not five, is divisible by two.

With such examples in this mind, we can use the previous framework to introduce a generalized notion of contrastive explanation; as before, we will not specify the nature of *explanans* and *explananda* (and, more precisely in the case of contrastive explanation, focus and foil), but we will rather express them with the nominalizing device [...]. Thus, using p1, p2, q1, and q2 as place-holders we obtain the following scheme of why-questions and because-answers:

9Q) Why p1, rather than p2?

9A) Because q1, rather than q2

These utterances express an instance of generalized contrastive explanation (which might either be causal or non-causal) according to which [p1], as opposed to [p2], is explained by [q1], as opposed to [q2]. The *explanandum* is decomposed into a focus, [p1], and foil [p2]; and similarly the *explanans* is decomposed into a focus, [q1], and foil [q2].[[10]](#footnote-9)

*4.2 No contrastive explanation of identities?*

A crucial feature of contrastive explanation, which may be crucial in our evaluation of Kim’s Passage, is that, at least in the simplest ordinary cases of causal explanation, focus and foil are both contingent and mutually exclusive; e.g., the focus event *Batman fighting the Joker* is incompatible with *Batman helping the Joker*, and they both are contingent; as such, these events constitute alternative possibilities, and the correspondent contrastive explanation clarifies why one took place, rather than another: in short, we are asking for an explanatory (causal) difference between focus and foil. There’s more than one way to understand contrastive explanation as difference-seeking. The more straightforward one, and the one supporting Kim’s reasoning, is the following. When asking “why does Batman fight the Joker, rather than helping him?”, we are searching for some information in the causal history of *Batman fighting the Joker*, that would not have been present in the causal history of *Batman helping the Joker*, were that to be the case. *Batman being good, and the Joker being evil*, as in (5A’), is present in the causal history of *Batman fighting the Joker*; but, had it been the case that Batman helped the Joker instead, that would have played no part in it. Thus, (5A’) is successful answer to the question. This kind of reasoning around contrastive explanation was championed by Lewis (1986a: 228):

“[o]ne way to indicate what sort of explanatory information is wanted is through the use of contrastive why-questions. Sometimes there is an explicit "rather than .. . . " Then what is wanted is information about the causal history of the explanandum event, not including information that would also have applied to the causal histories of alternative events, of the sorts indicated, if one of them had taken place instead. In other words, information is requested about the difference between the actualized causal history of the explanandum and the unactualized causal histories of its unactualized alternatives.”

In our case, *Batman being good and the Joker being evil* is the crucial difference between the causal chain leading up to the focus (*Batman fighting the Joker*) and the one leading up to the foil (*Batman helping the Joker*).

We can finally try to reconstruct the reasoning in Kim’s Passage. Assuming that *p* in “why p rather than non-p?” is an identity sentence, neither focus nor foil are contingent: the former is necessary, and the latter impossible. The question “why p rather than non-p?” according to this reconstruction, seeks for a crucial difference between actuality, as a p-world, and a non-p-world. But no such difference can be found, since all worlds are p-worlds and no world is a non-p-world; things are the same all over, thus no non-trivial answer to the question can be provided. Thus, under a framework for contrastive explanation as difference-seeking, we can see how an explanatory why-question involving an identity would struggle to receive an explanatory answer. This, at least *prima facie* vindicate Kim’s Passage.

Unfortunately, this won’t do. This reconstruction of contrastive explanation as difference-seeking, while seemingly viable for the many ordinary causal explanations (such as the ones I offered about Batman and the Joker, or the ones presented by Lewis 1986a: 228 about him visiting Monash rather than Oxford in 1979), is not viable for the generalized notion proposed above. The reason is very simple: plenty of *prima facie* perfectly acceptable non-causal explanations are in clear violation of it, in the same way in which the explanation of identities is: because they display non-contingent *explananda*. So to rule them all out would be tantamount to throwing the baby away with the bath-water.

There’s plenty of examples to be offered. If indeed, as they claim, metaphysical grounding backs its own special brand of non-causal explanation, sometimes called “metaphysical explanation”, then by standard rules of grounding the obviously necessary tautology [pVㄱp] is bound to be explained by either [p] or [ㄱp], depending on whether p is true. Indeed, non-contingent *explanans* and *explananda* are a commonly stated reason for taking metaphysical grounding as something other than a merely modal connection (as in Schaffer 2009: 364, Schnieder 2011: 445-446, and Dasgupta 2014: 4).

Another case is suggested by the question (8Q) above, which suggests the non-causal contrastive explanation of why mom could evenly distribute six candies between me and my sister (rather than five), in terms of six being divisible by two (but not five); this explanation is contrastive in both positions, but let us consider the focus and foil in the *explanans*. Neither of them look contingent; in fact, assuming that we are dealing with a mathematical explanation, we might claim that the focus [six is divisible by two] is mathematically necessary and the foil [five is divisible by two] is mathematically impossible. In short, they are not contingent in the sense relevant for the sought-after explanation. And something similar could be said for focus and foil in the *explanandum* (it is not contingent, nor accidental, that mom can evenly distribute six candies between two children: it is necessary in whatever sense it is necessary that six is divisible by two). What is more, it is not merely an accident that the *explanandum* is necessary. In fact, it may very well be the whole point; according to Lange (2016: 9), a very specific kind of non-causal explanations, which he calls distinctively mathematical explanations,

“explain not by describing the world’s causal structure, but rather by revealing that the explanandum is necessary— in particular, more necessary than ordinary laws of nature are. The Königsberg bridges as so arranged were never crossed because they couldn’t be crossed. Mother’s strawberries were not distributed evenly among her children because they couldn’t be.”

The idea is that such non-causal explanations work by describing the kind of constraint which make the *explanandum* unavoidable according to a modality stronger than the merely physical or nomic: e.g., there’s no possible course of action that would lead mom to evenly distribute five candies between two children, and a successful explanation describes the reason why (e.g., because five is not divisible by two). *Pace* Kim, the inevitability of the *explanandum* is a feature, rather than a bug, in many cases of non-causal explanations.[[11]](#footnote-10) More generally, moving away from the simplest, more ordinary cases of contrastive explanation may require considering modally robust focus and foil, in either position. Lewis’ reconstruction of explanatory contrastive question as difference-seeking, when applied to the generalized notion of contrastive explanation above, throws the baby away with the bath-water, for it rejects not only identity explanations, but any and all contrastive explanations with non-contingent focus and foil.

*4.3 No causal explanation of identities*

There is of course another option open to the supporter of Kim’s Passage; admitting that Lewis’ reconstruction of contrastive explanation as difference-seeking only characterizes *causal* explanation, while claiming that the explanation involving identities discussed in Kim’s Passage is indeed causal in character. Yet we cannot see how this strategy might succeed. First of all, there’s nothing in Kim’s Passage to explicitly invite the thought that we are dealing with a causal explanation of identities. Secondly (and most importantly), if the conclusion of Kim’s Passage was that there cannot be any causal explanation for an identity, that wouldn’t be such a surprising or interesting result. In fact, we think there are independent reasons to believe that identities cannot be causally explained (one might think that the main takeway from the previous subsection is that any alleged explanation of an identity is non-causal).

This has not to do with the intuitive observation that [Bruce Wayne is identical to Batman] appears to be more treatable as a fact than as an event (as we have seen in Section 2, such considerations are inconclusive); it has rather to do with the fact that there arguably is no cause of [Bruce Wayne is identical to Batman] for us to investigate. Here is a sketch of an argument to this conclusion: under a minimal understanding of causation, to search for a cause of [Bruce Wayne is identical to Batman] is to search for something which could bring it about that Bruce Wayne is identical to Batman, possibly from a time in which [Bruce Wayne is identical to Batman] did not exist (did not occur, was not the case). Yet [Bruce Wayne is identical to Batman] is impervious to all kinds of qualitative changes: viz., nothing can possibly happen to Bruce Wayne, or anything else, that could bring it about that Bruce Wayne identical to Batman. The only kind of change that could affect it, is the change from a time in which Bruce Wayne does not exist, to one in which it does exist; loosely speaking, only the existence of Bruce Wayne can bring it about that Bruce Wayne is identical to Batman. Therefore, one may think that the only item to be found in the causal history of [Bruce Wayne is identical to Batman] is [Bruce Wayne exists]. But [Bruce Wayne exists] cannot be a cause of [Bruce Wayne is identical to Batman]: that Bruce Wayne exists strictly entails that Bruce Wayne is identical to Batman; as such, the two items are too strictly correlated to be a in a genuinely causal relation, which famously displays a weaker sort of modal link (Lewis 1973). Thus, there’s really no causal story to be discovered about [Bruce Wayne is identical to Batman], and any explanation of it we may hope to find will necessarily be non-causal.

In conclusion, it is hard to motivate Kim’s reasoning, and thus the claim that, whenever *p* is a necessary sentence, it cannot be explained why p rather than non-p, by appealing to the difference-seeking features of contrastive explanation --at least, as described by Lewis.[[12]](#footnote-11) Either such features are only attributed to causal contrastive explanation, in which case the argument, while true, proves the weaker and far less interesting point that identities do not receive causal explanations; or they are attributed to generalized contrastive explanation, in which case identities enjoy the good company of many other non-contingent *explananda* which cannot be so easily expunged. For our purposes, these two options lead to the same conclusion: that nothing stands in the way of a non-causal contrastive explanation of identities. In fact, previous discussions offer interesting suggestions as to how such an explanation of identity might be framed. This is what we turn to in the next and final section.

1. **Towards a non-causal contrastive explanation of identity**

We now have at our disposal a generalized notion of contrastive explanation, for both causal and non-causal explanation. This can be used to sketch a non-causal contrastive explanation of identity; we will start by assuming that the sought-after explanation is contrastive on the side of the *explanandum*, although we will eventually obtain a kind of explanation which is contrastive in both positions.

*5.1 The sketch, and some examples*

Let us begin, then, by applying contrastive stress to why-questions involving identity. Using again (1Q), we will obtain the following three questions:

10Q) Why is *Bruce Wayne* identical to Batman?

11Q) Why is Bruce Wayne *identical* to Batman?

12Q) Why is Bruce Wayne identical to *Batman*?

(10Q) and (12Q) invite the contrast between [Bruce Wayne is identical to Batman] and another identity. Since the focus is necessary and the foil impossible, the two are trivially mutually incompatible. Thus we may ask:

10Qc) Why is Bruce Wayne identical to Batman, rather Kirk Langstrom being identical to Batman?

Here the focus is [Bruce Wayne is identical to Batman], and the foil is [Kirk Langstrom is identical to Batman]. A more natural utterance would perhaps drop the identity-talk and use the *being* verb to express it; keep in mind however that the simplest question “why is Bruce Wayne Batman, rather than Kirk Langstrom?” is ambiguous to the extent that it does not clarify whether the foil is [Kirk Langstrom is identical to Batman], or [Kirk Langstrom is identical to Bruce Wayne]; in short the expression could be associated to the contrastive stress of both (10Q) and (12Q). Similarly, (12Q) can be associated to the contrastive question:

12Qc) Why is Bruce Wayne identical to Batman, rather than being identical to Superman?

Here the focus is [Bruce Wayne is identical to Batman], and the foil is [Bruce Wayne is identical to Superman]. (11Q), on the other hand, invites the contrast with something different from an identity, as in:

11Qc) Why is Bruce Wayne identical to Batman, rather than being his cousin?

Here the focus is [Bruce Wayne is identical to Batman] and the foil is [Bruce Wayne is Batman’s cousin].[[13]](#footnote-12)

Having introduced our identity-based why-questions, how should we go on about answering them? This is where the presence of a foil in the *explanandum* makes things more interesting. Suppose that Batman and Superman have different heights, but Batman and the Flash have the same height; over this background, that Bruce Wayne and Batman have the same height can explain why Bruce Wayne is identical to Batman, rather than Superman (given that Bruce Wayne and Superman do not have the same height), but does not explain why Bruce Wayne is identical to Batman, rather than the Flash (given that Bruce Wayne and the Flash have the same height). This means that Bruce Wayne and Batman having the same height can only explain their identity within the confines of a certain foil. In fact, the first proposed successful explanation embeds the presupposition that Batman and Superman have different heights, which is why Batman and Bruce Wayne having the same height determines that Bruce Wayne is identical to Batman, rather than Superman.
This is where it might be useful to introduce contrast in the *explanans* as well. In short, the question:

12Qc) why is Bruce Wayne identical to Batman, rather than being identical to Superman?

in which, again the focus is [Bruce Wayne is identical to Batman], and the foil is [Bruce Wayne is identical to Superman], can be answered in the following way:

12Ac) Because Bruce Wayne is as tall as Batman, whereas he is not as tall as Superman

where the focus [Bruce Wayne is as tall as Batman], and the foil is [Bruce Wayne is as tall as Superman]. So we have contrasts in both *explanans* and *explanandum*. Similarly, consider again

11Qc) Why is Bruce Wayne identical to Batman, rather than being his cousin?

That Bruce Wayne and Batman have the same parents, whereas cousins do not, might explain why Bruce Wayne is identical to Batman, rather than being his cousin; but does not explain why Bruce Wayne is identical to Batman, rather than being his brother (given that brothers have the same parents). Again, the explanation of the identity between Batman and Bruce Wayne in terms of sameness of parents only works within the confines of a certain contrast. As before, we can formulate a contrastive answer to (11Qc) as follows:

11Ac) Because Bruce Wayne and Batman have the same parents, whereas cousins do not

in which the focus is [Bruce Wayne and Batman have the same parents], and the foil is [cousins have the same parents].

The fact that certain because-answers only have explanatory value within the confines of certain contrasts, may make us appreciate that many facts may have explanatory value for identities, that we wouldn’t have otherwise thought of. A prime example here would be *existence facts*. Here is an example of how existence facts may bear an explanatory value in a contrastive context:

13Qc) Why is Hespherus identical to Phosphorus, rather than Vulcan?

Where the focus is [Hesperus is identical to Phosphorus] and the foil is [Hesperus is identical to Vulcan]. A clear-cut reply to (13Qc) could point out that Phosphorus exists, whereas Vulcan does not. So

13Ac) Because Phosphorus exists, whereas Vulcan does not

Here the focus is [Phosphorus exists] and the foil is [Vulcan exists]. To anyone wondering why Hesperus is in fact identified with Phosphorus, and not with Vulcan, it is sufficient to point out the crucial difference that Phosphorus exists, whereas there’s no such thing as Vulcan; thus, existence facts may bear some degree of explanatory value with respect to identities, at least in the confines of very specific contexts of utterance (imagine the utterer of (13Qc) as an apprentice astronomer who has indiscriminately learned by heart all names of astral objects from a book, and is puzzled why her teacher does not identify Vulcan with anything).

Although we have proceeded in a piecemeal fashion, we can see that there are ways to provide contrastive why-questions involving identities with contrastive because-answers. But are those answers really explanatory? Lastly, we will deal with in an important difficulty which plagues answers such as (11Ac) and (12Ac), revolving around their alleged explanatory value. Facing this difficulty will entail going beyond the toy-examples of identities presented in the course of this paper, and present some alleged cases of non-causal contrastive explanations of identities embedded in philosophical (and especially metaphysical) theorizing.

*5.2 An objection*

As mentioned earlier, we must distinguish genuinely explanatory answers from merely evidential answers, given that both of them may present themselves as because-answers to why-questions. To answer “why is Bruce Wayne identical to Batman?” with “because Bruce Wayne is as tall as Batman” (even when both question and answer are provided with a contrast) may surely offer reasons for believing that the two are identical, but is it enough to count as an explaining? Someone might be worried that it is not. One way to articulate this worry, but by no means the only one, is tied to Kim’s (1994: 57) notion of “explanatory realism”, according to which “some objective relation between the events underlies, or grounds, the explanatory relation between their descriptions”. This worldly relation might be causation, metaphysical grounding, or what have you, depending on the kind of explanation at hand. As we have seen, the question “why did Marilyn Monroe die?” might elicit two answers: first, “because she overdosed on sleeping pills”, and second, “because I read it in the press” (as in Salmon 1989: 6-7). Of course [Marilyn Monroe overdosed on sleeping pills] is a cause of Marilyn Monroe’s death, whereas [I read it in the press] (or some slight elaboration thereof) is not: thus only the first answer, by tracking a worldy causal link, offers a genuine causal explanation, while the second merely offers some grounds for believing that Marilyn Monroe has died.

Back to identities, the objection might be that the alleged explanation of [Bruce Wayne is identical to Batman] with [Bruce Wayne is as tall as Batman] is not genuine, as it is far from clear that there is any worldly link from the first to the second to be tracked by an explanation, of any kind. If anything, assuming identity to be primitive, one might think that [Bruce Wayne is identical to batman] is a primitive matter, or at least primitive enough to non-causally determine [Bruce Wayne is as tall as Batman], rather the other way round; then, perhaps, [Bruce Wayne is as tall as Batman] is to be non-causally explained by [Bruce Wayne is identical to Batman] (something similar occurs in Block and Stalnaker 1999: 24). On the contrary, to answer “why is Bruce Wayne identical to Batman?” with “because Bruce Wayne is as tall as Batman” would offer little more of an evidential answer: as informative as they are, because-answers to why-questions such as the ones we have provided in the first part of the Section, are strictly speaking *not* explanatory. If that was the case, then not only that specific example, but our whole account would be severely compromised, as we would have completely reversed the correct order of explanation.

We believe this objection to be overreaching. While some identities may be basic enough for there not to be any philosophically interesting story about them (and thus, presumably, no explanation), arguably not *all* of them are. The most spectacular case here would be Hume’s Principle and other abstraction principles, which classify as “two-level” identity criteria (as in Williamson 1990: 145-146) in which the identities between entities of a certain kind are characterized through a condition imposed upon entities of another kind. As Lowe (1989: 4) explicitly notes, there seems to be some kind of ontological dependence relating the two classes of entities (e.g., directions of lines ontologically depend on lines, numbers of concepts ontologically depend on concepts, and so forth…) Although we have no clear account of this relation of ontological dependence, this at least paves the way for thinking that some identities are not as brute or primitive as the objection assumes; on the contrary, they would appear to be grounded or non-causally determined by something else. To deploy a standard metaphor in the literature, after determining that lines *a* and *b* were parallel, God didn’t need to add anything to the world to make it so that their directions are identical; and similarly, after deciding that forks and knives on a table are in a bijection, God didn’t need to add anything else to make it so that the number of forks is identical to the number of knives.[[14]](#footnote-13)

Of course, not all identity criteria can be reduced to the kind of “two-level” identity criteria considered above (as discussed in Lowe 1989: 4, 1991), and as such, not all identities are provided such a potential explanation. This suggests a very general point, but a crucial one for this paper: there are identities, and then there are *identities*. In whatever metaphysical category items like [Bruce Wayne is identical to Batman] belong to, it is very much possible that their prospects of grounding depend not entirely on the features of the identity relation (its necessity, or primitivity), but also on the nature of the entities being identified. The kind of items picked out by the [...], be they events, facts, or what have you, can on many accounts be thought as involving, for lack of a more specific term, not only properties and relations, but the objects that instantiate them; thus, the presence of a somewhat derivative item such as Istanbul in [Istanbul is beautiful] is bound to make [Istanbul is beautiful] itself somewhat derivative; and the presence of Istanbul, or Constantinople, in [Istanbul is identical to Constantinople] is bound to make [Istanbul is identical to Constantinople] somewhat derivative too. Although the identity relation is the same for everything, the things which are said to be identical may enjoy very different metaphysical status; as a result the identities themselves might enjoy very different metaphysical status, with only some identities being ungrounded, or primitive, while others being provided a grounding base, e.g., through suitable two-level identity criteria. There are of course multiple ways to tighten this thought process, given the varieties of metaphysical grounding and ontological dependence available on the market. For one, an argument in this direction may be extrapolated with the help of Sider’s (2011: 170-171) so-called “purity”, according to which no fundamental fact can involve non-fundamental items (more specifically, no fact can be more fundamental than any of its components); therefore, identity facts come in varying degrees of fundamentality, depending on the metaphysical status of its component objects.[[15]](#footnote-14)

If we are on the right track, at least some identity criteria have an inherent explanatory value and may be used to extract other examples of contrastive explanations of identities along the lines sketched above. For example:

14Qc) Why is the direction of line A identical to the direction of line B, but not identical to the direction of line C?

14Ac) Because A is parallel to B, but not to C.

Here the *explanandum* is decomposed in the focus [the direction of line A is identical to the direction of line B], and the foil [the direction of line A is identical to the direction of line C]; and the *explanans* is decomposed in the focus [A and B are parallel] and foil [A and C are parallel]. Under this reading, cases like (14Qc)-(14Qa) involve cases of genuinely non-causal contrastive explanation; that said, we leave it open as to what kind of non-causal explanation is at play.

Abstraction principles may only be a subset of biconditionals involving identities to be given a robust metaphysical reading, thus opening themselves to genuine explanations. Consider the vast family of the so-called Extensionality principles, which state that entities of a given kind are identical if and only if they have all parts, or components, or members in common. Such principles are metaphysically robust, at least in the loose sense that they sanction identities in a sense which is stronger than the sense in which one can claim that the fact that I read it in the press sanctions that Marilyn Monroe has died. Some robust non-causal connection is expressed by such principles, perhaps inspired by the nominalistic principle “no difference without a difference-maker”, viz. not simply a guide for us to discover whether two things of a kind are identical, but the indication of a philosophically robust explanation as to why such things are identical.

Such principles very easily lend themselves to non-causal contrastive explanations such as the ones we have sketched in this paper. For example, consider an Extensionalist presented with a certain ship in a certain instant of time, Ship, and two distinct ships in an another instant of time (ShipF, functionally identical to Ship; and ShipM, materially identical to Ship); the Extensionalist will perhaps declare that Ship is identical to ShipM: when asked “why is Ship identical to *ShipM*?”, she will answer:

15) Ship is identical to ShipM, rather than ShipF, because Ship and ShipM have the same parts, whereas Ship and ShipF do not

In (15Ac) we have an *explanandum* decomposed into the focus [Ship is identical to ShipM], and a foil [Ship is identical to ShipF], and an *explanans* decomposed into the focus [Ship and ShipM have the same parts] and foil [Ship and ShipF have the same parts]. Philosophers of different sensibilities will provide different explanations, perhaps arguing that, for whatever reason, Ship is identical to ShipF instead.

Similarly, an Extensionalist who accepts a theory of properties as classes of *possibilia*, when presented with Triangularity, the property of having three angles, and Trilaterality, the property of having three sides, will proclaim that Triangularity is identical to Trilaterality. When asked “why is Triangularity *identical* to Trilaterality?”, she will answer:

16) Triangularity is identical to Trilaterality, rather than being distinct from it, because they have the same members, whereas distinct classes have different members.

(*Explanandum* focus: [Triangularity is identical to Trilaterality]; *explanandum* foil: [Triangularity is distinct from Trilaterality]; *explanans* focus: [Triangularity and Trilaterality have the same members]; *explanans* foil: [distinct classes have different members]). That said, Extensionality might explain distinctness as well as identity. The same philosopher, when presented with Renate (the property of having kidneys) and Cordate (the property of having a heart), will proclaim that Renate is distinct from Cordate. Someone may inquire why that is the case, hence the reply:

17) Renate is distinct from Cordate, rather than being identical to it, because they have different members, whereas identical classes have the same members.

(*Explanandum* focus: [Renate is distinct from Cordate]; *explanandum* foil: [Renate is identical to Cordate]; *explanans* focus: [Renate and Cordate have different members]; *explanans* foil: [identical classes have the same members]).

These are only some examples; identity-involving biconditionals such as two-level identity conditions and Extensionality principles are themselves only some of the philosophical principles that may offer non-causal contrastive explanations of identities as they might be embedded in actual metaphysical discourse.[[16]](#footnote-15) It is difficult to offer a top-down perspective, as opposed to a bottom-up, example-driven methodology, as it is far from clear that all non-causal explanations of identities can be subsumed under a more general kind. Another respect in which we feel quite liberal is *which* identities can be so explained; we do not wish to draw any line at any specific point. Entities of a kind K might have explainable identities if they can be provided identity-involving biconditionals such as the ones above; e.g., can there be two-level identity criteria for persons like Bruce Wayne and Batman, keeping in mind that two-level identity criteria are most likely not universally applicable principles? Lowe (1989: 4) takes it to be deeply problematic to try to offer two-level identity criteria for persons, and warns the reader that in doing so “what is being overlooked is a certain order of ontological dependency seemingly implicit in Frege's discussion of the example of direction”; but we could very well take this objection on its head: how can we be sure that persons (or anything else for that matter) are not as ontologically dependent as directions are?[[17]](#footnote-16) Furthermore, there might be other identity-involving principles, beyond two-level identity conditions and Extensionality principles, sanctioning the explanation of identities.

Those are all issues we do not pretend to solve. Yet as far as we can see, there is no methodological advantage to be gained by excluding persons (or planets, as in the 13Qc-13Ac pair) from identity-based explanatory from the get-go. And if, down the line, it really turns out that no succesul explanation of the identity of people (or planets) can go through, then perhaps some other identity can still be explained.

1. **Concluding remarks**

Kim’s Passage allegedly offers philosophical justification to the Knee-Jerk Reaction against any explanation of identities, suggesting that it is ultimately pointless to ask why it is the case that any identity holds --given that things couldn’t have been otherwise. An argument against a (contrastive) explanation of identities, based on their necessity, has been developed with the help of Lewis’ (1986a) characterization of contrastive explanation as difference-seeking; according to this characterization, contrastive explanation functions by individuating a crucial difference between worlds in which the focus takes place and one in which the foil takes place. No such difference can be found in this case, since an identity, being necessary, holds at all worlds. However, developing a generalized framework for the discussion of contrastive explanation has shown that plenty of perfectly acceptable non-causal explanations deploy non-contingent *explananda*, which would equally violate Lewis’ characterization. Thus, either the Kim-inspired argument crumbles entirely, or it deflates to the conclusion that there cannot be a causal explanation of identities, which is something we readily accepted.

The discussion provided enough resources to sketch a very simple framework for a non-causal contrastive explanation of identities, with the help of many clarificatory examples. Finally, an objection has been raised against our account, wondering whether the cases we have submitted deal with genuinely explanatory because-answers to why-questions, rather than merely evidential ones. The reply to this objection lead us to consider the difference between some identities and others, and to select as particularly apt for a genuine explanation those involved in so-called two-level identity criteria, which might therefore be taken to have an inherent explanatory value; thus, we are content with the claim that *some* identities can be explained with the help of generalized contrastive explanation. There is obviously much to be discussed about the formal and informal features enjoyed by the kind of explanation sketched in this paper (for one, an obvious consequence of the account is that the logical form of explanatory knowledge concerning identity will turn out to be more complicated than originally thought: one does not simply know why Bruce Wayne is identical to Batman; one rather knows why Bruce Wayne is identical to Batman, as opposed to something else).

This is terrain still to be explored. For our purpose, it is sufficient to conclude that the Knee-Jerk Reaction has no business being the default stance on the explanation of identities.

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1. One might legitimately wonder *which* element in the *explanandum*’s causal history is to be mentioned in a successful causal explanation, amidst the overabundance of partial causes and background conditions. Any explanation has an unavoidably subjective and epistemic component, in the sense that an explanation is only successful relatively to the interests and assumptions of an inquiring agent. As we will see in a later Section, a way to express such an assumption is through the deployment of contrastive explanation.

We will come back to this issue later on, discussing contrastive explanation. [↑](#footnote-ref-0)
2. For an overview on non-causal explanations, beyond Lange (2016), see Reutlinger and Saatsi (2018). [↑](#footnote-ref-1)
3. Given the lack of details provided, there’s various ways in which [...] might function; in the case of facts “[p]” may simply be read as “the fact that p”. The case of events might be slightly more complicated; Mellor (1995: 64) describes events as localized particulars which “correspond not to truths like 'Don falls' and 'Don dies' but to referring terms like 'Don's fall' and 'Don's death'”, yet of course there are various ways to extract an ontology of events from sentences which do not explicitly make reference to them (paradigmatically, Davidson 1967). [↑](#footnote-ref-2)
4. Maybe not exactly (1Q): the expression “is identical to” appears to be, in this context, more of an artifice of philosophical English rather than something that could come out naturally in conversation. Perhaps commissioner Gordon would ask: “why is Bruce Wayne Batman?”, or perhaps a contraction of it: “why Bruce Wayne?”. Contrastive stress would make for an even more natural utterance; e.g., something along the lines of “why is *Bruce Wayne* Batman?”. Contrastive stress will play an important role in what follows. [↑](#footnote-ref-3)
5. Kim’s Passage to some extent resembles a well-known passage from Lewis (1986b: 192-193):

“There is never any problem about what makes something identical to itself; nothing can fail to be. And there is never any problem about what makes two things identical; two things never can be identical”,

which, unlike Kim’s Passage, is not explicitly about explanation; yet, like Kim’s, is concerned with “what makes it the case” questions concerning identity, vis-à-vis its necessity. Lewis is far from the only one to have reasoned along these lines, e.g., Lowe and Noonan (1988: 80-81), Williamson (1990: 144-145), Jubien (1996), Salmon (2005: 153), Horsten (2010), Fine (2016). None of those authors explicitly claim that identities cannot be explained insofar as they are necessary, and many of them do not deal with the explanation of identities *per se*. As such, they do not reason along the lines of Kim’s Passage, and neither they seem to be trying to lend their support to the Knee-Jerk Reaction. Rather, this reveals the existence of a bigger and looser collection of arguments concerning the grounding/definition/analysis of identities, which is a job for another time. [↑](#footnote-ref-4)
6. E.g., Azzouni (2000: 49). Curiously, the factivity of explanation is often argued for in the *explanans* position only (viz. if [p] explains [q], then *p* is true), whereas the truth of the *explanandum* sentence is implicitly assumed. Of course, in many models of explanation (e.g., the standard D-N model), a successful explanation from [p] to [q] with a true *p*, requires *q* to be true as well. Additionally, to the extent in which explanation is tied to the acquisition of a special brand of knowledge (explanatory knowledge, as opposed to mere descriptive or factual knowledge), the factivity of explanation in the *explanandum* position may have close ties to the factivity of knowledge. [↑](#footnote-ref-5)
7. Hitchcock (2012: 14-15). [↑](#footnote-ref-6)
8. It is unclear whether, by uttering “why is Batman *fighting* the Joker?” the rookie detective is considering the contrast between *Batman fighting the Joker* and *Batman helping the Joker*, rather than, say *Batman ignoring the Joker*, or even *Batman silently approving of the Joker*. If so, it may be more appropriate to consider the contrast between a focus and a set or plurality of foils. For simplicity we will continue to work with one-to-one contrasts, although those might eventually be subsumed as limiting cases of one-to-many contrasts (or perhaps even many-to-many). [↑](#footnote-ref-7)
9. As noticed in Hitchcock (2013: 13) our use of natural language might be somewhat misleading. The “rather than” expression used to express contrast usually takes a noun as a completion (as in “why does Batman fight the Joker, rather than Joe the Internet Scammer”); but focus and foil are here taken to be events nominalized by [...]. A more precise formulation would oppose *Batman fighting the Joker* with *Batman fighting Joe the Internet Scammer*. We will continue using natural language, but we will keep this point in the back of our head. [↑](#footnote-ref-8)
10. The introduction of the [p2] and [q2] foils might put a dent in the metaphysical neutrality that we wish to achieve. Under the assumption that, say, some non-causal explanation deals in facts, then both focus and foils would be facts; yet given that foils are built starting from false sentences, then they would need to be negative or non-obtaining facts, a notoriously troubling notion. E.g., many would agree that if *p* is false, there is no fact that *p* (although, e.g., Schaffer 2012: 130 deploys “non-obtaining alternative [facts]” functioning as foils in a relation of contrastive grounding). We will not say more on the matter. [↑](#footnote-ref-9)
11. This is not to say that the alleged contrastive explanation of identities that we will put forward in the next Section are explanations by constraint as shown above, although they may very well be. Lange (2016: xviii) is explicit to point out that distinctively mathematical explanations are but a subset of non-causal explanations. [↑](#footnote-ref-10)
12. Lipton (1990: 255-256) offers independent reasons against Lewis’ account, and proposes another account of contrastive explanation as difference-seeking. [↑](#footnote-ref-11)
13. Interestingly, the contrast with non-identity might be constituted by a contrast with something contingent, rather than necessary; thus focus and foil might not be incompatible. This is clearly not the case of (11Qc): given that Bruce Wayne and Batman are identical, it is impossible that Bruce Wayne is Batman’s cousin (no one can be one’s own cousin); but consider

Why is Bruce Wayne identical to Batman, rather than being his best friend?

Why is Bruce Wayne identical to Batman, rather than being his police informant?

Given that someone can be one’s own best friend, or police informant, these are cases of contrastive-why question with a necessary focus and a contingent foil, such that the two are not incompatible. [↑](#footnote-ref-12)
14. For one, Linnebo (2018: 18) is the last in a long line of supporters of an asymmetric reading of abstraction principles to claim that direction identity is metaphysically grounded, if not outright explained, by line parallelism (and identity of number of concepts by equinumerosity). [↑](#footnote-ref-13)
15. It may be worth noticing that Sider (2011) does not formulate fundamentality in terms of *grounding*, but *joint-carving*; and, for him, identity is fundamental insofar as standard-first order logic with identity is joint-carving. [↑](#footnote-ref-14)
16. And not *exclusively* metaphysical discourse. For example, one could very clearly claim that the cardinality of natural numbers is identical to the cardinality of rational numbers because there is bijection between them. We would like to thank an anonymous reviewer for suggesting this example to us. [↑](#footnote-ref-15)
17. Lowe (*ibid.*) tries to reason that Aristotelian primary substances do not ontologically depend on anything. But whether persons are primary substances is an entirely different issue. Persons aside, the general problem still stands. [↑](#footnote-ref-16)