

Translation, history of science, and items not on the menu: a response to Susan Carey

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Abstract. In “Conceptual Differences Between Children and Adults,” Susan Carey discusses phlogiston theory in order to defend the view that there can be non-translatability between scientific languages. I present an objection to her defence.

In a rewarding paper “Conceptual Differences Between Children and Adults,” Susan Carey attempts to defend the incommensurability thesis, or the semantic incommensurability thesis to be more precise. According to the thesis, there are cases in which the scientific language used by earlier theorists cannot be translated into our scientific language, or parts of it cannot be. She defends the thesis because she aims to export it to psychology and use it to characterize differences between children and adults as well. In this paper, I wish to evaluate her defence.¹

Carey considers an objection to the thesis:

If earlier theories are expressed in languages incommensurable with our own, the argument goes, how can the historian understand those theories and describe them to us so that we can understand them? (1988: 170)

The historian who describes them seems to be translating! To argue that there is incommensurability, she focuses on a specific case. In the old phlogiston theory, which attempts to explain combustion, the term “principle” is used in a way that does not correspond in meaning to any contemporary scientific term, in such expressions as “the

¹ Many of the pieces in this defence are around in the incommensurability literature earlier, but they have not been put together to form this defence (Barnes 1982: 2-3).

principle given off during combustion.” (1988: 169) Furthermore, in some contexts it makes sense to use some terms of ours in place of it and in other contexts to use other terms. Carey identifies two options for presenting an old text expressing phlogiston theory in contemporary language, when dealing with the problematic term, but neither option is genuinely translating, she tells us, so we can speak of a lack of translatability. Here are the options:

1. We use the word “principle” in the translation, but we provide a translator’s gloss, so that readers understand its old meaning. We are not translating then. We are teaching readers new language.
2. We use some terms of ours in place of the old “principle” in some contexts and other terms in other contexts. But the original uses one word throughout and so we produce a disjointed text. “Such a text is not a translation, because it does not make sense as a whole,” says Carey (1988: 170).

But there is an objection I anticipate being made to Carey’s argument for non-translatability.

Carey denies that one approach to communicating the content of the old phlogiston text is translation, appealing to one reason (“That is language teaching”), and she denies that another approach to conveying the content of the old phlogiston text is translation, appealing to another reason (“That is too disjointed to count”). The objection I anticipate is the following: there is no understanding of translation which is relevant to the debate over incommensurability and allows her both reasons. Either she has to count the first option as a translation, because given some relevant notions this kind of language teaching counts as translation, or the second, because given other relevant notions disjointedness does not disqualify a text from being a translation. To put matters metaphorically, a notion of translation that she would need is not on the menu. But I cannot prove this objection. I shall consider different notions and show that none of these notions makes both reasons available

to Carey. But it is always available for someone to speculate, “With your menu I am stuck, but it is an impoverished menu. I believe there is a better menu.” It is up to this critic to show that there genuinely is a better menu.

Before presenting my menu, here is some background. People with rival theories disagree with each other, or at least that is the normal situation of theoretical rivalry. And the essence of the disagreement can normally be captured by a person who holds one of these theories. This person can make a statement to the effect: “I accept the following proposition... but the person who holds a rival theory rejects it. They accept...” The reason why we need this term “semantic incommensurability,” I anticipate the objector saying, is because there can be rival theories without disagreement. (If there cannot be, then we do not need it.) In the case of semantic incommensurability, one cannot even translate between the languages of the people with rival theories so that one party can make a statement presenting the disagreement, and so there is no disagreement. (This “and so” does not look obviously valid and needs some elaboration, a task which I shall skip here.) Now to make my case against Carey, I shall look at two relevant notions of translation.

The propositional notion. There are propositions and the same proposition can be expressed in different languages. For example, the English sentence “Snow is white” expresses a proposition, but the same proposition can be expressed in at least some other languages. Now² the old scientific text, the phlogiston text, expresses propositions. Can this text be translated into contemporary scientific language? Our contemporary English scientific language features a set of terms and these terms are associated with concepts. For example, the term “evaporation” is associated with the concept of evaporation. Concepts are the

² “Or then?”

building blocks of propositions. The question then³ is whether these concepts of ours can be put together so that they form the propositions which the original text expresses. If so, then we say that the text is translatable – that is how this propositional notion of translation works. Furthermore, the concepts can be used to construct a proposition that negates some of those earlier propositions.

Now it might be that there is a word in the original text and more than one word is needed to translate its use into contemporary language. That does not matter, when using this translation notion, as long as the same proposition is being expressed. “That is a triangle” is turned into “That is a three sided figure which encloses a space, each side being a straight line” – that does not matter, assuming I have got the description right! And it may be that propositions using one word in the old text have to be expressed sometimes using one word and sometimes using another, when working with contemporary language. That also does not matter. What if the reader experiences the text as disjointed? An experience of disjointedness is not a problem. To repeat: all that matters, when applying this notion of translation, is that the current scientific terminology is associated with concepts and from these concepts one can build the same propositions as the old text expresses! In that case, the old text is translatable. So Carey cannot say, “It’s disjointed, so it is not a translation.” That is how one relevant notion affects her options.⁴ But what if she prefers to work with another notion?

A pragmatic notion. The pragmatist says, “What I am interested in is whether these two rivals can interact and resolve their differences, with some discussion and maybe some observation-making and experiments as well. And semantic incommensurability is my name

³ “Or now?” I fear these challenges concerning temporal terms.

⁴ This understanding of translation will also allow for some of what she calls language teaching to count as translation. If one can define an old term using concepts associated with the current vocabulary, this is also translating.

for one kind of obstacle to resolution: owing to the concepts involved, they cannot even understand each other's theories." Now if there are still some adherents of phlogiston theory and an attempt to translate that theory produces a disjointed text for scientists who have moved with the times, then that is a problem for the pragmatist. The two parties cannot yet understand each other. In this debate, the pragmatist does not count that as a translation. They say, "If these two are rivals and that is the best you can do to get them to resolve their differences, then there is semantic incommensurability." But if we engage in some language teaching, so that each party now understands the other better, then there is no reason for the pragmatist to characterize the situation as a case of semantic incommensurability. The two parties can now get on with disagreeing with each other and also trying to resolve their disagreement.

So if we switch to this pragmatic perspective on whether there is semantic incommensurability, then yes, a disjointed text does not count, but Carey cannot claim incommensurability after language teaching occurs. She wants to say that there is incommensurability because this is not translation, it is language teaching, but she is not using the relevant pragmatic notion of translation. With this notion, one speaks of non-translatability when the parties simply cannot move to the next stage towards resolving their rivalry, the next stage being "We understand each other now, but neither party is convinced by the other."

Appendix: damaged translations

I can see a third approach for translators, aside from providing a gloss or producing a disjointed text, when the following situation obtains: there are two terms of ours that we can use to translate an original term; term A seems more suitable in one context and term B in

another context; and these two terms are similar in spelling, e.g. “element” and “elegant.” We produce a translation that looks like a damaged text. Wherever the problematic original term appears, it is as if something went wrong with the production of the translated text: the hand of the transcriber became very shaky or the computer software “experienced” a problem, etc. It just says “ele..nt” before moving to the next word. Readers have reason to think it is the same word always, but in some contexts term A is more suitable and in other contexts term B is, so some readers will fill in a different word on different occasions. The translator just leaves them with that combination of evidence without resolving the tension. There is no gloss for anyone to claim that the translator is actually engaged in language teaching, unlike with Carey’s first option, and there isn’t the disjointedness of the second option, because the translator does not shift between terms. The grounds that Carey gives for saying that these two options are not translations do not apply to this third case.

References

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