Pictures Have Propositional Content

Abstract: Although philosophers of art and aesthetics regularly appeal to a notion of 'pictorial content', there is little agreement over its nature. The present paper argues that pictures have propositional contents. This conclusion is reached by considering a style of argument having to do with the phenomenon of negation intended to show that pictures must have some kind of non-propositional content. I first offer reasons for thinking that arguments of that type fail. Second, I show that when properly understood, such arguments can in fact be turned on their heads and shown to support the propositionalist position.

Introduction

Many pictures are representational and so can be said to have *content* – there is something they represent. Representational pictures may represent in different ways and so may have a variety of contents. For example, Albrecht Dürer's *Praying Hands* is a *depiction* of two hands, but it *symbolizes* prayer and perhaps faith. Besides depicting and symbolizing, pictures may *artistically represent* all manner of things from liberty to discontent to a lost love.[1] Of present focus is the depictive content of pictures. To further bring out the notion of depiction, consider the resemblance theory of depiction. Although I don't wish to endorse that view (and nothing in the present paper hangs on it), it is illustrative. According to that view, pictures depict what they resemble in some relevant respect. That would explain why *Praying Hands* depicts two hands but does not depict prayer or faith – the picture resembles two hands. But what is the nature of depictive content? Beliefs and assertions, for example, are said to have propositional content – the contents of beliefs and assertions *are* propositions. But it's not at all

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[1] See Abell (2009) and Greenberg (2013) for further discussion.

obvious that the *kind* of content had by sentences and beliefs (*i.e.* propositional content) is the *kind* had by pictures (moving forward, when I talk about pictures and their contents I'm restricting attention to depiction). It is common, in fact, to hold that pictures have a distinctive kind of content, sometimes called 'pictorial content'.[2] The present paper argues that pictures in fact have propositional content. In short, I consider a style of argument that alleges to show that pictures *must* have a kind of content that is other than propositional. The argument proceeds from the very plausible observation that there is no way to express a negated proposition pictorially – that is, one cannot depictively represent that such and such is not the case. Similar observations may be made about disjunctive contents and perhaps other contents involving Boolean operations which are typically taken to apply to propositions to form more complex propositions. Not only do these types of arguments fail, but upon closer examination they actually push one towards the propositional content view. Of course, there may well be additional arguments against the propositionalist view. My discussion is focused as it is for three reasons. First, the argument I examine is actually given. Commonly, one finds passing remarks and assumptions rather than arguments against the propositionalist view. One finds, for example, valuable discussions about important differences between pictures and sentences along with an *assumption* that they must

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[2] See, for example, Crane (2009), Haugeland (1998), Peacocke (1987, 1992), and Sainsbury (2005). Heck (2007) is concerned with 'mental maps' (which he takes to have a different kind of content from beliefs) but offers considerations very much like those offered by other anti-propositionalists. Lopes (1996) is a slightly harder case, though he seems to hold that pictures do not have the same kind of content as sentences and beliefs (in personal correspondence he expresses that he is indeed inclined to that position). Block (1981) and Dennett (1986) also appear to sometimes take the contents of pictures to be of a distinct kind from the contents of beliefs, though it must be noted that they are engaged with a literature (specifically the 'imagery debate' in cognitive science) that isn't always holding clear the difference between representational vehicles and their contents. I find allies in Blumson (2010) and Schier (1986). Sober (1976) may also be an ally. He aims to offer a translation procedure from pictures to sentences that *express* the same contents. Crane (2009) who is an anti-propositionalist would grant to Sober that there are sentences that *describe* the content of the picture, but none that can *express* it. More on Crane below.

have different kinds of contents. Second, the key problem with the anti-propositionalist argument extends more broadly into the literature. The anti-propositionalist argument on which I focus relies on the commonly made assumption that pictures have expressive limitations not had by sentences. It is important to see that even if true, this does not imply a kind of non-propositional content – the implications of the common observation should be tempered. Third, the anti-propositionalist argument I'll consider, as I mentioned, gives way to a *positive* argument for the propositional view when more fully appreciated.

Let me say a bit more about propositional content. By 'proposition' I have in mind abstract truth-evaluable entities that are the objects of the propositional attitudes such as belief and desire and that are expressed by declarative sentences. There are a range of views concerning the nature of propositions. For example, propositions have been taken to be unstructured sets of possible worlds, structured entities comprising concepts or Fregean senses, structured entities comprising objects, properties, and relations, and *sui generis* entities.[3] My arguments don't rely on settling on a particular view at this juncture. I'm myself inclined to advance the sets of worlds conception when it comes to the contents of pictures, though I see no in principle reason why a structured view might not become available if one were to offer reasons for thinking that pictures themselves have representational parts that contribute constituents to propositions. But again, for present purposes, these issues needn't be settled.

To say that a representation 'has content' is just to say that it is evaluable for truth, accuracy, or satisfaction. Beliefs and declarative sentences are the most

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[3] Hanks (2009) offers a nice survey of the views as well as various advantages and problems.

straightforward *propositional* cases – beliefs and declarative sentences are *true* or *false* and they owe their truth-value to the truth-value of their propositional content.[4] But propositional content is standardly extended to other cases. Desires are naturally said to be *satisfied* or *frustrated* rather than true or false, but it is common to account for this in terms of propositional content.[5] If one desires that it rain tomorrow, the desire is satisfied just in case its content (*that it rains tomorrow*) is true. Similarly, perceptual experiences are said to be *accurate* or *inaccurate* rather than true or false. But a now widespread view in the philosophy of mind has it that perceptual experiences are (at least in part) propositional attitudes, which is to say that experiences (i) have content and (ii) their contents are propositions.[6] Perceptions are accurate just in case their propositional contents are true. The case of perception is perhaps the closest to pictures. Philosophers of mind often focus narrowly when it comes to the content of visual experience – visually representing that a red round thing is before one, for example. But of course propositional theorists about perception think that the contents of actual perceptual experiences are far more complex. When one represents the red round thing, one also represents things in the background, the surface the round thing is resting upon, the lighting conditions, and so on. In short, a rich array of things is represented as being the case. But richness is certainly no bar on content being propositional, for some

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[4] Schiffer (2003) offers a helpful discussion, although the view is far and away the dominant one.

[5] See Searle (1983) and Stalnaker (1984) for influential discussions.

[6] Many theorists also add (iii) that the phenomenal character (or 'what it is like' to undergo the experience) is wholly determined by the content. In fact, in order to maintain that perception *is* rather than merely *involves* a propositional attitude, one may insist on adopting (iii) in addition to (i) and (ii). For the purposes of this paper, one needn't take a stand on this issue. The propositional attitude theory is indeed widely endorsed. For example, Evans (1982), Harman (1990), McGinn (1989), and Searle (1983) all endorse (i) and (ii). 'Qualia freaks' such as Block (1996), Peacocke (1983), and Shoemaker (1990) endorse (i) and (ii) or something very much like (ii) though explicitly deny (iii). For examples of theorists who argue for (iii) in addition to (i) and (ii), see Byrne (2001), Crane (2003), Dretske (1995, 2003), Lycan (1996), McDowell (1994), Pautz (2009, 2010), Siegel (2010a), Thau (2002), and Tye (1995, 2000). For dissent from the propositional attitude theory see Alston (1998), Brewer (2006), and Travis (2004).

propositions are informationally rich. My position is that just as the propositional model of evaluability has been extended to desire and perception, it should be extended to pictures as well. The accuracy of a picture depends on the status of its propositional content, and like the contents of perceptual experience, we should expect those contents to often be informationally rich.[7]

The Significance of the Nature of Content

Before moving on, we should consider why the *kind* of content had by pictures matters. I'll offer three reasons that I think are especially compelling.

First, the interface between the contents of our mental states and the contents of pictures gives us a clear reason for caring about the nature of the content of pictures. Representational pictures can uncontroversially be used in communication. One might use a picture to get an interlocutor to come to believe that, say, the weather on one's trip was dismal. One may ask, for example, 'How was the weather?' and receive, rather than a verbal answer, a gesture towards the screen of a smartphone or a photo depicting gloom and rain. On the basis of looking at the picture, one's conversational partner

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[7] There may be choices concerning richness. One straightforward propositionalist option is to hold that the contents of rich perceptual experiences and the contents of pictures are long, conjunctive propositions. We might then hold (roughly) that depending on how many conjuncts are true, the representation is more or less accurate. Alternatively, one might suggest that rich representations encode sets of propositions that are not united into a further proposition. Such a view has precedent in the philosophy of language. Dever (2001) offers the following example: If asked to evaluate the sentence 'Barack Obama, formerly governor of Illinois, is the 44th president of The United States' in the actual world, one might very reasonably argue that something is right about the sentence and something is wrong, but the sentence isn't straightforwardly true or false. Obama was, after all, never a governor. For this reason, Dever argues that we should take such sentences to express two propositions: (i) that Barack Obama is the 44th president of the United States; (ii) that Barack Obama was the governor of Illinois. Importantly, Dever writes, 'These two propositions will not be further united into a single proposition through the means of a sentential connective, so there is no single unit to which we can ascribe a truth-value' (294-5). Such a position might better account for the fact that we aren't inclined to say that pictures are simply false when they partially misrepresent. The exact details needn't be settled now. My modest goal in the present paper is to argue that some propositionalist view is correct. If one is persuaded of that, the next step would be to work out the subtle choice points.

comes to believe that the weather was dismal. But how might this be achieved? On one attractive model of communication (what we might call 'the proposition sharing model'), vehicles of content such as sentences express the contents of beliefs. When one has a thought with a propositional content and utters a sentence that expresses that very content, when all goes well, an interlocutor comes to have a belief with the very same content as the speaker. But if pictures have a distinct kind of content, a story about how information is being encoded such that one can put her beliefs into pictures (so to speak) and then expect others to recover them is needed. Any other interface between propositional mechanisms and pictures will raise similar questions. If pictures have propositional content, the story is familiar.

Second, a number of theorists have recently made very interesting use of the Gricean mechanism of implicature as applied to pictures.[8] For example, it has been noticed that the visual properties of a picture do not fully determine what a picture represents.[9] This is a point of pressure for theorists who aim to account for depiction in terms of resemblance. A picture might feature an array of colors and shapes that visually resembles, say, Churchill, but such an array also resembles a wax mannequin of Churchill. There is, in general, an underdetermination of what a picture represents when one appeals to resemblance. But of course, some pictures really do (determinately)

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[8] See Grice (1975).

[9] By 'visual properties', I have in mind the features of a picture that one can detect through vision alone. Abell (2009) offers a helpful list: 'occlusion shape, texture, tonal relations, apparent size relations of parts relative to a point, relative spatial location of parts, local color, and aperture color relative to a point (color as it appears at that point when seen through a reduction screen which isolates color from the distorting effects of environmental features such as ambient light and nearby areas of differing do color)' (196). Exactly which properties can be visually represented is a matter of debate (See, for example, Siegel (2010b)), but those issues needn't distract us presently. The important point now is that a picture can intuitively depict one but not the other of two visually identical objects, so what's depicted will not always be determined by the visual properties of a picture alone (more on this in the main text). Such possibilities create known trouble for theories of depiction that rely on visual resemblance.

depict Churchill rather than the mannequin. Abell (2005) has recently argued that

Gricean implicature can help the resemblance theorist fill in the gaps left open by what

she calls a picture's 'visual content'. Batinaki (2008) offers similar considerations. But

on Grice's account of implicature, one implicates that p by saying that q, where 'that p'

and 'that q' designate propositions. If the Gricean mechanism is going to be applied to

pictures, the nature of the contents of pictures matters. If they are propositions, then

theorists like Batinaki and Abell are off to the races. If they are not, then sympathetic

theorists will need to spell out how the Gricean idea is to be extended to contents that

aren't propositional.

     Third, the issue bears on the philosophy of perception. Whereas belief is

sometimes taken to have propositional content and is said to be a sentence-like way of

representing the world, perception is sometimes likened to picturing. This thought can

be fleshed out in at least two ways. First, it has been argued that whereas the *vehicles* of

belief are sentence-like, the *vehicles* of perceptual representation are picture-like.[10],[11]

Alternatively, it has been argued that the kind of *contents* perceptual states have is the

kind that pictures have. The nature of the content of pictures is clearly relevant at this

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[10] See, for example, Fodor (2008) for a discussion of both vehicles and their contents. Fodor's own view is that the nature of the vehicle of content has a bearing on the nature of the content itself. Fodor isn't explicit about whether he thinks the contents of pictures are non-propositional, but one might reasonably take him to hold that they lack the sort of structure that the contents of sentences have. Presently, the important point is that one may wish to flesh out differences between cognitive states such as belief and perceptual states at the level of vehicles while remaining silent on the nature of their content. Dretske (1981), for example, takes all representations to have 'information content' (plausibly construed either as a Russellian proposition or a possible worlds proposition) but distinguishes between pictures and sentences at the level of vehicles of content. He then takes this difference to illuminate interesting differences between belief and perception.

[11] 'Picture-like' and not 'pictures' since of course we don't have public images in our heads. Theorists such as Kosslyn (1980) who hold that there are picture-like mental representations argue that some mental representations are intrinsically spatial: spatial relationships are represented by actual spatial relationships on the picture-like surface. Kosslyn posits a functionally defined surface called the *visual buffer* that is influenced by Marr and Nishihara's (1978) 2 1/2-D sketch account of visual processing. Block (1981) offers a helpful, philosophical discussion of the 'imagery debate' in cognitive science.

juncture. If it turns out that pictures simply have propositional content, and if we are trying to draw an interesting difference between belief and perception, then it must be the *vehicles* of representation rather than their contents that we are interested in. If the contents of pictures are importantly different in kind from the contents of belief, then both suggestions are live.

There are two related points worth mentioning here. First, another interface question arises since there is an interface between belief and perception. Perception provides input to our beliefs – we very often believe things on the basis of perception. If we suppose that perception is somehow picture-like and pictures have contents that are different in kind from the contents had by beliefs, then we must consider how the contents of perception interface with the contents of belief. If both have propositional content, the interface looks simpler. Second, the suggestion that belief is sentence-like but perception is picture-like is sometimes in turn taken to have a bearing on debates over 'nonconceptual' content.[12] I think it is not at all obvious that these issues are as intertwined as often supposed. Not only do we need a clearer understanding of what it is for a representational state to be nonconceptual but, more to the point presently, we need a clearer understanding of the nature of the contents of pictures. On one popular line, nonconceptual content is understood in terms of the nature of certain contents themselves. For example, one might take some contents to be Fregean rather than, say, Russellian, or one may take some contents to be propositions and others not. If pictures have non-propositional contents, then it may be suggested that nonconceptual content

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[12] The first serious, contemporary suggestion of non-conceptual content can be found in Evans (1982). For more developed discussions, see Byrne (2005), Crane (1992), Heck (2000), and Tye (2005, 2006), though it is worth noting that the literature is large and growing. Bermudez and Cahen (2010) offer a helpful overview of the topic. Speaks (2005) offers reasons for thinking the term hasn't been sufficiently clarified in the existing literature.

is pictorial content. But if pictures have propositional content, it's not clear that appealing to pictures adds anything to the nonconceptual content debate construed as a debate over kinds of contents.[13]

Why the Contents of Picture Must Not Be Propositions

Theorists working on perception often draw analogies with pictures. As I noted above, for example, it is sometimes held that perception is, in some sense, picture-like. In the present section I wish to consider an argument offered independently by Tim Crane (2009) and Mark Sainsbury (2005). Their target is perception – both wish to show that the contents of *perception* are not propositional. Interestingly, however, both argue by first assuming that perception is relevantly picture-like. They then argue that *pictures* do not have propositional content. It is this conclusion on which I wish to focus. (It is noteworthy that the outcome of the argument would have a bearing on perception if the assumption that perception is relevantly picture-like could be substantiated, but I won't take up that possible connection here.)

The argument against the propositional content theory begins with the observation that there are things we can do via sentences (which are uncontroversially propositional) that we cannot do via pictures. Sainsbury offers the following:

> [P]ropositional content makes room for a notion of negation, an operation that can be applied to any complete content (and perhaps some

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[13] An alternative view about nonconceptual representation takes *states* to be conceptual or not – a state is conceptual just in case being in that state requires the deployment of concepts. (This is not unrelated to the content vs. vehicle distinction above). But that distinction may well apply to whatever one ends up saying about the contents had by pictures – perhaps grasping the contents had by pictures requires concepts or perhaps not. This is why I said above that whether being nonconceptual and pictorial are really intertwined depends in part on what is meant when one calls a representational state 'nonconceptual'.

incomplete contents as well). Applied to a complete content, negation is unique (there is just one negation) and it reverses truth-value, turning a truth into a falsehood and a falsehood into a truth. Although ad hoc conventions can relate aspects of a picture to negative facts, there is no standard way of effecting this, no operation that can convert a complete picture into 'its negation'. There is no such thing as the negation of a picture (2005, 242).

Crane (2009) has something similar in mind when he draws out some of the similarities and differences between pictures and sentences. He is motivated by the observation that there are certain things we can do to propositions via sentences and their utterances that we cannot do via pictures. Uncontroversially, indicative sentences have propositional content, and Crane notes that by using a sentence one can do things like assert a proposition or negate a proposition. But, Crane claims, parallel things cannot be said of pictures; one cannot use a picture alone to assert or negate anything. In order to express something negated using a picture, he tells us, one must also say something; *e.g.* 'this is not what happened in 1492'. The position is clear in the following remarks from Crane: '[T]here is no way of simply using a picture alone to deny what it represents' (459), 'You can only negate or disjoin the content of a picture by using some non-pictorial symbol' (459), and '[w]ithout these non-pictorial symbols, it makes little sense to say that the content of the picture can be something which can be asserted, denied, negated or disjoined' (460).[14]

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[14] Sainsbury clearly takes a stronger position here, holding that there is *no such thing* as the negation of a complete picture, though he allows 'aspects of a picture' to be related to negative facts. See fn. 7 above for a way a propositionalist might accommodate (if it is something that needs accommodating) that there is no negation of a complete picture.

Crane and Sainsbury wish to draw a conclusion about the contents of pictures on the basis of these considerations. Their argument can be reconstructed thus:

1. If one cannot, via representational vehicles of kind R, negate or assert a proposition, then vehicles of kind R don't have propositional content.
2. One cannot assert or negate a proposition via a picture.
3. So, pictures do not have propositional content.

It is crucial to notice that the argument relies on drawing a conclusion about content on the basis of facts about vehicles of content and what one can do with them. Sainsbury, for instance, notes that there is no standard way to relate aspects of a *picture* to negative facts and he later relies on the 'negation of a *picture*' (emphasis added). This move from contents to vehicles is important and Crane makes a similar move. He writes, 'there is no way of simply using a *picture* alone to deny what it represents' (emphasis added). The argument is provocative, but from the fact that one cannot do things via a picture or express certain kinds of contents in a pictorial way, it does not follow that the contents that are expressed by pictures aren't propositional.

Premise 1 is dubious. The fact that some vehicle of content can or cannot be used to do some of the things for which sentences are used seems to have no bearing on what the content of those vehicles is like. At most, Crane and Sainsbury have found an expressive limitation of a representational medium. That is, perhaps pictures do fail to express some propositions (such as negated propositions – more on this below), but this does not show that they express no propositions. In fact, it is a familiar idea that some propositional vehicles should have such limitations. It has been alleged that some natural languages, such as that used by Piraha speakers in the Amazon, lack terms for

certain numbers.[15] If correct, such languages cannot be used to express that there are fifteen coins on the table, for example. (If empirically incorrect, such a language certainly seems possible.) From this it does not follow that what *can* be expressed using the available sentences isn't propositional.

Premise 2 is also suspect, but also easy to misunderstand. To avoid confusion, consider someone who suggests the following: *it is true that pictures are not now used to assert or negate, but this is a contingent fact. If there were a practice of holding an image to one's forehead when one wanted to express that things are as they are depicted in the picture and a practice of holding a picture to, say, one's left cheek when one wanted to express that it is not the case that what the picture depicts is or was so, then one could use pictures very much like present, natural languages – to assert, to negate, and so on. Alternatively, one could have a practice of, say, drawing a '~' in the top left corner of any picture to indicate that what the picture represents is not the case. If such a norm were adopted, one would have no problem negating the content of a picture. Sainsbury in particular seems to be sensitive to this fact as he makes room for 'ad hoc conventions' of negation. But if one is interested in the nature of the contents of pictures, these non-actual possibilities (even if ad hoc) are clearly relevant. In other words, when the 'cannot' in premise 2 is given the proper modal force, it is false.*

This would be to miss Crane and Sainsbury's point. Their point is that by introducing ad hoc conventions one does not *depict* that something is not the case. The force of premise 2 (and so the antecedent of 1) does not rest on how one reads 'can', but

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[14] Frank, M.C., et. al. (2008)

rather on how one reads 'via'. For present purposes I wish to grant to Crane and Sainsbury that one cannot, *via depiction alone*, express (say) a negated proposition. In fact, it's a common thought in the literature. The position has been endorsed, for example, by Heck (2007), Kulvicki (2006), Schier (1986), and Sober (1976) and upon reflection is seems pretty plausible. How, for example, might one depict that something is not green? Plausibly by depicting the thing in question as being some other color, say red. But when we depict an object as red, have we thereby *depicted* it as not green? It would be strained, I think, to say that depicting something as red is sufficient for depicting it as not green, else the representation must also count as sufficient for depicting an infinite number of other 'not'-facts, many of which no interpreter is likely to pick up on. Schier (1986) helpfully points out that via pictures we can at most indirectly represent something as not having some color by directly depicting it as having some other color. Similar considerations go for shapes and seem to generalize more broadly. For example, it seems strained to suggest that I can depict that there are no unicorns by simply leaving unicorns out of a picture. Rather, I depict the things I've included.

I think quite a lot more could be said here and it is a worthy project to consider more carefully what the expressive limitations of pictures are and how to account for them. At present, we needn't get hung up on these issues. Even if we grant that one cannot depict things in such a way that a picture expresses that it is not the case that such and such, anti-propositionalism about pictures is no better off. Perhaps one cannot, purely pictorially, express a negated (or a disjoined) content. But Crane and Sainsbury can at most help themselves to the same claim as before: that there are some propositions pictures don't express. It does not follow that all contents pictures *do*

express fail to be propositions. Perhaps one does indeed need symbols or utterances to do everything with pictures that speakers do with, say, English sentences, but this isn't enough for the desired conclusion.

This observation is an important one, for commonly one finds appeal to the expressive limits of pictures. For example, Richard Heck (2007) writes:

> One cannot, for example, form arbitrary Boolean combinations of maps: There is no map that is the negation of my cognitive map of Boston; there is no map that is the disjunction of my map and my wife's; and so forth. If the content of a cognitive map is a structured proposition, why shouldn't there be maps with such contents? Why can't the negations of the atomic formulae that figure in the content of a map also figure in its content? Why can't these formulae be disjoined? This objection would also apply, of course, to the proposal that we should take the content of a map to be the set of possible worlds (parts of which) it correctly describes. Here again, there are only some sets of worlds that can be the content of a given map. The intersection of any two such sets can presumably always be the content of a map, but their union cannot. Why not? (126)

Heck's point is about maps, but one can easily assimilate his line of questioning to pictures. One possible answer to his line of questioning is that pictures and maps have a kind of content that doesn't allow for negation and disjunction, but that conclusion certainly doesn't follow, as we saw above. Moreover, there are alternative explanations worth pursuing. For example, one might argue that the semantic facts about depiction are determined at least in part by visual resemblance relations and since nothing *looks* to be disjunctive and nothing *looks* to not be the case, it's unsurprising that pictures do

not depictively express disjoined or negated propositions. Another approach might appeal to the *structure* of pictures. John Kulvicki (2006), following Nelson Goodman (1968), offers a detailed discussion of the structure of pictures themselves – he describes them as in fact having a syntax. One might look to such structural features to account for the expressive limitations of pictures. Presently I won't try to answer Heck's rhetorical questions in detail, but I hope to have made it clear that from expressive limitations one cannot simply conclude that pictures have a kind of content that is non-propositional.

Dominic Lopes (1996), picking up on an idea from Dennet (1986) and Block (1981), is another theorist who makes use of expressive limitation. Rather than focusing on negation and disjunction, Lopes argues that pictures, unlike sentences, must make various 'non-commitments'. For example, a picture of a man wearing an opaque hat large enough to cover all of his scalp must be non-committal with regard to the man being bald. A picture depicting a tomato as red all over cannot depict the tomato as simultaneously green all over, so the picture is non-committal with regard to the tomato being green (and the same goes for the other non-red colors). Sentences are not like this. A sentence might say that the man with the hat is bald, or it might say that a tomato is red all over and green all over. Sentences of the later kind are never true, but such *representations* are nevertheless possible. As I mentioned above (fn. 2), Lopes isn't entirely clear about how he thinks of the nature of the contents of pictures, but he certainly thinks that pictures' expressive limitations play an important role in differentiating them from sentences. I'd caution Lopes to leave open the possibility that even if pictures do have the expressive limits for which he argues, they may well have propositional contents. A valuable project would explore in detail how to account for

these expressive limitations. As mentioned in the previous paragraph, there are a range of options besides making an appeal to *kinds* of contents.

Pictures Have Propositional Content

The expressive limitation argument against taking the contents of pictures to be propositional fails, but something positive can now be said as well. In fact, it is in light of points concerning negation made above that this is so.

To illustrate, recall that Crane himself notes that one can negate the content of a picture, just not pictorially. He tells us, 'You can only negate or disjoin the content of a picture by using some non-pictorial symbol' (459). Next, as Crane reminds, propositions are the relata of truth-functional logical relations (454). This is unobjectionable and, of course, negation is one such relation. But if one can negate the content of a picture (with words, symbols, images, or whatever, ad hoc or otherwise), the content must be the sort of thing that can be negated, *i.e.* a proposition. The anti-propositionalists' own observations lead to an argument in favor of the view that the contents of pictures are propositional.

An example further illustrates the point. Suppose one holds up Jacques-Louis David's picture of Napoleon's coronation (to follow an example of Crane's) and says, 'This is not how it was.' It certainly seems that one is negating *something*. 'This is how it was' draws attention to propositional information encoded in the picture and one then negates that proposition by including 'not'. By uttering those words and holding up the picture, there are a variety of things one might intend to express. One might intend to express that nothing the picture depicts happened. One might intend to convey more specifically that no one was wearing red or that Napoleon crowned *himself*. Many

propositions seem available for negation so we should hold that the proposition the picture encodes is a very complex proposition, perhaps a long conjunction.[16] As I noted above, the contents of pictures are typically rich with information. It might be helpful to think of a picture as similar to book in this regard. I might present to you a copy of Russell's *A History of Western Philosophy* and say 'This isn't how it was'. I might intend to convey that all the information in the book is false or, more likely, I might wish to draw your attention to a single claim or a cluster of them: 'This isn't how it was, Philosophy didn't begin with Thales predicting an eclipse'. But if negation is successfully being applied (even by conventional means) and we agree that negation is a propositional operator, then there must be at least one proposition the picture (or the book) encodes that one can negate.

One might resist the preceding argument by holding that 'this is not how it was' functions in a more complicated way when applied to a picture. One might suggest that rather than making reference to a proposition *encoded* or *expressed* by the picture with 'this is how it was' (for example, to the proposition *that Napoleon was crowned*), 'this' demonstratively refers to a non-propositional content and 'how it was' predicates a property of this non-propositional content. This would yield a new proposition that has a non-propositional content as a constituent. It will be helpful to visualize the suggestion. Suppose we are attracted to a Russellian view of propositions according to which propositions are structured and their constituents are objects, properties, and relations. Let wedged-brackets represent whatever unifies such a proposition and let 'ⓘ' below stand for a non-propositional content (which is a kind of *object* or *entity* after all).

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[16] Again, see fn. 7.

The hyphenated phrase to its right represents a property that the object is represented by the proposition as instantiating:

<ⓘ,**how-it-was**>

Now we've got a complete proposition – there is an object (a non-propositional content) and a property and they are brought into a unity to form a proposition. To that complete proposition we can add negation to yield a negated proposition:

<~<ⓘ,**how-it-was**>>

But notice that the content of the *picture* is still non-propositional on this approach. It is only the content of my utterance that is propositional. Call this The Demonstrative Reply.

Crane would likely be attracted to The Demonstrative Reply given his discussion of 'describing' a content (460-1). He maintains that for any picture, there is some or other sentence that describes its content but which may fail to express its content. Crane's idea is that pictures have non-propositional contents to which one can refer with a sentence or a term. According to Crane, that a sentence that expresses a proposition can be used to describe the content is not sufficient for showing that the described content is propositional – describing isn't expressing. For example, he takes 'This is the content of this picture' to be a way of *describing* the content of a picture. This line of thought lends itself to adopting The Demonstrative Reply.

But there are two ways of resisting The Demonstrative Reply. First, there is no motivation for maintaining it. Since the enumerated argument above fails, why turn to this reply? Without another argument, only a prior commitment to non-propositionalism could motivate this move. Second, and more persuasively, other constructions involving what very plausibly are (or are at least expressively equivalent

to) sentential or propositional operators suggest the presence of a proposition rather than a non-propositional content. Imagine looking at a picture depicting a man jumping over a moving car. Suppose you express skepticism about what is depicted, but I reply, 'That's possible.' On a simple-minded view motivated by modal logic, the semantic value of 'possible' is a propositional or sentential operator. A more contemporary view in linguistics takes 'possibly' and other modal terms to be verb auxiliaries, but the important point presently is that the typical truth-conditions for sentences featuring a modal term like the one in question call for a proposition. More specifically, the truth-conditions involve quantification over accessible worlds or situations *where a relevant proposition is true*. When I utter 'That's possible' in the situation just described, what I say is true just in case there is some accessible world where it is true that the man jumps over the car. It's hard to see what the role of 'that' might be in the sentence in question if not to contribute a proposition to the truth-conditions. 'That', I suggest, is anaphoric on something like the proposition *that the man is jumping over the car*, a proposition encoded in the picture.[17] Recall that The Demonstrative Reply turns on taking 'is how it was' to contribute a property that is then to be combined with the semantic value of 'that' (which allegedly refers to a non-propositional content) to form a complete proposition which might then be negated. In the present case, this suggestion is implausible since 'possibly' calls for a proposition.[18] By taking the contents of pictures to

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[17] This is an instance of the wider phenomenon of propositional anaphora. A helpful discussion can be found in Moltmann (2006).

[18] It was noted earlier that Crane and Sainsbury are themselves interested in pictures because of an alleged connection to perceptual experiences. Notice that similar points to those just made apply to experiences as well. After knowingly putting on glasses that seem to shift things a bit to the left, one might truthfully say that things aren't quite where they appear. Plausibly, when one says that things aren't as they appear, the subject, in effect, says that the way her experience represents things is false or inaccurate

be propositional, we have a very straightforward way of accounting for how it is that we can use modal terms and negations along with pictures to convey information. To deny the straightforward account one not only takes on the burden of saying what the nature of the content of pictures is like, but one must also complicate if not deny well established and highly motivated views about the behavior of truth-functional connectives, sentential operators, and other well understood operations defined over propositions.

Conclusion

Given that one can (with the help of other conventional symbols) use pictures in the way just argued to express negated contents and modal contents, there is good reason for maintaining that pictures have propositional content. And I think this should be viewed as good news. Theorists can extend useful notions such as implicature to pictures in a straightforward way and can tell a similar story to the one told about sentences when dealing with pictures in communication. Furthermore, since philosophers already have on hand advanced discussions of propositional content, clear questions for interesting future research on the content of pictures can be formulated: 'which propositions are encoded in a picture?', 'what is the best way to account for the richness of the content', 'do pictures encode multiple propositions or a single, complex proposition', and 'how might the contents be structured if they are?'. There are rich

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– she negates (with words) the content of her experience. Examples involving sentential operators rather than truth-functional connectives are available as well.

philosophical resources concerning propositional content that will promote progress on

these questions.[19]

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