The space between the data and the concepts

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Abstract

The space between data and concepts is filled with hypotheses, which make up everything we call methodology. This claim is explained via a discussion of the role of interpretive, descriptive and explanatory hypotheses in methodology. The discussion is followed by an examination of the criteria that make any hypothesis a significant one, worth testing. As an example we take the well-known literal translation hypothesis. This states that as translators process a given text segment, they tend to proceed from more literal versions to less literal ones. The main criteria on which a hypothesis can be justified as significant are: explicitness, multiple testability, theoretical implications (links with other hypotheses), applicability to other research problems, surprise value, and explanatory power. Several other hypotheses in Translation Studies will be referred to en route, including Toury's laws, Seleskovitch's deverbalization, Tirkkonen-Condit's unique items, Halverson's gravitational pull and Pym's risk avoidance.

Keywords: hypotheses, research methodology, significance, literal translation, explanation

1 Introduction

The space between data and concepts is filled with hypotheses, which make up everything we call methodology. And some hypotheses are more important than others. – This paper first explains the difference between interpretive and empirical hypotheses, and then discusses the interpretive kind in more detail. All methodology starts with interpretive hypotheses, and usually (but not always) then proceeds to empirical ones. We then move on to consider what makes any hypothesis a significant one, taking the literal translation hypothesis as a test case (a descriptive, empirical hypothesis). This finally leads into an outline of different kinds of explanation, as we assess how much explanatory power the literal translation hypothesis has.

Etymologically, the word *method* derives from a Greek expression meaning 'along the way'. Methodology implies the idea of proceeding along a path, in order to reach a destination. The knowledge we attain along the path is not certain: all hypotheses are guesses – albeit well-justified and well-tested guesses. There may be a better way to get from A to B; or we might change our mind and set out for C after all. All methodologies contain a built-in fallibility. But this very fallibility also implies the possibility of improvements. We can revise hypotheses, or discard ones that no longer seem useful. At each point where we have a hypothesis, there is an opening to question, challenge, offer alternatives; to ask for more justification, raise counter-arguments, point to counter-evidence, or suggest better interpretations. Hypotheses of all kinds thus need to be tested against evidence and in use, and justified in terms of their importance.

2 Interpretive hypotheses

An interpretive hypothesis has the general form: *X can be (usefully) interpreted as Y*. The key term is **as**. It is a classic observation in hermeneutics that we understand anything by understanding it **as** something: we make some sense of the new or the complicated by seeing it in terms of something more familiar or more simple, **as** something familiar or simple. Light is seen **as** waves, or **as** particles, or indeed as both. An interpretive hypothesis is tested in use, pragmatically, as having more or less added value in furthering our understanding, generating empirical hypotheses, synthesizing existing knowledge, and so on. Interpretive hypotheses are testable against data, but they are not falsifiable; in this respect they differ from most good empirical hypotheses. (I know falsifiability is a tricky concept, but will skip over that problem here.) Yet interpretive hypotheses can be revised and discarded too, just like empirical ones (Føllesdal 1979; Chesterman 2008). We can always ask: how good is this interpretation? No research, empirical or otherwise, can avoid interpretive hypotheses. They are found at many levels in methodology: in formulating general perspectives (e.g. seeing translation as rewriting, or as cannibalism, or as reported speech), in operationalizations (we here measure quality as...), definitions and classifications, in interpreting results, and so on.

Another special feature of interpretive hypotheses is the way they can accumulate. We can entertain several at the same time, and explore numerous interpretations, all of which may have something to offer. New ways of seeing something do not necessarily banish old ones, but come to exist alongside them, adding depth of understanding.

One initial question is: what do we / can we take as data? Note: **take as** data. Data are taken, not given. There are no data that can be observed in the total absence of any theory. And some data are elicited by a given research method, and are thus defined **as** data by the method itself. So even our first perceptions of data of any kind are coloured by our perspective, our preliminary theoretical assumptions and so on. Our first sight of some data is thus bound to an initial interpretive hypothesis: that this stuff that we are observing is something to be interpreted **as** data. So here is a Really Useful Definition: **data are interpreted stuff**. This looks simple. But scholars only 50 years ago, let alone a hundred or a thousand years ago, would have had a much narrower interpretation of what stuff would count as data for translation research than we do today.

Given that we have some data, what do we take as a basic unit, in a given research project? Some of these units may seem to group themselves into natural categories, but ultimately their existence is largely a question of interpretation. Ideally, we would like our concepts of data units to “carve nature at the joints”, as Plato put it. But we seldom reach such ideals. When we think we see a possible category, we conceptualize it and give it a name (or borrow from previous research). This gives us a set of concepts and a set of terms. But in both cases we are dealing again with interpretive hypotheses. We hypothesize that it is useful to carve out a given set of data as being sufficiently homogeneous to be reasonably distinguished from some other category, such that it allows interesting generalizations to be made.

For instance, we can pick out things we conceptualize as what we call texts. What is a text? (What do we interpret **as** a text?) What we might want to call texts are not necessarily only written, nor even static (cf. EU committees, laws being drafted; an oral speech). So the concept needs to be interpreted, given a working definition. All such definitions are agreements that can be revised, not permanent facts carved in rock. Recall the changing definitions of a metre, or democracy, or life...

Text is a relatively simple case, but in Translation Studies we have some big problems here – not to mention the additional problems of translating the terms we use into other languages. There is a long-running debate about the need (strongly felt by some scholars, but much less so by others) to standardize our terminology (cf. the special issue of *Target* 19, 2; 2007). Categorizations and definitions are good examples of interpretive hypotheses. If it turns out that a given categorization does not give rise to any good generalizations, we can drop it. And the same goes for definitions: if you can't do anything with them, drop them. They are only instruments.

The first way to test the usefulness of interpretive hypotheses of categorization or definition is to link them explicitly to instances in the data. A single example will show that it is at least possible to apply the concept to the data. But even several selected examples will not suffice to prove that this concept is better than some competing one, or whether it is worth pursuing. Consider, for instance, our many taxonomies of strategies and shifts. These are often hard to apply, although easy to exemplify. The challenge is to provide adequately explicit criteria. Pym (2010: 66f) discusses the difficulty of applying to new material some well-known classifications of translation strategies and shifts.

3 Descriptive hypotheses

Categorizations and descriptions are part of any description of course, and hence part of any descriptive hypothesis. The basic form of a descriptive hypothesis can be given simply as follows: **all X have feature F**. This is an empirical claim, and may be correct or false. A descriptive hypothesis is thus a generalization, describing a pattern of some kind. The definitions of X and F are all ultimately based on interpretive hypotheses.

Descriptive hypotheses are usually first proposed in an unconditioned, maximally general form. If empirical tests begin to turn up evidence against the hypothesis in this form, it needs to be modified into a conditioned form, such as: all X **of type T** have feature F; or all X show feature F **under conditions ABC**; or all X **have a tendency** (with probability *p*) to show feature F.

In Translation Studies, research on so-called universals has turned up a number of interesting descriptive hypotheses, which are still being tested: the explicitation hypothesis, the unique items hypothesis, the retranslation hypothesis, and so on (cf. Mauranen and Kujamäki 2004). So far, it seems that the unconditional forms of some of these hypotheses are not supported. The retranslation hypothesis, for instance, does not seem to apply to drama translation, which seems to be governed by quite different considerations (see e.g. Brisset 1989). So they need to be conditioned. It then becomes

clear that our initial term "universal" is unfortunate, because its meaning in Translation Studies moves rather far away from its original meaning in language typology (language universals). So we need a better interpretive hypothesis here. It also seems clear that sometimes we waste time retesting hypotheses (in an unconditioned form) that have already been falsified in this form: it would be better to develop plausible **conditioned** formulations and test these. Under what conditions, with what language pairs / translation directions / text types / degree of professionalism etc. do we find that translators tend to reduce repetition, or manifest more interference?

A good way of refining descriptive hypotheses in this way is via correlations. Here are two paraphrased examples from Toury's well-known work. They both have the form: the more X, the more Y; or: the more X, the more likely Y.

> Translations are more standardized than their source texts >> The more peripheral the status of translation in a given culture, the more standardized translations tend to be (Toury 1995: 271)
> Translations manifest interference >> There will tend to be more interference when translation is carried out from a high-prestige culture to a minor culture (ibid.: 278)

The correlations thus express hypothesized conditional constraints on the generality of the underlying descriptive claim.

Research may also progress in the opposite direction. A hypothesis can be proposed for a restricted type of data, maybe even a single case, and then it is discovered that it also applies to other cases and thus has a more general scope. For instance, the use of more standardized language may not only be a tendency found in translations but also in normal second or foreign language performance.

4 What makes a good descriptive hypothesis?

A hypothesis is assessed at two stages. It is of course tested, and found to be supported or not supported (does it seem to be true?). This may lead to adjustments in the way it is formulated or operationalized, and in both these interpretive hypotheses are of the essence. Take the explicitation hypothesis, for instance. There are several ways in which the notion itself has been defined, and several ways in which it has been operationalized and measured, so that it is virtually impossible to compare research results. Blum-Kulka's original operationalization (1986) was in terms of the addition of explicit markers of cohesion, but many interpretations have been proposed since then (see e.g. Klaudy 1996, Englund Dimitrova 2005). One criterion of a good hypothesis would be one where the interpretive debate has, for the time being at least, been settled, and we can proceed to the empirical testing of the claim in question. In this respect, the explicitation hypothesis is not yet a good one, as we are still arguing about what it means! In other words, we have not yet succeeded in agreeing about how to make it adequately explicit. (Cf. Becher 2010.)

But hypotheses are also assessed in terms of their significance; they are (more or less) justified in the first place, before even being tested. After all, some hypotheses matter more than others. A well-justified hypothesis will "make a difference" to the field, to theory or to practice – if it is then supported by the evidence.

There are several ways of justifying a hypothesis, and hence avoiding the risk of triviality. To illustrate this, let us assess the **literal translation hypothesis**, which I will formulate here as follows: during the translation process, translators tend to proceed from more literal versions to less literal ones. The underlying assumption is that the translator's cognitive processes will tend to be influenced, initially, by formal features of the source text. The hypothesis could also be stated in terms of a process of deliteralization, i.e. a move from more literal to less literal. The hypothesis itself is by no means a new idea, of course. Toury (1995: 191) already cites Ivir (1981: 58) on the idea that translators start from target versions that show formal correspondence, and then move on to freer versions when they need to in order to achieve a relevant equivalence. The rejection of the initial literal version is assumed to be made by some kind of cognitive monitor, and several scholars have proposed a "monitor model" to represent this (see e.g. Tirkkonen-Condit 2005).

Like any empirical hypothesis, its formulation requires a number of definitions and hence interpretive hypotheses. The main interpretive question is: what exactly do we mean by "literal"? The term "literal translation" is commonly applied both to a complete translation and to a local translation solution (strategy). Both these uses raise the problem of where exactly to draw the line between a literal translation and a non-literal one. I think we are dealing with a continuum here, not two distinct classes. If we interpret "more literal" as "manifesting more formal similarity with the source", this allows the comparative formulation of the hypothesis mentioned above, in terms of a process that goes from more to less literal. We then need to define, for a given research project, how the degree of similarity is to be measured, which can easily be done in terms of the frequency of shifts of various kinds. And then we need to decide the scope of the hypothesis: are we talking about all translations, or just certain types?

How important is this hypothesis? First justification: it can be formulated explicitly enough to be empirically tested. If we operationalize the verb "tend" in the formulation above (e.g. to: in at least x% of cases studied), the hypothesis can also be falsified.

Second, it can be tested in several quite different ways. This is also a merit, partly because it makes the hypothesis more vulnerable (and possible multiple corroboration is correspondingly more meaningful), and partly because it indicates that the hypothesis may have relevance to different research frameworks and may thus perhaps encapsulate a fairly general insight. The various ways of testing the hypothesis include the following (most of them are used or referred to in Englund Dimitrova 2005):

> – Think-Aloud Protocols. Do translators' verbalizations show movement away from more literal versions?
> – Keystroke logging analysis, such as Translog data.
> – Interim solutions analysis (the study of the revision process across a series of drafts). This was the context of Toury's reference to Ivir, cited above.
> – The study of repairs in simultaneous interpreting (cf. work referred to in Tirkkonen-Condit 2005). Interpreters appear to use fewer repairs when there is more syntactic similarity between strings in the two languages, which suggests easier processing.
> – The study of the time taken to translate different kinds of idioms, some of which have formally matching versions in the target language (and tend to be translated faster) and some of which do not. (Also discussed in Tirkkonen-Condit 2005.)

> – The study of interference in general. Interference is of course a sign of some (usually) unwanted similarity that has been carried over from the source text into the target version.
> – The study of differences between novice and professional or expert translators. A plausible corollary to the hypothesis would suggest that professionals and experts proceed more quickly, and further, along the path away from an initial literal translation; or that they actually start their processing from a less literal point. (See e.g. Englund Dimitrova 2005.)
> – The study of translation performed under conditions of unusual time stress. One might expect that when processing time is strictly limited, more recourse is taken to literal versions, but research on this has so far been rather inconclusive (see e.g. Jansen and Jakobsen 2000).

Third, the hypothesis has theoretical implications. This criterion can be explained in terms of the various relations the hypothesis enters into with other hypotheses. For instance, it might be a counter-hypothesis to a competing claim. In the case of the literal translation hypothesis there is indeed a competing claim: the deverbalization hypothesis, proposed and assumed (but not empirically tested) by the so-called Paris school of interpreting, a claim implying the separation of form and meaning during processing. The deverbalization claim is that translators go straight to a deliteralized version. True, the deverbalization hypothesis was originally proposed for interpreting, but it has also been taken to apply to translation (see e.g. Seleskovitch and Lederer 1984). If the literal translation hypothesis holds good, any deverbalization would take place only after the initial literal phase, during drafting or during revision.

There are also other conflicting arguments which make the literal translation hypothesis interesting. Nida's well-known river-crossing model of translation (e.g. 1964), comprising the three stages of analysis, transfer and restructuring, appears explicitly to assume deverbalization, at least insofar as the formal structure of the source text is initially recast into its basic semantic structure. In Nida's model, however, the initial deverbalizing move away from the source surface structure is represented as taking place within the source language, not the target language. Evidence in favour of the literal translation hypothesis would thus suggest some initial transfer to the target language **without** analysis, which would go against the model. Yet there might also be evidence of a move towards freer renderings during the restructuring process, which does take place within the target language. That said, it is clear that Nida's model is not based on explicit empirical evidence, and is presumably intended to have pedagogical and prescriptive priorities, as indeed was the deverbalization idea. Nevertheless, the fact that the literal translation hypothesis stands in a dialectic relation with a competing claim gives it a sharp theoretical relevance. It also has the rhetorical advantage of enabling scholars to formulate their discussions about it as a confrontational debate.

There are other kinds of possible relations with other hypotheses, apart from oppositional ones. A given hypothesis might be a sub-hypothesis of a more general one, and thus bring potential support to the latter. Two of the most general hypotheses that have so far been proposed are Toury's "laws", which I referred to above. The literal hypothesis seems to be a manifestation of the general interference hypothesis: it makes a more specific claim, about the relative degree of interference at different stages of the translation process (i.e. more at the initial stage of the translation of a given unit, then less later).

Or a given hypothesis might be a general one, which connects to a more specific one. Consider the relation between the literal translation hypothesis and the unique items

hypothesis (Tirkkonen-Condit, e.g. 2004; Chesterman 2007). The latter claims that items which are specific to a given target language tend to be under-represented in translations. The assumption is that translators find no direct trigger in the source text which would suggest the target-specific item; instead, they select the form that corresponds more closely to the source-text trigger. True, the unique items hypothesis does not look at the initial choice, or the first draft, but at the final version. (I do not know whether it has been tested on interim solutions data.) But the two hypotheses seem to go hand in hand, and if both are supported they corroborate each other. Both would point to the effect of source interference, and both would go against the initial deverbalization idea. The key point about all these kinds of relations is that they all contribute to creating networks of interlocking hypotheses, and thus promote the evolution of broader theories.

A fourth justification is that the hypothesis can also offer applications to different kinds of research goals. In other words, it is fruitful, productive. It might offer a solution to a significant practical or social problem, or to different theoretical problems. In the case of our example, the literal hypothesis has interesting potential applications in the description and explanation of individual translator styles, and perhaps in the optimization of revision procedures (see e.g. Mossop 2007). There may be more than one tendency at work: some translators, under certain conditions, may tend to process in a **deliteralizing** direction, from more literal towards less literal, while others work in the opposite direction, beginning with a freer version and then pulling it back closer to the source text during processing or revision (i.e. **reliteralizing**). So our hypothesis can generate additional research questions: under what conditions do translators tend to deliteralize, and under what conditions do they tend to reliteralize? Do these conditions have to do with personality? Translator style? Text type? Language pair and/or direction? Length of professional experience? Desired translation quality? Left-handedness?... How then could we use this information in order to improve procedures of self-revision and other-revision?

A fifth criterion of significance is surprise value. A bold (unlikely) hypothesis that is corroborated is extremely interesting; and so is a cautious (plausible) one that is **not** supported. In the latter case, we might suspect the testing procedure itself; we might also need to reconsider cherished assumptions that actually do not hold. (For instance: that all amateur translations are of lower quality than professional ones, or that translations always improve if translators have more time.) In this respect, the literal translation hypothesis is less impressive. Because it appears to be highly plausible, it is a rather cautious hypothesis. Research results that went against it would rather surprise us. Bolder and potentially more interesting sub-hypotheses might eventually emerge when we know more about the specific conditions under which a processing move from more to less literal tends to occur, and when it tends not to occur.

We can now add a sixth criterion, perhaps the most important of all: a hypothesis is significant if it has explanatory power. This takes us beyond description into explanation.

5 Explanatory and predictive hypotheses

The fundamental goal of any research is to explain or understand something. One basic sense of explanation is the causal sense: we explain the occurrence of X by saying that it has been caused by Y. In translation, Y would include both external factors like the languages involved, the skopos, the working conditions etc., and also the translator's agency, know-how, subjectivity, moods, etc. But there are also other ways of explaining. Generalizations themselves are also a kind of explanation: they show that the explanandum is not an isolated phenomenon, but behaves like others of the same kind. In this way, a generalization about X helps us to make some sense of X, to understand it better (see Croft 1990). One can also explain by colligating generalizations and/or observations under a single governing principle, as Darwin did with the notion of natural selection. Salmon (1998) calls this explaining by unification. Or one can explain by situating a phenomenon in its contextual network, which also helps us to make sense of it, so that we are less puzzled, less in need of an explanation (cf. the use of a nexus model in Koskinen 2008).

Some would argue that the causal type of explanation is the basic one, and that the other types are either implicitly (weakly) causal or not really explanations at all. I prefer to use a broader concept of what can constitute an explanation, and so include them all. What all explanatory hypotheses have in common is the fact that they propose different kinds of relations between the explanandum X and something else, so that X is shown not to be an isolated phenomenon. This further illustrates the significance of hypotheses that relate in some way to other hypotheses: it is one way in which they show their explanatory power. And it also illustrates the explanatory role played by interpretive hypotheses, for relations are also interpreted. X is less puzzling if we see it *as* Y. The explanatory power of a hypothesis is thus a measure of its ability to *make sense*, in some way, of the explanandum X.

Let's take a couple of examples of proposals that aim to explain something by explicitly relating it to something else. As generalizations, Toury's two laws referred to earlier are not only descriptive but also explanatory, in the sense that (if they hold good) they "make sense of" many observations of interference or standardization. But we can go a step further. Might there be some other principle, more general than these laws, which would make sense of the laws themselves? Pym (2008) makes just such a suggestion. He argues that both laws could themselves be explained by the notion of risk-avoidance. Translators have an in-built desire to avoid risk, says Pym, and they do this both via exploiting interference and via standardizing. Pym's explanatory hypothesis looks like a unificatory one, but it also has a causal sense. The posited cause is situated within the translator's sociopsychological attitude, or habitus, which may itself partly be the result of training.

My second example comes closer to our literal translation hypothesis. Halverson's hypothesis of gravitational pull focuses on how target-language category prototypes and superordinate conceptual schemata tend to influence the translator's choices, leading to the over-representation of certain kinds of items (Halverson 2003, 2007). This cognitive pull, she argues, explains such putative translation universals as simplification and generalization. But underlying this idea there is obviously the assumption that salient

source-text features will also exert a pull (i.e. leading to interference of some kind, and hence evidence for the literal translation hypothesis). In her discussion of the unique items hypothesis, Halverson makes this point explicitly (e.g. 2003: 223). In the absence of any conceptual overlap between source and target structures, it is only to be expected that target-language-unique forms will be under-represented. In other words, if there is a choice between a target structure that is formally similar (and hence cognitively salient at the moment of target-item selection) and one that is not, the translator will tend to select – at least initially – the formally similar one and thus save processing time and effort. Halverson also makes the important point that similar effects have been observed in studies on second language acquisition. This implies that so-called translation universals may not be specific to translation, but have to do more generally with language use under particular constraints.

Halverson's hypothesis thus situates its causal trigger not in the translators' attitudes but in their cognitive processes. So we are dealing here with a different level of causal explanation, which is not necessarily in conflict with the risk-avoidance idea but might complement it. Both these explanatory hypotheses propose an explanation by linking descriptive textual phenomena with other phenomena of a different kind, not textual but attitudinal or cognitive. An explanation that makes this kind of connection is more powerful – because more general – than one that remains within the field of the explanandum itself. Halverson actually takes this step twice: first by extending the hypothesis beyond translation studies into second language acquisition studies; and then by the appeal to cognitive processes. Pym's risk-avoidance hypothesis also looks outward beyond translation to intercultural cooperation in general, and the social risks of non-cooperation.

Predictive hypotheses are sometimes simply formulations for testing explanatory ones. If X is explained as being caused by conditions ABC, one can test this claim by predicting that whenever conditions ABC hold, X will occur (with probability *p*). But the relation between explanatory and predictive hypotheses is not always so evident. Explanations are easier to make than predictions; one can explain (in hindsight) more than one can predict. Descriptive hypotheses also have a built-in relation to predictive ones. The descriptive claim made by the literal translation hypothesis leads easily to a predictive formulation: (under conditions ABC) translators will tend to first write/verbalize more literal versions and then deliteralize them. Predictive hypotheses are also implicit in methodologies which are designed to elicit data, not just analyse it (such as TAP, or interviews). The predictions are that these methods will produce interesting and relevant data. Prescriptive claims ("you should do this") are also implicit predictions ("if you do this, the client/reader/I will be pleased, etc.").

What kind of explanatory power does the literal translation hypothesis have? It certainly unifies a number of different kinds of observations under a single idea. And it links with several other hypotheses, in different ways. And although it is overtly a descriptive claim, it is based on assumptions about the influence of linguistic form on cognitive processing. It would be interesting to explore how far these assumptions could also explain second language acquisition data, or features of text composition by bilinguals writing in their weaker language, or natural translations done by untrained bilingual children. This would be the next step: to extend the reach of the hypothesis in order to

connect with other fields, and thus stretch and test its explanatory power. The more relations of different kinds a hypothesis allows us to establish, the more explanatory power it has.

6 Final comments

The oldest research methods in TS have been conceptual analysis and comparative textual analysis. Conceptual analysis is basically the generation and assessment of interpretive hypotheses. In TS this has sometimes taken place at some distance from the data, however, and exemplification has been difficult, especially on new data. New interpretive hypotheses are often proposed, but not so often tested beyond a possible exemplification or two. Text analysis, on the other hand, is an empirical endeavour which is mainly descriptive.

We now have many more kinds of data than earlier – not just textual – and a great many hypotheses of different kinds. One problem here seems to be that we repeatedly test the same hypotheses in an unconditioned, absolute form, when they have long been shown to be false in that form. Perhaps we should give up the term "universals", for instance, and prefer claims that are precisely conditioned, i.e. not absolute. That would mean adjusting the level of generalization we are aiming at. At the same time, we need to develop bold general hypotheses which offer greater explanatory power (such as Pym's risk-avoidance idea), and find ways of operationalizing and testing them. This underlines the importance of formulating hypotheses as explicitly as possible, whether they are interpretive or empirical. Perhaps we are actually working with more hypotheses than we realize?

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