Comments on *Naming and Necessity*
by Andrew Boucher
3 March 2007

I recently had the occasion to reread *Naming and Necessity* by Saul Kripke. *NaN* struck me this time, as it always has, as breathtakingly clear and lucid. It also struck me this time, as it always has, as wrong-headed in several major ways, both in its methodology and its content. Herein is a brief explanation why.

A Methodology of Intuition

NaN uses over and over again a particular *modus operandi*. Imagine, says Kripke, a particular situation, usually different if not very different from the present world. A query is formulated as to what "we" or "you" would say about a particular topic. Kripke then answers for us, based on what *his* intuition says. And then he draws a philosophical conclusion.

For instance [p. 132]

> Someone might, by a clever sort of apparatus, produce some phenomenon in the sky which would fool people into thinking that there was lightning even though in fact no lightning was present. And you wouldn't say that the phenomenon, because it looks like lightning, was in fact lightning. It was a different phenomenon from lightning, which is the phenomenon of an electrical discharge; and this is not lightning but just something that deceives us into thinking that there is lightning.

This is then used to buttress a claim that a certain type of assertion is necessary.

Kripke writes in a different context [p. 42]

> Of course, some philosophers think that something's having intuitive content is very inconclusive evidence in favor of it. I think it is very heavy evidence in favor of anything, myself. I really don't know, in a way, what more conclusive evidence one can have about anything, ultimately speaking.

I think Kripke is right that, in some cases, intuition is conclusive evidence. For instance, whether or not an undefined, intuitively understood word applies in a given situation, looks like it can only be decided by intuition. Is the color of this particular thing yellow (does the concept of "yellow" apply)? Is it logically possible that Godel was born from different parents (does the concept of "logically possible" apply)?

But there are problems with relying on intuition too heavily and too broadly.

First, intuition has different degrees of conviction. My intuition affirms quickly and without effort that yellow is a color. But having to respond to some of Kripke's unusual counterfactual situations, my intuition has difficulties; it doesn't really feel one way or the other with any degree of strength. Intuition may simply not be able to decide.

Secondly, Kripke doesn't mention here *whose* intuition should be taken as evidence. It seems that he's presuming that everyone's intuition will agree. He doesn't, at least, indicate the possibility that two intuitions may not concur, and what is to be done should they differ. Kripke may even think that it is impossible for two intuitions to disagree, using the argument that since intuition is infallible, two intuitions cannot disagree, because one would have to be wrong. But *prime facie* anyway this is incorrect, because I sometimes have the *opposite* intuition of Kripke. For instance, in the case of lightning just cited, if something up in the sky pretty much looks like lightning, then I'd probably conclude that it *is* lightning. If there had been no electrical discharge, then I would probably say that it may have been a different *type* of lightning. Now sure one can think of demons and what not, so that perhaps there are extreme cases where I would agree, "No, that's not lightning" even when it looks like it. But those same demons could create a phenomenon which produces electrical discharge as well, and I would *still* think it's not lightning. That is, *contra* Kripke, electrical discharge would not be much of a factor in my decision, whether something is lightning or no. So *prime facie* our intuitions disagree. In order to avoid the conclusion that there really is a disagreement, it would have to be supposed that Kripke and I are just assigning different meanings to the word 'lightning' and so really talking about different things. Maybe we do; I don't know.

But ultimately Kripke does not care about my or anyone else's intuition; he is only interested in his. Even when he accepts that his is different from everyone else's, he insists on his own [p. 23-4]:

> Some of the views that I have are views which may at first glance strike some as obviously wrong. My favorite example is this (which I probably won't defend in the lectures - for one thing it doesn't ever convince anyone): ... it is said that though we have all found out that there are no unicorns, of course there *might* have been unicorns. Under certain circumstances there *would* have been unicorns. And this is something I think is not the case.

Now this seems to be an instance of whether an intuitively understood word applies in a given situation (is this a unicorn, yes or no?). So it's not clear to me that an argument is really helpful; it's just a case where one gives a thumb up or thumb down. One could, again, resolve

the difficulty by simply assuming that Kripke means something different from the rest of us by 'unicorn'. But here it seems more likely that it is just a case of *bad faith*. Kripke's intuition probably does or would agree with ours - if a species of horse with a pointed horn were discovered on an island, then he would in fact agree these animals would be unicorns - but he is insisting the contrary because he is following a theory he has developed to its logical conclusion. So far from accepting intuition as "ultimate evidence," he prefers theory *over* intuition.

Perhaps Kripke's dogmatic reliance on his own intuition is understandable; philosophers are meant to reflect, and they obviously can only reflect on what they think themselves, what their own intuitions say. Nonetheless, it is a little grating how often Kripke talks about "we" and "you", but in the end, it appears that he has not consulted anyone else, and he simply assumes, perhaps because his is so strong, that his intuition is the one and only. Not once during his lectures - for of course *NaN* was originally a lecture before an audience of philosophers - does he risk a show of hands. Or if he did, he doesn't think it relevant to report the result in the written version.

Indeed, it might seem that the fairest thing to do to decide questions about what "we" mean by a particular word or term is to take a poll. Here is a situation. Would you say that this is lightning or not? Kripke could then base his conclusions based on how people reply, according to their intuitions. I doubt seriously, for many examples which Kripke constructs, that he would find anything near an overwhelmingly majority (over 80% say) to come down on either side.

Admittedly there are all kinds of problems with polls; I doubt philosophers would really want to base their theories of the necessary *a priori* on what Joe Q. Public says. In some ways my suggestion is a red flag and intentionally so. But there is an important feature of polls which seems relevant to Kripke's method. In a poll, the *lead-up* to a question - what the pollster says beforehand - can have a great impact on how the interviewee responds. For instance, if the survey intends to find out what people think about XX and prefaces its question with a short summary of who XX is and what he or she has done, how the summary is presented will effect greatly the responses. Most blatantly, consider:

> XX is duplicitous and ineffectual. Do you approve of the way XX is handling his job?

versus

> XX is competent and hard-working. Do you approve of the

way XX is handling his job?

Presumably the first poll will receive more negatives than the second.

Now of course Kripke isn't guilty of such crudity - or is he? Consider again the passage about lightning above. Looked at closely, we see that Kripke *supposes*, at the beginning, that whatever is in the sky, is *not* lightning: "in fact no lightning was present." So when he adds "And you wouldn't say that the phenomenon, because it looks like lightning, was in fact lightning," he has already steered our reactions. The thing in the sky, which looks like lightning, isn't in fact lightning, not because there is no electrical discharge, but because he just comes out and *supposes* it isn't. Clearly if the discussion is to be honest, this assumption needs to be removed (as indeed, I assumed it was, in my reaction above).

Here's another example where one's intuitive feeling can depend greatly on how a situation is presented. Here are some descriptions of what are basically the same situations:

> Consider a counterfactual situation in which, let us say, fool's gold or iron pyrites was actually found in various mountains in the United States, or in areas of South Africa and the Soviet Union. Suppose that all the areas which actually contain gold now, contained pyrites instead, or some other substance which counterfeited the superficial properties of gold but lacked its atomic structure.

versus

> Suppose that in various mountains in the United States, or in areas of South Africa and the Soviet Union, indeed in all the areas which actually contain gold now, contained a substance which had all the properties of gold except that its atomic number was 80 (rather than 79).

versus

> Suppose that all the areas which actually contain gold now, contains a substance which has all the important properties of gold. It is mined and greatly coveted. It is metallic and was sometimes used to mint coins. It is considered more precious than silver. It is heavy, yellow and malleable. It is stored in Fort Knox. It is called "gold" in English and "or" in French. The only difference in properties is very unimportant; its atomic number is 80 (rather than 79).

And now ask the question, "Would you consider this substance gold?" I'm not much of a betting man, but I would be willing to wager a reasonable sum that the second and third situations would elicit far more affirmations than the first. I would imagine, indeed, that most non-scientists would probably react by thinking that a difference of a mere 1 in the atomic number wouldn't be *that* important, and would favor "yes".

Of course Kripke's phrasing of the situation is the first [p. 124]. He uses all kinds of hooks to force the "no" answer that he wants and his argument needs: it is a *counterfactual* situation; he mentions fool's gold, which the reader knows isn't the same as gold; and the substance "*counterfeited*" the superficial properties of gold rather than just having them, which again gives the idea that it is not the same. None of these verbal flourishes are particularly relevant to the question whether gold must necessarily have the atomic number 79. Kripke might be somewhat excused if he were arguing for the *possibility* of something, in which case he only has to demonstrate the existence of one world; but he is arguing for its *necessity*. To prove necessity one has to show, broadly speaking, that something is the case in *all* possible situations. That is, if Kripke wants to provide a valid argument that gold must have atomic number 79, he must prove, for all situations where a substance does not have atomic number 79, that that substance is not gold. So the description of one world, in which our intuitions feel that a substance without atomic number 79 is not gold, is hardly sufficient. Probably Kripke thinks his world, as described, offers the best chance for gold not to have gold's atomic structure, because he is giving it all the properties of gold, and not just some of them (although the use of "superficial" belies this); and so if in this world the substance is not gold, no such substance in any other world would be gold. But surely the second version is a more neutral and fairer way to make the description of the "best chance" world that Kripke wants to present. The fact that he doesn't use the fair way, but instead provides a description which slants the response to the one he favors, is not just rhetorical flourish; it is good evidence, I think, that even Kripke's intuition isn't or wouldn't be so certain when presented with the second version, much less something like the third; he's just not confident enough to use it.

Remark that *some* English speakers - namely chemists and perhaps other scientists - simply *define* 'gold' to be "the element which has atomic number 79." When it is given this meaning, of course gold must have atomic number 79. But Kripke's point seems to be that even for those of us who *don't* make this definition are still constrained to say that gold must have atomic number 79. (In any case the example of "gold" is interesting because a small but influential part of the community mean it so that by definition gold has atomic number 79, while the rest of the community does not. What do "we" mean in this case?)

Here's a possible sketch of scientific discovery, different from real history, but not so much that it still serves for illustrative purposes. Suppose scientists learn that water is composed of one hydrogen and two oxygen atoms. It is then discovered that hydrogen has one proton and one electron but no neutrons in its nucleus, and it is symbolized by H. So water is

thought to be H_2O. Then it is discovered that there is another isotope of hydrogen, with a neutron in the nucleus, called deuterium, and that the substance containing D_2O molecules has the look, feel, and taste of water; it freezes at 0 into ice and boils at 100 into steam; etc. It would seem that Kripke is forced to say that D_2O is *not* water and, indeed, is *necessarily* not water. And yet, people and scientists just considered it a different type of water, after all, they called it *heavy water*. (If D_2O hadn't tasted like H_2O, were a reddish color, didn't boil at 100, and so forth, it would seem less likely that it would have been called *water*.)

To the problems with intuitions already mentioned - they may not be able to decide in unusual cases, and different people may have different intuitions - there is a third; the same person's intuition can produce conflicting results. A prominent example occurs with modal expressions, such as "he believes that...", "it is known that...," and "it is possible that...". Intuitively, I think that

(1) "I believe that Benjamin Franklin invented bifocals"

is making an assertion about Benjamin Franklin. But if it were *just* about Benjamin Franklin, then it would seem that any other expression referring to him, e.g. "the first President of the American Philosophical Society," could be substituted and result in a proposition with the equivalent truth value:

(2) "I believe that the first President of the American Philosophical Society invented bifocals".

But I wouldn't say that (1) and (2) *are* equivalent. My intuition is torn; it wants both, but it can't have them, upon pain of contradiction.

Well this is an old philosophical chestnut, and it doesn't seem to create any problems any more. One just needs to distinguish between a belief about a thing and a belief about an attitude or a state of affairs. That is, (1) either expresses that I believe that *Benjamin Franklin the man* invented bifocals, in which case I *also* believe that the man who was the first President of the American Philosophical Society invented bifocals; or it expresses that I believe that *Benjamin Franklin invented bifocals*, in which case (1) is not equivalent to (2). That is, (1) can be analyzed either as:

(1a) "I believe that "Benjamin Franklin invented bifocals""

or

(1b) "Of Benjamin Franklin I believe that he invented bifocals"

And (2) can be analyzed either as

(2a) "I believe that "The first President of the American Philosophical Society invented bifocals""

or

(2b) "Of the first President of the American Philosophical Society I believe that he invented bifocals"

(1a) and (2a) are not equivalent, while (1b) and (2b) are (given that Benjamin Franklin *was* the first President of the APS). This disambiguation helps us explain why our, or at least my, intuition was confused; in one sense, the belief is about Benjamin Franklin, and in the other the propositions (1) and (2) don't need to have equivalent truth values. But one *can't have both*, because one *can't mean both (a) and (b) at the same time*. Intuition is wrong, because intuition was confused.

Which Concept of Necessity?

Early on Kripke describes three or four different concepts of necessity [p. 35-6]:

> Sometimes this is used in an epistemological way and might then just mean *a priori*. And so course, sometimes it is used in a physical way when people distinguish between physical and logical necessity. But what I am concerned with here is a notion which is not a notion of epistemology but of metaphysics, in some (I hope) nonpejorative sense. We ask whether something might have been true, or might have been false.

Kripke talks about the epistemological at several points and distinguishes it clearly from his own, metaphysical notion; e.g. [p. 35-6] Goldbach's conjecture is necessarily true or necessarily false, but not epistemologically necessary at this point in time since we don't know now whether it is true or not. However logical necessity is never mentioned further until it makes a sudden appearance at the end (more on that later). As to physical necessity, Kripke

apparently punts on the relation between it and his metaphysical necessity [p. 99]:

> Physical necessity, *might* turn out to be necessity in the highest degree. But that's a question I don't want to prejudge.

If one were talking about physical necessity, then indeed gold *must* have atomic number 79, because that's what scientific theory says; but that is hardly very revealing. Anyway, it would seem that there are levels between physical and logical necessity, wherein certain physical laws, but not all, are disobeyed. One might suppose e.g. what would happen should I weigh a ton, but still expect all other physical laws to be obeyed. So there are a lot of concepts of necessity flying around and it would seem rather easy for intuition to become confused. Still Kripke provides little guidance, and insists in a footnote [p. 39-40], "Here I am just dealing with an intuitive notion and will keep on the level of an intuitive notion."

Kripke does, however, provide one important detail about his metaphysical notion: it is about the person or the thing itself. For example, "Nixon could have lost the election" is about Nixon. Kripke justifies this by pointing to the "ordinary man" [p. 41], who would supposedly agree with Kripke that the claim of contingency is a claim about Nixon. Now, I don't know much about the ordinary man, but almost by definition, he is not concerned or likely to use a *metaphysical* notion. When Kripke says [p. 44], "What do we mean when we say 'In some other possible world I would not have given this lecture today?'", I hope he realizes that his manner of speaking is completely divorced from ordinary speech and limited (roughly), not just to the set of philosophers but some proper subset. Maybe the ordinary man's meaning happens to coincide, more or less, with Kripke's. But there is no evidence that it does. It would be hard to tell in any case, and about the only way to tell, would be the show of hands mentioned above. So the fact that the ordinary man, in his sense of necessity, is speaking about Nixon, does not ensure or even support Kripke's claim that *his* metaphysical necessity is about Nixon.

Indeed, I have strong doubts that the ordinary man would entertain the question of whether Hesperus and Phosphorus are *necessarily* or *contingently* the same in any other sense other than epistemological necessity. So even if the ordinary man were to use something close to the metaphysical meaning in some cases, it does not need to extend as far as Kripke wants to apply it; it would therefore be possible to extend the ordinary sense in either direction, so that Hesperus and Phosphorus are necessarily identically or are not necessarily identical.

Leaving aside the ordinary man, about whom I know very little with respect to this situation, *I* would say:

(M) the meter stick in Paris, if it exists, is necessarily one meter long.

And I mean this in the strongest sense of "necessary"; it's *logically necessary*. Now Kripke can assert that it is contingently so because *that stick* could of course have been longer or shorter. But that only implies that, when I say (M), I do not mean it in the particular way that Kripke is taking it.

Anyway, Kripke is interested in ordinary speech only anecdotally, not systematically or scientifically. Ultimately, I think one can understand Kripke best by treating *NaN* as an explanation of how Kripke means the word "necessity" and how he thinks it should behave in various expressions. "Necessary" applies in this, this, and this situation; and it doesn't apply in that, that, and that. When it conflicts with what you or I would say, there is no real conflict; Kripke is just being idiosyncratic (or perhaps it is me?). The value one claims for *NaN* is then highly correlated with the interest that one judges the explication of such a private meaning.

Naming

In *Nan* Kripke first presents arguments against a particular theory of naming and then outlines one of his own. The prevailing view which Kripke criticizes may be summarized as saying that the reference of a name means or is determined by a description or a cluster of descriptions. For instance, one might suppose that Socrates means or has its reference determined by "the great philosopher of Antiquity who taught Alexander the Great". In contrast Kripke thinks reference "... actually seems to be determined by the fact that the speaker is a member of a community of speakers who use the name" [p. 106].

Kripke is careful not to give his views too much specificity. He avers his is only a theory "in a way" [p. 93] and adds that he wants "to present just a *better picture* than the picture presented by the received views". Still, he provides the following outlines of how he thinks reference is determined [p. 91]

> Someone, let's say, a baby, is born; his parents call him by a certain name. They talk about him to their friends. Other people meet him. Through various sorts of talk the name is spread from link to link as if by a chain. A speaker who is on the far end of this chain, who has heard about, say Richard Feynman, in the market place or elsewhere, may be referring to Richard Feynman even though he can't remember from whom he first heard of Feynman or from whom he ever heard of

> Feynman. ... A chain of communication going back to Feynman himself has been established, by virtue of his membership in a community which passed the name on from link to link...

and [p. 96]

> An initial 'baptism' takes place. Here the object may be named by ostension, or the reference of the name may be fixed by a description. When the name is 'passed from link to link', the receiver of the name must, I think, intend when he learns to use it with the same reference as the man from whom he heard it.

Now Kripke's theory or picture seems to me to be clearly wrong, or at least it's clearly wrong in some cases. For instance, I might say, "Venus has an atmosphere." Indeed, I might say it even if I were the only person in the world and the world had just begun five minutes ago. That is, I can say, "Venus has an atmosphere" even when there is and had never been a community of speakers (except the trivial community of one), and indeed where there had been no initial baptism. Now in those conditions, surely extreme but nonetheless imaginable, could I say "Venus" meaningfully and be referring to something? It seems I could. It seems I would mean it in exactly the same way that I mean it in *this* world full or people and with its long history, because after all maybe *this* world is *that* world. Indeed, in the world where only I existed, I could set out to verify the truth of "Venus has an atmosphere." I could create a telescope and with a certain amount of effort, identify the first planet and then Venus as the second planet. Then I could see whether Venus has an atmosphere.

Now of course it would be possible that there is in fact a planet closer to the Sun than Mercury, which would make Venus the third planet around the Sun. Or if I discovered that the second planet around the Sun had rings like those I imagine Saturn having, then I would probably throw up my hands and not be sure what Venus was. So Venus doesn't just mean "the second planet around the Sun." Its meaning is more complicated and not one, I think, easily reducible to a description which can be written down. But it does seem to be description-like, or cluster-of-description-like and anyway closer to a description than having its reference dependent on a community of speakers.

Can one say the same about "Godel", a name which Kripke used to support his argument? It would seem yes. Suppose the world stopped in the year 1932 and only began again five minutes ago. Would I take "Godel" to refer to the Austrian logician who proved the Completeness and Incompleteness Theorems and was called "Kurt Godel"? Almost certainly, even though there would have been no passing the name from link to link. Of course, if there

had been a Schmidt who had *really* proved the Theorems, and Godel had just taken credit for them when he wrote his thesis or published his paper, then I would still be referring to Godel and not to Schmidt. If, on the other hand, there actually had been no one vaguely with the name of Godel who had anything to do with logic, then I would have more difficulty assigning any referent to "Godel." What this shows is that my meaning of "Godel" (when I utter the name) is far more complicated than a simple description which can be written down; still, it is more description-like than hanging on a community of speakers.

Nixon, as Kripke points out, could not be an inanimate object [p. 46]. Yet it would seem possible that the community of speakers eventually links the name "Nixon" to an inanimate object. Nixon's mother might have miraculously given birth to a stone. The embarrassed parents called it "Richard," enrolled it in school, and so forth; later, evil-minded politicians fooled the public, and so forth. It doesn't matter what the story is, or whether it's plausible; it's *logically possible* that the links of the community, begun when I say "Nixon," eventually lead to an inanimate object. In this case I would not say that Nixon really had been an inanimate object; I would say that Nixon had not existed, because one of the conditions of the name "Nixon" is that its referent must have been animate.

Nonetheless, there are times when Kripke's version seems reasonably close to reality. If someone asked me what Alpha Centauri was, I would say a star, and indeed that is about as much as I know about it. I don't know which star it is, and if I were left to my own devices to find it in the heavens, I could not do so. So here I am relying on a community of speakers and referring to what *they* mean by "Alpha Centauri". Still, if the link-to-link of the community ended up with "Alpha Centauri" pointing to a cat, then I would just conclude that the reference has failed. So there's still a description-like element in the term.

Given that community-reliance can be taken as a description (roughly, "what the community means by 'X'""), à la Strawson [p. 90], while descriptions cannot be seen as community-reliant, it would seem that it is best to think of names as description-like, that is descriptions which cannot be written down, if one wants to provide an overarching, singular theory of names.

Logical Possibility, the Mind-Body Problem, and Rigid Designation

As I said, logical possibility, after a brief mention which seems to set it off from Kripke's metaphysical notion [p. 35-6], makes an explicit appearance only towards the end.

There is a mention on p. 142-3 and then in terms of the mind-body problem [p. 146]:

> Let '*A*' name a particular pain sensation, and let '*B*' name the corresponding brain state, or the brain state some identity theorist wishes to identify with *A*. *Prima facie*, it would seem that it is at least logically possible that *B* should have existed (Jones's brain could have been in exatly that state at the time in question) without Jones feeling any pain at all, and thus without the presence of *A*. Once again, the identity theorist cannot admit the possibility cheerfullly and proceed from there; consistency, and the principle of the necessity of identities using rigid designators, disallows any such course. If *A* and *B* were identical, the identity would have to be necessary.

Up to now Kripke has been using an intuitive, metaphysical sense of necessity. He's defined "rigid designator" in terms of his sense. I am able to accept that he can coherently say "Hesperus is necessarily Phosphorus" because I grant that he is using his own special sense. But, whatever Kripke means, it is *coherent* that Hesperus is not Phosphorus. It is imaginable just as much Kripke's situation about *A* and *B* are imaginable. (If one wants to say that it is *not* imaginable because Hesperus *is* Phosphorus, then one equally cannot say that it is imaginable about *A* and *B*, unless one knows beforehand that *A* is not *B*.) So, in these terms, Hesperus is *not* necessarily Phosphorus. Hence Kripke's argument, in terms of logical necessity, is just flawed, a counterexample being: "Hesperus" and "Phosphorus" are, according to Kripke, rigid designators; Hesperus is Phosphorus; but it is not logically necessary (it is imaginable) that Hesperus is not Phosphorus. For his argument to work, Kripke must claim that it is *metaphysically* possible for the pain sensation to be different from the brain state. But this does not seem to be in his reach, unless (as he argued with Hesperus and Phosphorus, and gold and having the atomic number of 80) he can already assert that the pain sensation *is* different from the brain state.

Perhaps there are those who think that the notion of "rigid designator" can be reworked in terms of logical necessity so that Kripke's argument goes through. However, since "Hesperus is not Phosphorus" is logically possible, it would appear that certain names, if not all names, are not (logically necessary) rigid designators. If his argument can be repaired - which I doubt - , it could only be done by substantially altering it.

Conclusion

There are different types of necessity. There are - perhaps among others -

epistemological, physical, and logical. The ensuing examples have been constructed so that they apply whether necessity is taken as physical or logical.

Assertions of necessity may be about the thing itself or about a statement or state of affairs. So "Nixon could have lost the election" can be analyzed as either

"Of Nixon it is possible that he lost the election"

or

"It is possible that "Nixon lost the election"".

Natural language may pre-suppose one of these forms. For instance, when we say "Nixon could have lost the election," we may in preference mean "Of Nixon it is possible that he lost the election." I will not speak of what the natural-language preference is, because I have not conducted any survey which might provide an answer. Still, one should be very careful about inferences from what "we" mean by one sentence to what "we" mean in another, even when their constructions are very close.

"Of Hesperus and Phosphorus it is necessary they are identical" is true; that is, if we are referring to the thing which is Hesperus and Phosphorus, then necessarily it is identical to itself. On the other hand, "It is necessary that "Hesperus and Phosphorus are identical"" is false, since there are conditions of the world in which "Hesperus and Phosphorus are identical" is not true. "Of the first President of the APS and Benjamin Franklin, it is necessary they are identical" is true, and "It is necessary that "The first President of the APS and Benjamin Franklin are identical"" is false. "Of Aristotle it is possible he died at childbirth" is true, "It is possible that "Aristotle died at childbirth"" is false. Again, common usage, if it exists, may prefer one form over the other (and prefer different forms according to the different cases).

Names have sense and their reference is determined by their sense, although they may not be determined *exclusively* by their sense. 'Nixon' means "Nixon," and I doubt that a better analysis can be achieved. When I utter 'Venus', it seems that the reference of "Venus" is determined exclusively by how I mean it; when I utter 'Alpha Centauri,' its reference depends in part on what the community means by it.

None of these propositions, I hope, is particularly surprising, because I hope they are correct. That is, a good rule of thumb in philosophy is: "Surprising assertions are wrong." So Kripke's promise at the beginning of *NaN* that [p. 24]"some of [his] opinions are somewhat

surprising" was the first warning sign. I would claim that he kept his promise.

BIBLIOGRAPHY

Saul Kripke, *Naming and Necessity*, Harvard University Press (Cambridge Mass., 1980).