

ROD PITCHER

Metaphor Analysis Using

MIP

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1. Introduction

This book is an introduction to MIP, the Metaphor Identification Procedure described by the Pragglejaz Group (2007). The name of the Pragglejaz Group derives from the first letter of the first names of the ten original members of the group who devised MIP: **P**eter Crisp, **R**ay Gibbs, **A**lan Cienki, **G**raham Low, **G**erard Steen, **L**ynne Cameron, **E**lena Semino, **J**oe Grady, **A**lice Deignan, and **Z**oltan Kövecses. MIP is the result of a project co-sponsored by the Netherlands Organization for Scientific Research (NWO) and the British Academy which involved the development of a reliable procedure for finding metaphorically used words in natural discourse. The work was carried out at the Vrije Universiteit (Free University), Amsterdam, The Netherlands.

MIP works by comparing the contextual meaning of a word in the text being examined with its meaning as found in a dictionary. If the contextual and dictionary meanings do not correspond then the word is used metaphorically. In other words, if the literal meaning given in the dictionary corresponds with the meaning in the text being examined then the word is used literally and not metaphorically.

In using MIP I have developed ways of dealing with some of the problems I found. These problems include which dictionary to use, or how many; some of the words found have some metaphor-like qualities that need to be thought through; then there are the implications that MIP can be used either quantitatively or qualitatively, by providing data useable in either of those ways; and so on.

In resolving these problems I believe that I have developed MIP into a very strong tool for providing a reliable, valid and rigorous result, and also one that can be used for quantitative and qualitative analysis. I discuss these implications in the following chapters where I also use the data from a survey of PhD students to illustrate them. The students were asked to discuss their PhD work, from which I have extracted their conceptions of research, their conceptions of the self in research,

conceptions of knowledge and conceptions of the PhD itself. Some of these conceptions are also discussed, where they add a suitable context, in the following chapters.

2. MIP: ‘Metaphor Identification Procedure’

An Introduction to the Method

The analysis described by the Pragglejaz Group (2007) provides a prescriptive method of finding the metaphors in a transcript or other written material. As such it provides a way of finding all the metaphors without the risk of the investigator’s sensitivity to metaphors, or the lack of it, being an influential factor. The method described is almost mechanical in its application in that each word is checked against a dictionary definition. The dictionary provides the literal meanings of the words. Thus, if the meaning in the material is not identical to the literal definition given in the dictionary it can be taken that it is a metaphor.

The Pragglejaz Group describe five basic steps in their method of finding metaphorical words and phrases. The first step is to read the entire text to gain a general understanding of the context in which the metaphors appear. The next step is to mark out the lexical units within the text. In general ‘a lexical unit’ is a single word. However, there are some compound words, such as ‘power plant’ and ‘of course’ that require analysis as a single unit.

The next step is to take into account the meaning of the lexical unit in the context of the whole. Next there is the need to determine if the lexical unit has a meaning that is more concrete, relates to a bodily action or is historically older. If this step is true, then one must decide whether the meaning in the text contrasts with the basic meaning and can be understood in comparison with it. If the answer to the above is yes, then the lexical unit is metaphorical. (Pragglejaz Group 2007,3). They then work through an example in detail, using an extract from a newspaper article, to show how their method should be undertaken.

They show how the text to be examined is broken down into individual words and then each word’s contextual and dictionary meanings compared. This results in a table from

which a decision can be made as to whether or not the word is used metaphorically. I used the same table form as a working layout for my own work using MIP. Examples of the layout of the tables using my data are shown in the Appendixes to this Report. The layout is convenient and provides a working record of the decisions made and the reasons for them. Keeping this record is an important part of the process of using MIP.

The reporting of the results is an important part of the analysis, according to the Group, and should be undertaken with care. It should provide as much detail about the analysis procedures as possible. The report, they say, should include information on the text studied, the lexical units found, the resources used for checking the status of the lexical units and any decisions made along the way (Pragglejaz Group 2007, 13).

My application of MIP to a selection of my survey responses is described in detail below where I provide a step by step account of my use of MIP in finding the metaphors in the responses.

Applying MIP to a Sample of Responses

This is a report of my examination of the ten survey responses in which I used MIP to find the metaphors. The responses were broken down into individual words, each word was looked up in a dictionary, and then its usage in the context of the response was considered and compared to the literal meaning found in the dictionary. Finally, the way in which the word was used was decided upon, it being either metaphorical or non-metaphorical. I found this to be a critical part of the examination that needs to be carried out with care and concentration.

I first read all the responses through a number of times to get a feel for the text and the ways in which the respondents described their conceptions. This stage was very tentative but it later helped in describing the contextual meanings of the words in each response. It must be remembered that the most important factor in the investigation is the students' conceptions and that those conceptions can only be derived from the words

the students use in describing their conceptions in their responses to the survey. Thus understanding the context of the words used in the responses is of vital importance in the analysis.

Each response was divided up into its constituent words. The words were listed in the order that they appeared in the response to simplify looking back at the response to refresh my memory about the context during a later stage of the examination. In the first few cases every word was examined. However as my experience grew I was able to eliminate conjunctions, the definite and indefinite articles, pronouns and some prepositions since these were found never to occur as metaphors. The words were listed in order and then looked up in a dictionary to find their literal meanings. This part of the examination is very demanding and time consuming, but it is necessary to do it with care and concentration for it will greatly influence the later decision on whether or not the word is used metaphorically.

The next step was to again examine every word and establish its contextual meaning. Care must be taken to place the word in the context of the whole response or the final decision on whether or not the word is used metaphorically may be affected. As part of the decision making process it is necessary to look back at the whole response to establish the context for each word. Although this stage can also become tedious it is enlivened when some of the words almost jump out from the page and announce themselves as metaphors. However, the decision for or against the word being a metaphor must wait until the next stage.

The final step is to again examine the words and decide whether each is a metaphor or not by comparing the basic and contextual meanings. This step must also be done carefully since it will influence the number of metaphors found in the response and influence the later analysis. If any metaphors are missed the later analysis may be skewed and invalid.

All the steps taken in finding the metaphors must be done carefully and with concentration. All the steps have a requirement for accuracy. All will affect the final results. Thus care and concentration are a requisite for the use of MIP in

finding all the metaphors. Only if all the metaphors are found will I be able to justify making any claim for the validity and reliability of my results.

MIP is the procedure for finding metaphors in text that I have settled on as the next method I shall use in analysing my survey responses. I discuss my trial run of the method with ten of my survey responses and describe in detail the results obtained. MIP was found to be a useful and satisfactory way of finding the metaphors in the sample texts.

Some Findings From MIP

The Metaphors and Their Groupings

Once all the metaphors had been found the ones contained in each response were written onto a sheet of paper. Any that seemed to be related by concept or metaphorical inference were linked by lines. This stage was very tentative as it was not yet known how or if any groupings might be formed. However, it helped in bringing together the metaphors within each response that had similar topical inferences. This process is the same as that used in my previous analysis. It helps to see the metaphors laid out and related to the responses. This step was useful as it indicated where metaphors in separate responses were related by topics and helped in thinking about whether and which groupings could validly be formed.

I begin by discussing the metaphors contained in each response, and considering how they might form groupings. Then I take the combined metaphors in all responses and consider them as groupings across responses. I discuss the possible links and inferences of any groups of metaphors that appear and form some tentative conclusions. Finally, I briefly discuss the frequency of metaphor usage as it occurred in the responses and derive some suggestions about it. I discuss all these matters in detail and consider any meanings and associations that can tentatively be drawn from them. It should be kept in mind that these are the results of examining only ten of the responses. The

examination of the remaining responses may produce a different result.

Response 37 had three references to 'area' and a possible link to them in using 'gap' to refer to something missing from knowledge. I suggest that these go together since they have a similarity in referring to a space. There were also two references to 'explore' and 'exploring' plus two possible additions in 'steps' used twice and 'run' used once. Since 'steps' and 'run' might be a part of an exploration I tentatively linked them together. As well, there were two references to 'issue' and 'issues', that form another small grouping that has an organic feel. Finally, there were three uses of 'in', two joined with 'interested' and taking the form of 'interested in' and the third referring to something being 'in' the relevant area of study. These uses of 'in' suggest that the objects with which they are linked are seen as containers 'in' which something might be placed or exist. These small groupings show a lot of variation in their references and cannot be united any further than described above. The wide range of metaphors makes any further speculation pointless at this time and until the possibility of links to other responses is considered below.

Response 45 had two tentative groupings. 'Depth' and 'deep' can be linked, and possibly 'on' also may be linked to them as aspects of some relationship to being part of an almost physical entity. A further small possible grouping is between 'journey' and 'marathon', in that both might have connotations of difficulty and requiring a lot of effort, although the link is very tenuous. Since there is no link between either of the minor groups there is no gain in speculating further until any possible links to other responses are considered below. Two interesting and unusual metaphors in this response are 'burrow deep' into the subject and 'muster enthusiasm'. The two are not related in any apparent way to each other nor other responses so whether they will prove useful is impossible to say at this stage, but it would be delightful if they could be placed in some grouping. They certainly add colour and interest to the text of the response.

Response 39 had little to consider at this point. There are two references to 'in', where mention was made of being 'in your subject area' and 'in general'. In addition 'through' might be

tentatively joined to the group, since all refer to the inside of a container or thing. This response also had references to 'a 'body' and an 'area'. Although these cannot be linked in any way they offer possible links to other responses as discussed below.

Response 28 had only one grouping but it was large in comparison to the amount of other metaphors found. There were four references to 'in' in various ways. The word was linked to 'the world', 'research', 'science' and 'your chosen field'. These uses seem to have little in common apart from all representing the object of discussion as a container that can have an 'inside' to be 'in'. In this response there were also single usages of 'body', 'field' and 'logbook', none of which form any grouping. 'Logbook' is unusual and unique, but the other two might be useful for forming links to other responses.

Response 58 had two groupings that are interesting. There were two uses of 'in' with the likely inclusion of 'into', which form a useful grouping referring to aspects of a container. As well, there were uses of 'develop' and 'developed' which form another small grouping. This response also had 'key', which is an unusual metaphor, and 'areas' which might be useful in forming links to other responses.

Response 7 did not have any groupings, but did have 'issue' and 'body' which it appears from the discussion so far might be useful for forming links to other responses. 'Game' appears to be a singleton which probably will not link with anything else.

Response 42 had a mixed lot of metaphors. There was 'path' and 'embark' which might be useful to link to other responses in relation to a journey. The multiple uses of 'of' form a group on their own which might have some interesting connotations but at this stage looks unusual. 'In' and 'into' form a group which has been seen to have connections with containers in other responses. Two unusual and colourful metaphors that occur twice each are 'corner' and 'market'. Both times they occur in the phrase 'corner of the academic market'. At this stage this representation appears to be unique to this response and appears that it will not link to other metaphors. However, it is indeed a

colourful and interesting metaphor and adds interest and individuality to the response.

Response 50 had few metaphors. There were a few uses of 'in' which has been seen to be common to a number of responses as a representation of something that might be a container. As well there was 'discover' which appears in other responses and 'work' which so far looks unique. It appears that this response will have some links to other responses.

Response 41 had a mixture of metaphors. There were multiple uses of 'of' and 'in' which, again, might refer to a container or being within some object. As well there were a few isolated metaphors. 'Developing' which appeared here now seems to be fairly common in the responses and will provide links to some of them, as will 'depth'. An odd one that again appears unique is 'fantastic' in reference to the 'opportunities' of the PhD. If it does not link to other responses at least it gives this response an individual flavour. It appears so far that this response will link to others, but will still have its differences.

Response 43 showed a variety of metaphors. Again there was a large group of 'ins' that will help linking this response to others. There was a scattering of 'of' and 'out', which also might link to other responses. Two useful metaphors were 'body' and 'corpus' which form a small group of their own. These two are related and appear to be useful in forming links. Finally, there was the use of 'field', which also appears useful for linking to other responses.

It will be noted that a number of the responses described above have a metaphor or phrase that is unique to the response and appears not to be linkable to others. Even if they do not help to link responses those unique metaphors provide interest and colour to the individual responses.

The largest grouping found in the responses was around the use of 'in'. In all, eight of the ten responses considered contained this metaphor (39, 28, 58, 37, 50, 42, 41 and 43). The word was used in reference to many different things such as the subjects of research, the world, science, the field of study and the area of research. This metaphor suggests that these are seen to have container-like properties and can contain or enclose

something. Since it was used in relation to many different topics it is not possible at this point to elaborate the meaning further. However, there is the contrast between the responses where it was used and those where it was not (response 7 and 45), which may have a deeper meaning that will emerge when further responses are analysed. It appears at this stage that some respondents see 'containers' in their world of study and others do not.

However, 'in' may also refer to an aspect of an open space, where things are 'in' the space. Thus this metaphor might be linked to the mentions of 'area' or 'depth' in the responses. It is also possible that 'in' might be linked with 'body'. These possible links require more responses to be analysed before they can be settled. The possible linking of 'in' to 'area' or 'body' opens up more possibilities for groupings that might eventually be developed.

There is also the possibility that 'of' may be linked to 'in' or some of the other metaphors mentioned above. 'Of' appears to have connotations that make it similar to 'in' as it relates to one thing belonging, or being related, to another. This is similar in some ways to the relationship between 'in' and a container or other body. 'Of' can also be tentatively related to 'area' and 'field', as it indicates a sense of belonging that might refer to something being part of the 'area' or 'field' of research. It also is possible that 'of' could be related to 'issue' since if something is an issue in the sense of coming out of a 'body' it then can be said to 'of' that body.

The possibilities of linking 'in' or 'of' to other metaphor groups also suggests some further thoughts. If either 'in' or 'of' is to be linked to 'area' or 'field' then it cannot indicate a container, as such. The word would then indicate the much different conception of something being in or of the 'area'. Linking 'in' or 'of' to 'body' would indicate that the body, whether of a person or knowledge, still has connotations of being a container but a differently defined one as regards its contents, scope, and outputs. For 'of' to be tentatively related to a container would require that it have an output of some sort to give the reference

to 'of' meaning produced from. Again, these differences may be resolved when more responses are analysed.

There were two groupings containing four responses. Responses 7, 39, 28 and 43 each contained a reference to 'body'. The subject varied from the 'body of knowledge (7 and 28) to the 'body of researchers' (39) and the 'body of literature' (43). As can be seen, the subjects varied over a wide area which makes it difficult if not impossible to combine them into one grouping. 'Of' also featured in four responses (42, 50, 41 and 43). The only notable usage here was in response 43 where it was used in the form 'out of', which might possibly combine with something else such as a journey or area to be part of some larger grouping. This tentative suggestion needs to be tested further.

'Issue' was found in a group of three response (7, 45 and 37) where it provided an organic feeling to the references to research (response 7) and things to explore (37). Another metaphor found in three responses and forming a small grouping on its own was 'area' (responses 39, 58 and 37). A third possible grouping is the response that used forms of 'develop'. 'Develop' itself was used in responses 58 and 37, and 'developing' was used in response 41. These metaphors might eventually have links to other organic-type metaphors, such as 'issue' or 'body'.

There were a number of groups of two responses. 'Depth' appeared in response 41 and 'deep' in response 45 in reference to a quality of research. At this stage there does not appear any broader grouping to which these can be attached. 'Field' appeared in responses 28 and 43, and references to a 'path' or 'journey' appeared in responses 42 and 45. These two groupings may eventually be related. Response 42 also had 'embark' which can be related to 'journey'.

'Explore' appeared in only one response (37) as did 'steps/run'. These singletons may eventually be related to each other. since exploration may be seen as comprising 'steps' or they may both be grouped with 'journey'. It remains to be seen what will eventuate when more responses are analysed.

Response 45 contained two interesting and unique metaphors – 'muster' and 'marathon'. It may become possible to

link one or other of these two terms with either 'journey' or 'explore' at some stage.

It will be noticed from the above discussion that response 37 appears in many possible groupings due to containing a range of metaphors. It used 'in', 'issue' and 'explore'. Although this range of metaphors offers a number of links to other responses it may also complicate the formation of any groups. On the other hand, it might show that there is no simple arrangement of groups that will work and require some other arrangement such as a hierarchy, tree-formation, overlapping circles or some other formation as yet unthought-of of.

Two groupings that, at this stage, appear interesting are the references to research and knowledge. All ten responses had some reference to research. It was described as having 'depth' (45), an 'area' (37), 'issues' (7), an 'in' aspect (39) and a 'field' (28, 43) amongst other things. References to knowledge only appeared in four responses (37, 7, 28 and 43) where it was described as having 'gaps' (37), a 'body' (7 and 28) and a 'corpus' (43). 'Body' and 'corpus' look like possibilities for a grouping since they both refer to the 'body' of knowledge and give it an organic feel. If further similar groupings are found as the remaining responses are analysed it may mean that some sort of grouping around the subject might emerge rather than one based on the particular types of metaphors used. These types of groupings do offer the possibility of influencing the classification that eventuates from my analysis.

A grouping that might eventually have important repercussions is the group of responses containing 'in'. This metaphor suggests the possibility of a container or containment of some sort. Since it is applied to many different aspects of the PhD it is not possible to group the subjects, but the container aspect can be applied to the whole response and, possibly, to the student's comprehension of what is involved in doing the PhD and research. This is an intriguing possibility that may or may not be strengthened when more responses are analysed. It may be conjectured at this stage that the student views many things in his or her world, and particularly of the PhD, as 'things that can contain other things'. This possibility can then be contrasted with

the students who do not have that view and hence did not use the 'in' metaphor. This grouping offers some interesting insights into the student's view that provoke a number of questions. For instance, does viewing research as a container make the student feel that s/he has to put something 'into' it in the way of effort so that s/he can 'take out' the results? Does the student see limits to the capacity of research, its range and its outcomes due to a limited size of the container? How does the student feel about sharing the container with other researchers? Does the student feel that the shape and size of the container influence the nature of research? Perhaps the answers to these questions will become apparent as more responses are analysed.

The problems with linking 'in' to other metaphor groups mentioned above illustrates a situation that I hope will be resolved when more responses are analysed. At the moment there is too little data on which to base any definite conclusions. However, it is to be hoped that the situation will be resolved and some relationships between metaphor groups will be formulated. It is necessary that some groupings are arrived at to link various responses together into some coherent whole that will illuminate the respondents' conceptions. Just what those groupings will arrangement will be is not yet apparent.

The Frequency of Metaphor Usage

One of the statistics to come out of my metaphor analysis was the frequency of metaphor usage by the PhD students. Overall the responses varied from five metaphors per hundred words by a female, domestic, Arts student in her third year to 13.7 metaphors per hundred words by a female, domestic, science student in her first year. There seemed little in the way of relationships apart from the tentative ones mentioned below. The small number of responses examined prohibited any solid conclusions so any relationships mentioned must be considered very tentative.

The highest frequency of metaphor usage was recorded by a female science student in her first year. This might perhaps be related to the high use of metaphors used in teaching scientific

principles. However, a second year female science student recorded only half the level. Since there were only two science students represented in the sample responses it is not possible to make too much of this relationship. It does suggest, however, that the frequency of metaphor usage amongst female science students might be high at first but fall drastically after their first year of study. Whether this is so, and the reason, if any, will depend on further investigation of the remaining responses.

The next interesting peak in the frequency distribution was made by Arts students in their third year of candidature, irrespective of gender, although there was a single case that did not agree. Arts students in their second and fourth years used metaphors much less than their fellows in their third year. Again, the small number of responses analysed does not permit any definite relationships to be stated.

There did not appear to be any simple relationship with gender. The highest frequency of usage was by a female student and the second highest by a male student. The other students were a mixed bunch with no regularity of frequency of metaphor usage.

The only International student available in the analysis recorded a frequency about mid-way through the range of all the students, but was the second highest of the Arts students. This may or may not indicate something about the student's facility with the English language: One case does not support a definite conclusion.

Conclusions

This analysis has produced more questions than answers! Hopefully, further work will answer, or at least make clearer, some of the questions. I was unable to come to any definite conclusions due to the small amount of data obtained from only ten responses. It will require the analysis of the remaining responses to either fill in some of the gaps or suggest ways of forming any groups or relationships inherent in the responses. The further analysis of the remaining responses will also indicate whether or not they can be grouped in any way that helps the

understanding of students' conceptions of research and other matters.

In later work Gerard Steen from the Pragglejaz Group joined a new group of researchers to develop MIP further into a variation they named MIPVU after the university where they worked (Steen, Dorst, Herrman, Kaal, Krennmayr, and Pasma 2010). I will return to Steen's *et al*'s work when I discuss my experience in developing my own way of using MIP. Steen *et al* offer solutions to some of the problems that arise in the use of MIP. I discuss these solutions below where they fit better with my continued use of MIP and the solutions that I evolved to some of the problems that arose. Just what these problems are will become apparent as the description of my use of MIP continues. At this point it is sufficient to indicate that some of their suggestions and remedies differed from my own.

The next chapter continues my work using MIP. It is an account of my investigation, using MIP, of some of the conceptions other than the conception of research that have appeared in the analysis. In particular I look at the students' conceptions of themselves as researchers, of their PhDs, the outcomes of their research and knowledge.

3. The Self in Research and Other Matters

Introduction

This chapter is an extension of the previous one in that it is a further application of MIP to the survey responses. It thus follows on closely to the previous work. The aim here is to study the students' conception of self in research, the conception of the PhD, the conception of the outcomes of research and the conception of knowledge.

This study was aimed at understanding doctoral students conceptions in a number of areas, such as their conceptions of themselves as researchers and the outcomes of their research. Those conceptions were extracted from the responses to the survey in the form of the metaphors referring to them. Each response was read a number of times to ensure that all the metaphors were found. Where there was any doubt over a word or phrase being or not being a metaphor recourse was made to a dictionary. Where the word or phrase is used literally and matches the dictionary definition it is not a metaphor. When all the metaphors in each response had been found they were listed in their categories of conceptions on separate sheets of paper for ease of working. Then comparisons were made between the categories, both within a response and between responses, looking for any relationships between the occurrence of the categories, between the categories and the demographic data and with the previously found conceptions of research.

The Conceptions

In some cases the other conceptions – the conception of self in research, the conception of the PhD, the conception of the outcomes of research and the conception of knowledge – match the category of conception of research into which the response was placed but in many cases they have to be allocated to different categories. For example, in response 1 knowledge was described as being 'produced' which would place it in the category of 'organic'. In the same response 'outcomes of research'

were described as ‘the end of the research process’, again being ‘organic’. Thus both were placed in the category of ‘organic’ which was also the category of conception of research into which the response was placed. It can be seen that, in this case, the category of ‘organic’ covered the conceptions of knowledge, outcomes of research and research itself. That is, the participant’s conceptions of all three were placed in the same category.

Similarly, response 51 shows the conception of the PhD as ‘explorative’ when describing it as ‘a journey’, and thus the category matches the category of conception of research which was also ‘explorative’. Further examples would show that response 12 shows the conception of outcomes of research as ‘constructive’ – the same category as the participant’s conception of research – and that response 2 shows a conception of knowledge as being ‘spatial’ which matches the participant’s conception of research.

The students’ conceptions of themselves as researchers were very scattered and difficult to put into any category. They tended to be described using metaphors that varied across all the categories.

A consideration of the demographic factors did not indicate any correlation between them and the responses discussed above. It appears that the participants have none of the demographic factors in common and thus that there is no apparent reason why the conceptions discussed should match the conception of research in the same response. In most cases only one other conception matched the conception of research whereas other cases, such as response 1 for which examples are given above, show a number of conceptions which can be placed in the same category as the conception of research.

However, there are many more examples where the conceptions of self in research, outcomes of research, knowledge and the PhD do not match the category of the conception of research. Indeed, in some responses all the conceptions present fall within different categories.

For example, in response 48 the conception of self in research was very strongly ‘organic’ and the conception of the

PhD was also 'organic' but the conception of research was 'explorative'. Why there should be such a disparity is not evident from the response. However, I would suggest that for the conception of self to be 'organic' is quite logical since it is a conception of the person as an organic being undertaking the research. Indeed, the conception of self as 'organic' appeared in many responses. At first glance there did not appear to be any relationships between the conceptions and other factors.

However, on deeper examination a few did appear. I discuss these relationships below and offer some conjectures as to their significance.

The first relationship that I noticed was that the response (12) which had previously been placed in the category of 'research is constructive' also showed a strong conception of the self in research. This respondent referred to 'carrying out your research' and 'commit[ting] yourself to the undertaking' amongst other things. The demographic data gathered from this respondent shows that she is a female, domestic, anthropology student in the second year of her candidature.

The response did not show a conception of the PhD nor a conception of knowledge. Unfortunately she is a single case and no great value can be placed on the relationship since there were no other anthropology students nor respondents in the category of 'research is constructive' against which to check the association. However, the question arises "Do any of the factors in this case have any relationship to the factors in other responses?" It is something worth looking into, and will be considered below after discussing another response with some similarities.

Another response (48) that attracted my attention has a very strong conception of the self in research. It is stronger than that shown in the case discussed above. The respondent spoke of 'get[ting] a buzz', 'hunting for a specific result' and [having] to fight for what you do', amongst other phrases. This respondent (48) is a female, domestic, science student in the fourth year of her candidature. The response was previously placed in the 'research is explorative' category. This response did not show a conception of outcomes of research nor a conception of

knowledge. However, again it is difficult to see anything worthwhile in this relationship as the factors appear to be unrelated to the strong conception.

Although this response and the one discussed above both had strong to very strong conceptions of the self in research the only other common factors are that both are female domestic students. These factors are probably not significant, although it is not useful to generalise from only two cases. However, there are a large number of female domestic students who do not match either of the cases discussed above. Also, there are other strongly expressed conceptions of the self in research that do not match to any great degree. This suggests that those characteristics are not significant.

There were a number of other strong conceptions of the self in research other than the two discussed above (19, 20, 21, 24, 25, 26, 27, 41, and 49). This grouping is of some interest since the responses 19 to 27 all were previously allocated to the conception of 'research is spatial'. However, it appears that the connection does not indicate anything significant as others with that conception of research did not show such a strong expression of the self in research and responses allocated to other conceptions of research did show conceptions of the self in research. Further, there was no apparent connection between the strong conception of self and the demographic data: The respondents who expressed a strong conception of self in research were a mixed lot of gender, background, areas of study and years of candidature.

There were two strong expressions of the PhD (11, 16). Of these one was male (16) and the other was female (11), one had an arts background (16) and the other a science background (11). Both were domestic students in the third year of their candidature. Both these cases were previously placed in the category of 'research is spatial'. However, the demographic factors do not seem to relate to the strong conception of the PhD, since there were other third year students in other categories who did not express strong conceptions of the PhD. It appears that these two cases are too dissimilar to suggest any connection.

Other strong expressions of the conception of the PhD appeared in responses 14 and 15. There were only two similarities between these two respondents in that both were male and were studying the sciences: physics

(14) and ecology (15). One was a domestic student (15) and the other an international student (14) in different years of their candidature. They were allocated to different categories of conceptions of research. Again there did not appear to be any strong connection between these two respondents.

There were two strong expressions of the conception of the outcomes of research (1, 9). Both these responses were allocated to the conception of 'research is organic' amongst many other responses. There was no other relationship as there was no similarity in genders, cultures, areas of study or years of candidature. There were no strong conceptions of knowledge. The conception appeared in responses across genders, cultural backgrounds, areas of research and years of candidature.

Discussion

The understanding of the PhD students' conceptions of the self in research, the PhD and other matters is important since it might affect their progress and development. Bills (2004) and Lee (2008) have both discussed the importance of any differences in conceptions held by the supervisor and the student. A mis-match can result in problems in the relationship that may affect the progress, time to completion and development of the student.

The responses showed a number of strong conceptions of the self in research and of the PhD. There were fewer expressions of the outcomes of research and knowledge. I suggest that this might have been due to the nature of the questions asked in the survey. The questions asked respondents to describe their work and research as PhD students and what it meant to them. Thus, while answering the questions the respondents would have been focusing on themselves and their relationships to their PhD research. It seems to me that that would produce the high number of references to the self in research and to the PhD itself.

In other words, the many references to the self in research and the PhD might be a result of the way the questions were phrased.

Although the conception of self in research was more common and usually more strongly held, as indicated by the number of instances in the response than the conception of the PhD, neither appeared in all responses. The conceptions of self in research and the conception of the PhD appeared side by side in many, but not all, of the responses. Also, there were some very strong conceptions of the self in research as indicated by the number of expressions in individual responses but in general the conceptions of the PhD occurred less strongly.

However, digging deeper into the data does raise some interesting questions. Why do the conceptions appear together some times but not others?

Why are there some responses that have neither a conception of self in research nor a conception of the PhD? What is it about the conceptions that makes them relevant to each other so that some people hold one, both, or neither? The answers to these and other questions are worth considering and I will attempt to answer them below.

Consider the two conceptions. The conception of self in research indicates that the respondent sees the importance of their own person in their research. This is often accompanied by thoughts about the importance of the outcomes of the research either for personal advancement or for the good of society. The conception of the PhD indicates that the respondent was thinking about the process of doing the PhD while answering the questions. In the case of the conception of the PhD there is often a personal flavour to the comments about the PhD. These effects may be present because the intention of the survey questions was to elicit the respondents' personal views of the PhD and the research involved. In both cases there is an aspect of the personal expressed: It is a common thread to the responses containing the conceptions.

From this occurrence we can suggest that combining the two conceptions indicates the importance of the person in the PhD

research. This combination of the two conceptions suggests a broader view of the respondents than relying solely on the occurrence of just one conception. Why then do some responses have one or the other or neither of the conceptions? Why don't all the respondents use metaphors to express a conception of research and conception of the PhD? What is it that makes the respondents differ so much?

Going back to the responses suggests some tentative answers to the above questions. It is noticeable that all of the respondents who expressed a strong conception of research were female students. Thus there may be some link to the demographic data. However, the less strongly held conceptions did not appear similarly related. In other words, although some female students held much stronger conceptions of self in research than any of the males, there were many more females whose strength of conception only equalled that of the males.

One female respondent (48) held a very strong conception of self in research. She expressed herself in strong term such as 'hunting' for a result and 'fighting for what you do'. As well she said that she gets a 'buzz' out of research and it is 'very stimulating'. This respondent also expressed a weak conception of the PhD. Of the other women who expressed a fairly strong conception of the self in research (19,20,21,25,26, 41) only one (20) also expressed a conception of the PhD.

Perhaps this is a way that we can understand the difference in the strength of the conception. Perhaps the more passionate the respondent is about her/his research the stronger the conception. The case described above (48) supports this conclusion. It seems to me that a person who feels strongly about something will express their conception of the subject equally strongly: Strong feelings will invoke strong words. Consider the occurrence of 'hunting' and 'fighting' in the above case. This suggests that for this woman research is far from being a half-hearted exploit!

This also suggests a reason why the conception of self in research is usually weaker when it is expressed alongside the conception of the PhD. If the respondent's passion is spread

over two conceptions then it may be difficult, if not impossible, to have strong feelings about both. This conjecture is in some way supported by the fact that the woman who had a very strong conception of self in research only had a weak conception of the PhD. Further, it can be surmised, those who express a conception of the PhD but not a conception of self in the research have more strength of feeling for their PhD itself than the research involved. The next logical conclusion is that those who did not express either a conception of self in research nor a conception of the PhD were not passionate about their research or their PhDs. However, I would not like to express that conclusion too strongly on the basis of what data I have.

There is another slight relationship to the demographic data and to the previously found conceptions of research, although too much weight should not be placed on the relationship due to the small number of respondents represented. In the earlier analysis two responses (57,58) were placed in the category of 'research is organic'. Respondent 57 is male and respondent 58 is female. Respondent 57 showed a conception of both the self in research and of the PhD, whereas respondent 58 showed neither conception. Both respondents were domestic students in the second year of their PhDs. In this grouping, therefore, respondent 57 conceived of research as organic, was a male domestic student in his second year and had conceptions of both the self in research and conception of the PhD. Respondent 58 also conceived of research as organic, was a female domestic student in her second year and showed neither a conception of self in research nor a conception of the PhD. What, if anything, can be deduced from these relationships?

In this limited context it can be said that female domestic students in their second year of their PhDs who hold the conception of 'research is organic' do not hold any conceptions of the self in research nor conceptions of the PhD. On the other hand, male domestic students in the second year of their PhDs who hold the conception of 'research is organic' also hold conceptions of the self in research and conceptions of the PhD. Whether these relationships would hold up in a wider context is

unknown as there is insufficient data to support a definite conclusion. Thus, at this stage, it must remain an interesting conjecture that may or may not be true. But what else could be deduced if this conjecture did hold up when more data was obtained?

If such a relationship did hold when further data was obtained it might have some interesting consequences. It would be possible to state the tentative deductions above much more strongly. It would be possible to say definitely that certain groups of people will have conceptions of self in research and conceptions of the PhD, whereas other people definitely will not. That in itself would be a useful and interesting result in understanding those groups of people and might be important when deciding who is to supervise certain research students. The literature states that mismatches in conceptions of research can affect the supervisor/student relationship. Perhaps the other conceptions discussed here are also important and their presence or absence looms large in the relationship. Only further research will prove the point one way or the other.

Conclusions

There did not appear to be any consistent relationship between the conceptions of self in research, of the outcomes of research, of knowledge and of the PhD and the conception of research in the majority of responses. As noted above some of those conceptions did align with the conception of research of the response but mostly that did not occur. Indeed, the ones that did not match were found to be in the majority.

Why this should be so is not apparent from a careful study of the responses and the demographic data. There does not appear to be any common factor that would link any of the responses to each other nor to the demographic data. It would appear that the various conceptions of the participants fell into different categories simply because the participants conceived of them that way. This would suggest that when the majority of people expresses their conception of any matter, be it their conception of self in research, of the outcomes of the research, of

the PhD, of knowledge or probably of any other matter, their conception is expressed in metaphors that have a particular meaning for them while thinking of that topic. The metaphors used might vary with the time and the situation in which they are thinking of the topic or they might vary randomly. From the data gathered in this investigation it is impossible to tell. Their conceptions might then be expressed using a different category of metaphors when discussing other topics even though those other topics might be closely related to the first ones or even when discussing the same topic. In other words, the majority of people do not appear to be consistent in the category of metaphors used to describe different topics even when those topics are closely related. Why this should be so is an interesting question but is beyond the scope of this investigation and the data gathered. Another interesting question is why some people appear to be at least partly consistent in their use of metaphors while others do not. Again, this question and its possible answers are beyond the scope of this investigation.

To me it appears possible that the reason that the conception of self in research is so strong is that one of the survey questions asked the students to discuss *their experience* of research. I suspect that this question might have been taken as requiring discussion of themselves *vis a vis* research and thus caused them to talk about themselves *in* their research. In other words, the strength of the expression of the conception of self in research might be an artefact of the question asked of the students. This is perhaps something that might have been considered when planning the survey.

It can be suggested that the conception of research as problem solving is expressed strongly because it is the one of the important things that will be in the mind of any PhD student. Solving a research problem is part of the justification for doing a PhD. Similarly, the students are particularly interested in the outcomes of their research since upon that point rests their success or otherwise at the PhD. For these reasons, as well, the PhD will be in the forefront of their minds when answering questions about their research since they are *PhD* students. Thus

the strength with which these conceptions were expressed might be a result of the respondents being PhD students in particular. Since obtaining PhD students conceptions was the aim of the survey, the results obtained in the form of conceptions are focussed on that group.

In the conception of research as problem solving the problem itself appears to be most important. The conceptions of outcomes does not always appear alongside the conception of research as problem solving. This suggests that to the respondent the problem itself is more important than the outcomes of the research. The outcomes are seen only as the result of the problem solving.

In the conception of outcomes of research the respondent's attention is on the way the results impact on the wider society or professional community. The self in the research and the particular problems to be solved are less important than the outcomes.

In the conception of the PhD the most important aspect of the PhD is seen as its function as a training exercise and for the advancement and improvement of the person undertaking it. Research and its outcomes are seen as most important in the way that they impact on the PhD and its successful conclusion rather than for themselves as seen in some other conceptions.

In this report I have discussed the 'conceptions of self in research' and the 'conceptions of the PhD' and other conceptions as I found them in my survey responses. I have discussed some possible relationships between the conceptions, the demographic data and the results of a previous analysis into conceptions of research. I have also indulged in some conjecture linking those factors and come to some tentative conclusions. It is apparent that more work is required to strengthen my suggestions into reliable results or to eliminate them as merely incidental coincidences.

The importance of these findings becomes apparent when considering the effect of mis-matches in conceptions between supervisors and doctoral students. That mis-match can have a deleterious effect on the supervision in practice. This

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paper is intended to alert supervisors to some of the conceptions held by doctoral students and, perhaps, to help them to become aware of differences between those conceptions and their own. Becoming aware of the problem is the first step in solving or avoiding it.

The next chapter is a discussion of some of the questions arising about some of the words in the responses when they are analysed using MIP. The words discussed are not true metaphors but have some metaphor-like properties.

4. Some Thoughts About Using MIP

The work described in this chapter was a joint effort by my supervisor and I. It is the result of many and long discussion to the point where it is no longer possible to decide who decided what. I wrote the chapter.

Introduction

In this chapter we discuss some of the apparent anomalies in using MIP that have arisen in our analysis of the survey responses. We suggest that looking at and discussing these anomalies is important in developing our understanding of MIP, its limitations and its benefits. They need to be looked at to further our understanding and development as MIP users and researchers of metaphor usage.

As well, we discuss in some detail the problems surrounding the decision as to which dictionary should be used to provide the basic definitions of the words in the text. We suggest some of the problems that might occur and some possible solutions to them.

It is worth keeping in mind at this stage just what a metaphor is. It is the representation of one thing or domain as another. For instance '*the PhD is a journey*' does not mean that in doing a PhD one is literally travelling from place to place (although some actual travelling might be involved) but that '*the PhD*' has some attributes that are brought out by comparing it to a journey between different locations. Thus the stages of the PhD are compared to the stages of a journey. This comparison between a PhD and a journey is not meant to be taken literally. The movement within a PhD is intellectual rather than physical. That is, '*journey*' is a metaphor for the progress made during a PhD.

Methodology

We began by using MIP as recommended by the Pragglejaz Group to examine the survey responses. The metaphors found were to be used in analysing researchers' conceptions of research and other matters.

In the process of using MIP an number of words caused some problems. They appeared to have metaphorical properties but were not identified as metaphors by MIP. In the first instance these words were put aside until the analysis of the metaphors was completed. However, the problems would not go away and continued to occupy our minds, so we returned to the words to see what we could find.

The words were discussed in some detail. The discussion ended in complete agreement that the words needed some thought as to what should be done with them. We decided that these anomalous words might indicate some problems with the method described by the Pragglejazz Group and, perhaps, require some modification of the procedure they describe.

Having briefly described MIP and our usage of it we now proceed to discuss the problem of which dictionary to use and the anomalous words and try to make some sense of them.

The Dictionary Problem

Much of our discussion about the responses centred on the choice of dictionary. Where we disagreed on whether or not a word was a metaphor it always came about due to the use of different dictionaries as a sources of the literal meanings of the word.

The dictionary is the source of the definitions used in deciding whether or not a word is a metaphor. The dictionary provides the basic definition of the word which must then be compared to the contextual meaning. A problem that has arisen in our work is that the definitions with which we are working depend on the choice of dictionary.

Sometimes we have disagreed upon whether or not a word is a metaphor because we have used different dictionaries to obtain our basic definitions. My supervisor favours the *Macquarie Dictionary* and at other times uses *The Free On-Line Dictionary* or other internet sources, whereas I prefers using *The Shorter Oxford English Dictionary* for all my work. It is apparent that the choice of dictionary is important and requires some thought. It may turn out to be necessary to use more than one dictionary

and derive some consensus definitions rather than depending upon a single source. Whatever the outcome it appears that naming the dictionary in the report is important to allow other people to reproduce or verify our work.

Other factors should influence the choice of dictionary. For instance, the English as spoken in the country of origin of the respondents may affect the literal meanings of the words since some words will be accepted as literal in some countries and not others. Thus if the respondents are Australian then it will probably be necessary to use a dictionary based on Australian usage of the words. Some words that Australians see as literal might appear metaphorical, or vice versa, to a person from another country, even though both are English speakers. Much will depend on the typical usage of the words in the particular country, as reflected in its dictionary. Thus we would suggest that a dictionary be obtained from the country of origin of the respondents: For Australian usage perhaps *The Macquarie Dictionary* would be best, for American respondents perhaps the *American Heritage Dictionary* or *The Oxford American Dictionary* would suit the purpose, for British respondents the *Oxford Dictionary* in one of its various forms would be best. Whichever dictionary is chosen it should reflect the word usage as it appears in the English spoken in the respondent's country.

Similar arguments might also relate to languages other than English. However, we are not qualified to comment on them.

It may also be necessary to use a dictionary of words used by special fields of endeavour. For instance, in response 28 the respondent uses the word 'logbook' when talking about scientific record keeping. The dictionary definition of 'logbook' is that it is a record of a ship's voyage so it seems that here the word is used metaphorically. However, there is a case for taking the scientific meaning of 'logbook' as a working record of steps and experiments in this context. It may sometimes be that the way a word is used in a discipline should be allowed to override the normal dictionary meaning. This may require the acquisition of a dictionary of technical words used in the discipline of the writer.

As Steen *et al* (2010: 34) note, in the work in which they developed MIP further, "Specialist terminology may constitute a

specific case of insufficient contextual knowledge to determine the precise intended meaning...”. In other words, the use of technical jargon may make it difficult to decide whether or not a particular word is a metaphor unless the context makes it clear that the word is used technically and therefore literally. As noted above, it would probably be necessary to refer to a technical dictionary to decide the point. It is a well known fact that many words that started out as metaphors have become integrated into the technical languages of various fields of science and technology and thus have lost their metaphorical meanings to become simply technically descriptive words.

When deciding upon a suitable dictionary its age should also be considered. Words change their meanings over time. Words that were once metaphors become accepted as normal parts of speech and the metaphorical meaning becomes literal. This happens over a long or short period of time. Thus a recent issue of the dictionary should be used when looking up the literal meanings of the words in the text. An old dictionary might lead to incorrect decisions regarding the metaphorical nature of the words.

It obvious from all of the above that the choice of dictionary must be made in a logical manner rather than simply using the first to hand. It can be seen that the choice is no simple matter as it will affect the number and nature of the metaphors found when using MIP.

A further problem that required some discussion was the choice of which of multiple dictionary definitions should be used in determining which words are used metaphorically. We found the wording of the procedure in the MIP paper to be somewhat confusing and required some interpretation.

The Pragglez Group say:-

- ‘3(b). For each lexical unit, determine if it has *a more basic contemporary meaning in other contexts* than the one in the given context. For our purposes, basic meanings tend to be
 - More concrete [what they evoke is easier to imagine, see, hear, feel, smell, and taste];

- Related to bodily action;
 - More precise (as opposed to vague);
 - Historically older;'
- (Pragglejaz Group, 2007, p.3. Emphasis added)

We decided that all the dictionary definitions for a particular word should be seen as providing the 'more basic contemporary meaning in other contexts' and thus should be used in the analysis.

We considered the meaning of 'in other contexts' and decided that the dictionary definitions provided the basic contemporary meanings, as seen by the dictionary compilers, in a variety of contexts. I considered that if the compilers had found any other basic contemporary meanings they would have added them to the definitions. Thus *all* the dictionary definitions were taken to be *all* the basic meanings in other contexts.

We also decided that if the word in the response is less concrete, less related to bodily action, less precise (more vague) or historically younger than the 'more basic contemporary meaning in other contexts' then it is a metaphor. If the 'basic' meaning has more of the features than the contextual meaning then the contextual meaning, if a metaphor, will have less. On that basis we determined which words were used metaphorically in the survey responses.

The dictionary used in making the decisions for the rest of this research will be *The Shorter Oxford English Dictionary*. Although there might be some disagreements about the decisions if other dictionaries are referred to, it is necessary to draw the line on just how many dictionaries should be used somewhere so that the research can continue. Thus I decided to limit myself to just that one dictionary. Further work in this area might result in a better decision later.

It should be noted that in their developmental work on MIP Steen *et al* (2010) also used a single dictionary for most of their work (*The Macmillan English Dictionary for Advanced Learners*) with occasional recourse to a second one (*The Longman Dictionary of Contemporary English*) (Steen *et al* 2010: 16). They give no reason why this decision was made, but I

can probably assume that it was similar to mine, that is, to limit the amount of work to a reasonable amount and prevent it building up in an uncontrollable fashion. I would argue that Steen's *et al*'s decision to use one dictionary supports my decision to do likewise, even though we used different dictionaries.

The Number of Dictionary Definitions to Consider

I have mentioned the problem of how many dictionary definitions to consider as the 'basic' meanings of the word. If the number considered is less than the total given in the dictionary then a personal, subjective, factor is introduced which would affect the reproducibility of the analysis. Should all the definitions be considered or can the consideration stop at some point and the following definitions disregarded? It might be desirable to limit the number of dictionary definitions considered for reasons of practicality but just where to stop the consideration is a difficult problem, and a subjective decision.

To put this dilemma in some sort of context and, perhaps, to make the problem clearer I shall here list the meanings of 'field' as shown in my dictionary. When I took the first definition of 'field' as the basic meaning I found it many times as a metaphor in the responses when used to indicate a 'field of research'. However, when I took all the meanings of 'field' as basic then it no longer appeared as a metaphor. The critical point at which 'field' disappeared as a metaphor was definition 12, shown in ***bold italics*** in the following list of definitions. In definition 12 'field' appears as an 'area or sphere of action, operation or investigation' which is, I would argue, sufficiently close to 'field of research'.

Field

A noun I (A piece of) ground.

1 (A stretch of) open land.

- 2 (A piece of) land appropriate to pasture or tillage or some particular use, and usually bounded by hedges, fences, etc.
- 3 The ground on which a battle is fought; a battlefield.
- 4 A battle. Order of battle.
- 5 The country as opposed to a town or village.
- 6 A piece of ground put to a (usually specified) use other than pasture or tillage.
- 7 Country which is, or is to become, the scene of a campaign; the scene of military operations.
- 8 An enclosed piece of ground for playing a game, as cricket, football, etc., or for athletic events; part of this as an area of attack or defence.
- 9 The players or partakers in an outdoor contest or sport; all the competitors except a specified one or specified ones.
- 10 In cricket, etc., (the position of) a player stationed in a particular area of the field.
- 11 A tract of ground abounding with some (usually specified) natural product.
- II** An area of operation.
- 12 ***An area or sphere of action, operation or investigation***; a (wider or narrower) range of opportunities.
- 13 The space or range within which objects are visible from a particular viewpoint, or through an optical instrument, the eye, etc., in a given position.
- 14 A region in which some condition prevails, especially a region of electric, gravitational, magnetic, etc., influence; the presence of such influence; the force exerted by such influence on a standard object.
- III** An extended surface.
- 15 The surface on which something is portrayed; especially the surface of an escutcheon or of one of its divisions. Also, the groundwork of a picture, coin, flag etc.

16 A large stretch, an expanse, of sea, sky, ice, snow, etc.
(*Shorter Oxford English Dictionary*, 2007,
pp.956-7. Emphasis Added.)

The dictionary then goes on to define ‘field’ as an adjective and verb. It is not necessary to consider those definitions here as the word is used as a noun in the responses. However, in some contexts it might be necessary to consider those further definitions which would greatly lengthen the list of definitions to be considered.

As can be seen from the above, in my dictionary there are 16 definitions of ‘field’ as a noun, and it is only at the 12th that the definition matches the contextual meaning in the survey responses. The 12th definition says that ‘field’ is “An area or sphere of action, operation or investigation.”. If I had decided to limit the search for the basic meaning at any stage before reaching the 12th dictionary definition I would have found that ‘field’ was a metaphor as happened in my previous analysis where I used only the first dictionary definition. Continuing on to the 12th definition removed ‘field’ from the list of metaphors.

To remove the doubts regarding the reproducibility of the analysis caused by a subjective decision to limit the consideration at some arbitrary point it seems that all the dictionary definitions must be considered even though it might be tedious or unproductive to do so. It would also be a matter of completeness in not arbitrarily limiting the range of meanings.

A further problem which arises from this is the number of definitions provided by different dictionaries and the position at which the definition which makes the word literal appears. It is apparent that some dictionaries provide more or less definitions than others and the position at which any definition appears will vary. The number of definitions to take into consideration and the choice of which definition to use will thus be an artefact of the choice of dictionary.

For instance, both the Cambridge on-line dictionary and the Merriam-Webster on-line dictionary had the definition of ‘field’ matching the above at number two. Thus in those

dictionaries the search for a usable literal definition of ‘field’ would have ended at definition two.

The Words

Prepositions

Prepositions are defined as those words that relate to and usually precede a noun or pronoun and express a directional relationship between it and another word. Such words as ‘of’, ‘in’, and ‘from’ are examples of prepositions found in the survey responses.

The dictionary definition of these types of words relates them to a medium of some sort but does not specifically identify the medium as material or non-material. Often the word’s use in the responses indicates a relationship to a non-material entity such as knowledge.

Prepositions occur in many responses near to words that MIP identifies as metaphors. A typical example is the situation where the respondent uses ‘field of knowledge’. Here the word ‘field’ was correctly identified as a metaphor, but ‘of’ caused some concern in that it seems to have some ‘metaphor-like’ properties when associated with a non-material medium such as knowledge.

Where the word is used to mean coming from a material medium such as research there was no problem as we could clearly understand something coming from it. However, where the medium is non-material, such as knowledge, the word seems metaphor-like.

For instance, we previously considered ‘in’ to be metaphorical where it referred to being ‘in’ non-material things such as knowledge. We believed that it inferred a material property of a non-material entity and was thus metaphorical. However, the definition of ‘in’ refers to being inside a ‘medium’. After considering the definition closely we have now decided that this medium can be non-material and so something can be ‘in’ a non-material medium such as knowledge. Thus we do not accept that ‘in’ is a metaphorically used word.

For similar reasons we now believe that in referring to ‘of’ as coming out of a ‘thing’ (as the definition does) it can refer to non-material ‘things’ and hence is not being used metaphorically. Thus in ‘field of knowledge’, ‘of’ is not a metaphor. We now believe that in referring to coming out of a non-material source the word ‘of’ is being used literally.

A similar situation pertains for ‘out of’ in response 55, where it occurs in the phrase ‘out of my interest’. Again, something is coming out of a non-material medium, but the words do not have any metaphorical meaning.

A further example occurs in the phrase ‘go through this path’ in response 52. Here ‘path’ was found to be metaphorical and ‘go through’ refers to an action involving that ‘path’, where a physical movement is suggested. Although ‘path’ can be a physical medium it is here used metaphorically to mean the ‘path of research’. However, ‘go through’ is not used metaphorically here.

Although these prepositions appear to have some metaphor-like properties we decided that they are not metaphors. The dictionary definition of these types of words relates them to a medium of some sort which may be taken as material or non-material. The dictionary did not specifically identify the medium as either material or non-material, so we decided that it could be taken either way. We opted to take the broadest interpretation of the dictionary definition and decided that the medium could be either material or non-material. By allowing the dictionary definition to apply to either a material or non-material medium MIP identified the preposition as not being metaphorical. After some discussion following the above lines we decided that this was the correct result.

The Pragglejaz Group point out the difficulty in formulating a response to prepositions due to their highly abstract nature. This makes it difficult to establish a contrast between the contextual and basic meanings (Pragglejaz Group, 2007, p.29).

Further Steen *et al* (2010: 49-50) discuss what they refer to as ‘contextual ambiguity’. Most of the words discussed in that situation are prepositions. They further discuss some

prepositions in another part of the book (2010: 91). Apparently Steen *et al* also found difficulty in deciding whether or not they were metaphors. They decide that some of the words were used metaphorically but others weren't. However, a problem occurs since sometimes a word is called a metaphor but that at other times it isn't. Rather than agree with Steen *et al* I consider that my reasoning, above, provides a better definition of the prepositions as non-metaphorical.

Exaggerations

Exaggerations are the forms of adjectives and adverbs that are meant to express extreme or superior values, but are used in ordinary speech to just mean a large amount or degree. Such words as 'countless', 'always' and 'terrific' are found among the responses. we would argue that these words perform the act of emphasis rather than taking on their original meanings. In this case they are not as metaphorical as they might initially appear.

In one response (55) 'countless' and 'always' appeared. These are not words to be taken literally; they are not to be taken as their literal meaning implies but are an attempt to achieve emphasis and lend an aura of credibility to a statement. They are exaggerations for effect. The reference to 'countless hours' does not mean that the hours are of a countless number but that there are a lot of them. Similarly, 'always', in the phrases "I've always had" and 'have always fascinated me', doesn't strictly mean 'all the time' it simply means 'for a long time'.

A similar case occurred in response 2 where 'perfectly' was used in a non-literal sense in the phrase 'you know perfectly well'. It was obviously not meant literally, since it does not mean that something is in a state of perfection, but only for the effect it produces on the reader.

Further, in response 19 the word 'incredible' is used in the phrase 'incredibly difficult'. The word, as used here, does not mean that the difficulty is truly incredible and can't be credited, but that it is very difficult.

Another example occurs in response 59 where the phrase 'fully dedicate yourself to a single idea' occurs. We suggest that it

is not possible to ‘fully’ dedicate oneself to anything since there is the need to pay attention to other matters either in the PhD or in normal life. Thus the word ‘fully’ is here used as an exaggeration rather than being purely descriptive.

It is apparent that this type of usage is common in ordinary speech where the effect is more important than the (mis)use of the word. It is also obvious that the word is meant to have *less* than its literal meaning rather than *more* as would be the case if it was meant metaphorically.

However, that is not to suggest that words like ‘countless’ are metaphors. They are only used for effect not to represent one thing as another as they would if they were used metaphorically. As noted above, a metaphorical allusion requires that the properties of one domain or thing be compared to another to give the required effect. Since ‘countless’ is not a ‘thing’ but itself only a property of a ‘thing’ it cannot be used as a comparison in a metaphorical allusion.

There were a number of this type of word scattered throughout the responses. They appear to be a common feature of the respondents’ thoughts about their research and other matters and also appear very frequently in everyday speech.

A phrase that might be the opposite to an exaggeration (an ‘anti-exaggeration?’) is ‘at the end of the day’ in response 21. In this case the phrase does not mean at the end of some 24-hour period but rather at some time in the future. Thus the phrase means a longer time than the words would indicate. It indicates *more* than the words mean not *less*, which is opposite to the exaggerations described above.

Additional Nouns

By definition, nouns are words that name people, places or things. Such nouns as ‘student’, ‘field’ and ‘research’ appear in the responses.

In some places in the responses additional nouns are used to indicate a property of a word that has been identified as metaphorical. For example, in response 22 there occurs the phrase ‘a new aspect of the field’, where ‘aspect’ indicates a

property or attribute of ‘field’. However, if ‘field’ is to be taken as a metaphor, as indicated by MIP, the question arises whether that attributes some metaphor-like properties to ‘aspect’. The words help to provide the contextual meanings for each other. ‘Field’ was identified as a metaphor by MIP, correctly we believe, but ‘aspect’ was not, again we believe correctly. Although these words are not metaphors they adopt some metaphor-like properties from their association with a metaphor.

Further, there appears in response 37 the phrase ‘a knowledge gap’. Since knowledge is non-material it cannot have a ‘gap’ in it. The word ‘gap’ appears to add a property to ‘knowledge’ which doesn’t really exist. ‘Gap’ therefore appears metaphorical but isn’t.

These words are not themselves metaphors but they appear to either add properties to subjects which are metaphors or attribute properties to a non-material thing and thus appear to have metaphor-like properties.

Pronouns

Pronouns are defined as words used to replace or stand in place of nouns. Such words as ‘they’ and ‘it’ are pronouns that appear in the responses.

The pronouns discussed here represent nouns which have been identified as metaphorical using MIP. For instance, in response 55 we find the statement ‘The point of research is that it scratches an itch that I have always had...’. In this sentence ‘scratches’ is accepted as a metaphor. If the pronoun ‘it’ is replaced by ‘research’ then ‘research’ would seem to be a metaphor since it is a non-material thing performing the physical action of scratching an itch.

A further example of the use of a pronoun to replace a noun is illustrated by a phrase in response 49 which reads “It’s a marathon”. If ‘the PhD’ is substituted for ‘it’ then the phrase has the non-material subject, the PhD, performing the task of running a race. That is not possible, so ‘PhD’ would become a metaphor.

However, MIP does not identify ‘it’ as a metaphor in either of the above cases. We decided to follow the results of MIP and not name ‘it’ as a metaphor. Although these words are not metaphors they gather some metaphor-like properties from their positions in the text and their connection with words that might have some metaphorical properties if used to replace the pronoun. These pronouns display some aspects of metaphoricity due to their relationships with the nouns.

Pictorials

Pictorial are words that conjure up a picture in the readers’ minds.

Pictorials include such words as ‘fruitful’ in reference to the PhD experience in response 52. The word is not defined as a metaphor by MIP since it has the literal meaning of ‘conductive to productivity’. However, it conjures up visions of apples and pears in the reader’s mind, so has some features of a metaphor. This type of words occur in everyday speech where they appear as metaphor-like words without, in this case, actually inferring a comparison as such.

Pictorials appear to be further examples of words that have lost their original meanings and become merely parts of speech, similar to the exaggerations described above. In fact they have further similarities to the exaggerations in that both are used for their effect in the sentence rather than for any metaphorical meanings that might still be attached to the words.

Meta-Literals

The term we’ve invented here – meta-literal – is used to indicate a word that is used metaphorically and literally in the same response. An example is the word ‘detective’ in response 31. A ‘detective’ is defined in our dictionary as being ‘a police officer or other person who gathers evidence relating to a crime’. This is the literal meaning of the word. In the same response the word is used metaphorically.

In the first instance ‘detective’ is used metaphorically in the phrase ‘it [being a PhD student] is a lot like being a detective’.

This usage is metaphorical since the student is not investigating a crime, but is rather researching some topic of his or her own choice in the chosen discipline. The comparison with a real detective adds meaning to the phrase.

The second use of ‘detective’ occurs in the phrase ‘just like a detective tries to find a plausible story to account for a crime’. Here the phrase describes the work of an actual detective so the word is used literally.

It can be seen that ‘detective’ is here used differently from its literal usage when it is used as a metaphor. The word is the same but the meanings and implications are different. MIP functioned correctly in identifying the two different meanings of the words. It identified the first instance as metaphorical and the second as literal.

Discussion

The above were not the only cases of the effects found. They also appeared in other responses. The above examples and discussion are only meant to show examples of what was found in our analysis and discussion.

While MIP does an excellent job of identifying single-word metaphors, discussing what MIP does not do helps us identify many of the linguistic features in the single word’s context that contribute to the single word’s metaphoric meaning and value.

It is becoming apparent that certain words that are not found to be metaphorical using MIP might still be considered to have some metaphor-like qualities. The question that arises is whether or not they will affect the analysis of the responses, and if so, how much and in what directions.

Apparently we were not the only ones to have trouble applying MIP to all the words in a language. Vierkant (2008) had some problems analysing metaphors in German using MIP. He decided to leave adverbs and adjectives out of his consideration due to the problems they caused. He went further and omitted idiomatic expressions. He particularly had problems with compound words in German. Many adjectives and nouns in that language are made up by combining other words together.

Vierkant found that sometimes part of a compound word was metaphorical whereas the whole of the word was not when MIP was applied to it. His solution was to count such words as non-metaphorical. However, despite the problems, Vierkant decided that MIP was useful when applied to the German language (2008, 131). We have come to a similar opinion in relation to English. Although there are problems the overall gain is positive since MIP provides a repeatable procedure.

Conclusions

The working for this chapter has aroused some questions about the way the use of MIP indicates the nature of those words that have some metaphor-like properties discussed above. Those questions should be given further considered at some time as they are important for the use of MIP. If they can be resolved satisfactory they might lead to some modification to the procedure of MIP which would allow some clarification of the problematical words discussed above. If the questions cannot be resolved then some concern is cast onto the completeness or otherwise of the list of metaphors produced by MIP.

We consider that the above anomalies will require further consideration at some time. The findings will be of importance in the validation of the results obtained in using MIP to find the metaphors in our survey response, since they suggest some questions that need to be asked about the performance of MIP itself.

An important question that arises from the above is whether or not the metaphorical nature or otherwise of the above words makes any difference to the interpretation of the texts. We would argue that it does.

The simple answer is that seeing the above words as metaphors would provide many more metaphors for interpretation. This in itself would affect the conclusions derived from the texts by allowing a different view of the respondent's thoughts about the PhD and other matters. The words described above are of a different nature to the words that MIP identifies as metaphors and would apply to different conceptions. For

instance, if the words such as 'of' and 'in' are included as metaphors they tend to suggest that the respondent who uses them thinks of the PhD experience as a container of some sort. Thus the words may provide a different view of either the same or other, different conceptions held by the respondent. On the other hand, 'of' and 'in' are so common in ordinary speech that their use may not indicate anything peculiar to the respondent and thus might be misleading if they are thought to have some metaphorical meaning.

The purpose of obtaining the responses was to come to some conclusions about the respondents' conceptions of research. However, other conceptions such as the conception of the self in research, the conception of knowledge and the conception of the PhD itself were also found in the texts. These other conceptions turned out to be interesting and useful as they gave more information about the respondent's thoughts. They were also interesting in their own right.

The question then arises whether having the above words as metaphors would add anything to the interpretation of the texts. This is a more complicated question. Most of the examples given above are words that, if they were originally metaphors, have now lost any metaphorical meaning. They are used simply as parts of normal speech and writing, without any intention, consciously or unconsciously, of being metaphorical. Thus if we classify the above words as metaphors we may be seeing them in a context that does not now apply, because any metaphorical implications they once had are now dead. The words have become dead metaphors and have passed into the realms of common speech forms that have no further meaning.

If the above word are metaphors then MIP is ineffective in finding them because it does not give a firm decision and its use is questionable. If that is the case then further work with MIP itself must be undertaken to correct or modify that situation or an alternative method must be found that is reliable.

We would argue that seeing the above words as not being of a metaphorical nature is the appropriate response. As we have argued above seeing them as metaphors could have unintended and erroneous implications for the interpretation of the

responses. It is our conclusion, then, that the above words should continue to be seen not as metaphors even though they have some metaphor-like properties. Since MIP finds that they are not metaphors we consider that following the findings of MIP in relation to these words is the way to proceed. Thus we would see the use of MIP vindicated.

However, the above words do tell us something about the thinking of the respondents. Maybe some conclusion can be arrived at as to the thinking of the person who uses more or less exaggerations or pictorials. Maybe it will indicate something useful about the respondent's thinking. Whether anything useful about the person's *conceptions* would be indicated by the use of the words or not is a further question that we feel unable to speculate about at this stage of our analysis.

There are some questions that arise from the use of MIP that should be resolved as they influence the reliability and rigour of the method and its findings. The important questions are which dictionary and which definition in the chosen dictionary are to be used as the basic meanings of the words in other contexts.

The above problems of which dictionary and definition are to be used are not trivial. They will affect the whole of the search for metaphors, the metaphors found and the resultant analysis of the metaphors.

I might suggest that all the definitions in a variety of dictionaries should be used as the basic meanings of the words. However, this would make the use of MIP to find the metaphors a much longer job. Even using MIP in its simplest form takes a long time to work through. It can take days or weeks to sift through a long interview transcript considering every word. If it were necessary to compare every word with all the definitions in a large number of dictionaries the job would become too tedious to even think about. And who is to know whether or not the next definition in the next dictionary would make the word a metaphor or not?

The task of comparing the words to the dictionary definitions must end somewhere. Where it will end is,

unfortunately, a subjective decision by the examiner, which introduces a personal factor into the examination. It appears that however MIP is used it will involve some personal decisions which reduce the rigour and repeatability of the list of metaphors found.

I conclude that that personal factor is unavoidable and must be lived with. Having said that, and despite the shortcoming discussed above, I believe that MIP is still a useful tool for finding the metaphors in text, providing allowance is made for the factors discussed above.

The next chapter will consider some of the implications of the above. In particular I shall discuss the effects of the decision to base the basic meanings of the words on all the dictionary definitions rather than just the first, as had been done previously.

5. A Further Reconsideration of the Metaphors.

Following the thoughts that went into the previous chapter, in particular those relating to which dictionary definitions are to be taken as the basic meanings of the words, I reconsidered the metaphors found in the survey responses. This was necessary as the change in the basic meanings means that many of what were previously considered to be metaphors are no longer. This chapter, then, is largely about the effects and implications of the changes in basic meanings. It is also a consideration of what it all means for the future use of MIP.

Introduction

The work described in this chapter was caused by my decision to base the basic meanings of the words on all the dictionary definitions rather than just the first one as I had done previously. The problem of which dictionary definition to use is a complex one. It depends on which dictionary is used and which definition given in that dictionary is used. What required some discussion was the choice of which of multiple dictionary definitions should be used in determining which words are used metaphorically.

For the purposes of this re-evaluation I did not examine all the words in the responses, only the words previously found to be metaphors. The words that had previously been rejected were not reconsidered as they had already been found to not be metaphors when compared to the first dictionary definition. Thus there was no need to reconsider them when taking into account all the dictionary meanings. This sped up the re-analysis and allowed a result to be arrived at much quicker than was the case in the previous analysis using MIP.

Many of the metaphors that had previously been found using MIP disappeared in the present re-evaluation. Many of these were common words that were originally metaphorical but have now become accepted, in ordinary contexts, as just ordinary

words without any metaphorical significance. The significance of such words as 'field' and 'area' was found to be zero, metaphorically speaking.

One of the most disappointing results of the new consideration was that there are now 36 of the 59 responses which do not contain any metaphors. The previous figure was eight. This result must be taken into account and given some thought when analysing the metaphors. This loss of 36 out of 59 responses has some problematical implications. It means that more than half the responses gathered in the survey contained no metaphors that could be used in interpreting the students' conceptions. The paucity of useful data also begins to cast doubts on the method of gathering it. The problem is partly the shortness of the responses. The method of gathering the data used here -- the students' responses to an on-line survey -- appears to not be a very good way of collecting information on their conceptions. This would have to be taken into consideration in any future research and perhaps an alternative method such as interviewing used to gather more suitable data.

To give an idea of the range of metaphors found in this analysis I discuss them in relation to each of the conceptions -- research, knowledge, the PhD, and the self in research -- which were found in the previous examination.

The dictionary used in making the decisions for the rest of this research will be *The Shorter Oxford English Dictionary*. Although there might be some disagreements about the decisions if other dictionaries are referred to, it is necessary to draw the line on just how many dictionaries should be used somewhere so that the research can continue.

These matters are discussed in more detail below and the meaning of the metaphors found considered.

The 'Basic' Meaning and the 'Context'

In deciding what definition to use as the 'more basic' meaning I found the wording of the procedure in the MIP paper to be somewhat confusing and required some interpretation.

The Pragglejazz Group say:-

‘For each lexical unit, determine if it has *a more basic contemporary meaning in other contexts* than the one in the given context.’

(Pragglejaz Group, 2007, p.3. Emphasis Added.)

I considered the meaning of ‘in other contexts’ and decided that the dictionary definitions provided the basic contemporary meanings, as seen by the dictionary compilers, in a variety of contexts. I decided that if the compilers had found any other basic contemporary meanings they would have added them to the definitions. Thus the dictionary definitions could be taken as the basic meanings in all other contexts.

However, another question arises. What does ‘basic’ actually mean, and, particularly, what is ‘more basic’ than basic? My dictionary says that ‘basic’ means “of, or pertaining to, or forming a base; fundamental; essential”. I have taken these words to indicate the meanings as they appear in the dictionary. In other words, I take it that ‘basic’ meanings are what the dictionary compilers list in their dictionaries. Thus *all* the dictionary definitions were taken to be *all the basic* meanings in other contexts.

A further statement in the instructions for MIP states that we have to ‘decide whether the contextual meaning contrasts with the basic meaning but can be understood in comparison with it’ (Pragglejaz Group 2007, 3).

I take ‘understood’ in this instructions to mean adding to the literal clarity and meaning of the text when the contextual meaning is compared, by replacing it in the text, with the basic meaning. If substituting the basic meaning for the contextual meaning allows the contextual meaning and the meaning of the text to be better understood the word is used literally. If not, it is a metaphor. I think that the word being literal means that if we replace the word with the basic (dictionary) meaning and it helps us to understand the literal meaning of the text better it is literal. If not, and it doesn’t make sense, then the word is a metaphor.

For example, in the statement ‘my research field’ if ‘field’ is replaced by ‘area of operation’, one of the dictionary definitions

for it, the statement ‘my research area of operation’ still makes sense, even though it is a little clumsy, so ‘field’ is used literally.

However, in the statement ‘the PhD is a marathon’, replacing ‘marathon’ with ‘running race’ produces ‘the PhD is a running race’ which doesn’t make sense, so ‘marathon’ is a metaphor.

The Re-Examination of the Metaphors

The metaphors previously found were re-examined carefully and a decision made about their metaphoricity based on all the dictionary meanings. Again consideration had to be given to the basic and contextual meanings and whether or not they agreed. This process was quickened considerably by the fact that the words and the processes of deciding which were metaphors was already documented in the extracts from the survey responses. Since this meant that only a limited number of words in each response had to be considered the process was not as long drawn out nor as tedious as the previous analysis. In only a few hours I had the new list of metaphors ready for consideration.

There were some somewhat surprising results. For instance many of the words that I had thought of being metaphors in the previous examinations using my intuition and MIP turned out to not be what MIP would recognise as metaphors. Two words that occurred in a large number of responses – ‘field’ and ‘area’ – disappeared completely from the list of metaphors.

The only explanation that I can offer for this disappearance is that these words have been given quite ordinary meanings and are no longer considered to have any metaphorical significance. It was noticeable that many of the words that disappeared were well down on the list of dictionary definitions, which suggests their much more recent acceptance as simply descriptive words.

This disappearance of many of the metaphors due to dictionary definitions well down the list suggests perhaps that some sort of limit be placed on the number of dictionary definitions considered. This would result in more metaphors

being found but would require a decision as to just which definitions should be used. The problem with this approach is that it re-introduces a subjective factor back into the decision. This might not be so bad as a return to the intuitive approach used originally but it would affect the reproducibility of the work, since a subjective factor would be introduced where the researcher determines the number of dictionary definitions to use simply on a personal basis. This question of how many dictionary definitions to consider is examined further below.

In the original analysis of the survey responses using MIP all but eight of the 59 responses were found to contain metaphors. As a result of this re-consideration a further 28 were discarded as having no metaphors. This result came about largely due to the common metaphors mentioned above such as 'field' and 'area' being discarded. Altogether the removal of those two words alone caused the loss of 14 responses. This was an effect much more significant than the removal of any other words. It is apparent that 'field' and 'area' were the only metaphors that had been previously found in a large number of the responses. This suggests that either the respondents were using what they knew to be quite ordinary words to describe their conceptions or they were using what they thought of as being common metaphors but which were no longer considered metaphors by the dictionary makers. Unfortunately, the available data does not allow this problem of the respondent's thoughts about the metaphoricity of the words to be resolved.

The problem of which, and how many, dictionary definitions to use in deciding the metaphoricity of the words is a continuing problem with the application of MIP. Since it is a subjective question it needs to be decided in some objective way lest it remove the desirable factors of reproducibility and rigour from the process. The decision will also affect the number of metaphors found which, from experience, will certainly influence the results.

The Metaphors and the Conceptions

To allow a comparison with previous findings the metaphors found in this analysis were grouped into the same categories as those used previously: The conceptions of research, the self in research, knowledge and the PhD are discussed individually, below.

The Conception of Research

There is little to say about the metaphors referring to the conception of research. Only three remained scattered throughout the responses. This is a disappointment since the original intention was to investigate the conceptions of research held by the participants. The three might be considered as relating to the body of a human or animal and, perhaps, are a remaining trace of the 'research is organic' category found previously. However, that relationship is very tenuous.

The Conception of the PhD

It can be seen that all the metaphors relating to the conception of the PhD can be associated with a journey. Journey, itself, and road can be easily related and seeing the PhD as either a marathon or a sprint may also fit into that category of conception. Thus a suitable category might be that the PhD is seen as a journey of one sort or another. The relationship then becomes 'the PhD is a journey'. This category combines two categories – PhD as a journey, and PhD as a marathon – found in the previous examination.

The Conception of the Self in Research

Conception of the self in research has more metaphors remaining than the other categories. There are two apparent groupings that might be worthwhile investigating.

Fighting and poking are somewhat similar in nature and might be combined into one category of the conception. They might perhaps be part of the category of 'the self in research is a

fighter’ since they both represent a form of attack – in this case the ‘self’ attacking the research.

Another grouping is the three terms detective, hunting and delve. These three might represent the self as detective, since they all infer a search for something, and thus be the category of ‘the self in research is a detective’, where the researcher has to search for and discover the results of the research.

There are also a number of other metaphors that do not form any sort of grouping and that cannot be allied to each other in any purposeful way.

The Conception of Knowledge

There appears to be nothing of any significance left in the metaphors relating to the conception of knowledge. This is another category of conception that has virtually disappeared with the stricter application of MIP.

Some Repercussions of the Reconsideration

The stricter application of MIP has caused a marked reduction in the number of metaphors found in the survey responses. This has caused some problems in trying to group the metaphors into any meaningful categories. The metaphors remaining in reference to the various conceptions make it difficult to find any meaningful relationships between them. As can be seen from the above the only conception which appears to have many metaphors describing it is the conception of the self in research. Even in this case the groupings of the metaphors are very loose and can only be tentatively allocated to those groupings.

Although the more stricter – might I say ‘more clinical’? – application of MIP appears to be most correct it took out a lot of the picturesque words that had previously been seen as metaphors and took a lot of colour out of the results. This loss is important and not just a matter of losing a lot of the colourful phrases. Where previously the examination provided a brightness and colour to the process of finding the metaphors now it is much less the discovery of picturesque words and has

become much more tedious. I find this loss of colourful words to be a disadvantage of the stricter application of MIP. Finding the metaphors using MIP is a long, somewhat tedious, task in any case. The loss of anything that can brighten up that process must be counted against the stricter application of MIP.

For instance in response 20 there appears the following text.

‘Doctoral research is about making a unique contribution to your field of study.’

In this text the word ‘field’ appears. Using MIP in its basic form it was found to be a metaphor. However, using MIP in the strictest mode it disappeared. If ‘field’ in the above text is replaced by its definition – ‘area of operation’ – some of the colour of the statement disappears because it takes away the mental picture comparing the area of research with an expanse of land with animals or crops on it. This unfortunately happens when many of the metaphors disappear using MIP in its strictest mode.

The loss mentioned above only comes about with the stricter application of MIP. The simpler application, using only the first dictionary definition, did not have that disadvantage. That simpler application produced as many metaphors, albeit some different ones, as the intuitive search. In both of those cases the variety of metaphors added colour and interest to the search and findings. For those reasons I prefer the simpler application of MIP. It provides more rigour than the intuitive approach without removing the picturesque, colourful words from the list of metaphors. I feel that retaining the colour gives a better view of the students’ conceptions and adds interest to the responses.

What MIP does, in actuality, is draw our attention to the literal meanings of the words in the text. As an example of how removing the metaphors and replacing them with the basic meanings of the words brings out the literal meaning of the text, consider the example given below.

Here is part of the text from a sample response (43) showing the metaphors **bold and underlined**.

Doing a PhD is about trying to find a question that fits into a **body** of literature and then attempting to answer it in a way that might contribute to the **corpus** of knowledge in your **field** - standard line. But it is also about setting yourself a challenge and hoping, in the end, that you get there. (Response 43)

If we now replace the metaphors with the words' basic meanings we get the following. (The replacements are shown **bold and underlined.**)

Doing a PhD is about trying to find a question that fits into a **collection of the details** of literature and then attempting to answer it in a way that might contribute to the **collection of knowledge** of knowledge in your **area of operation** - standard line. But it is also about setting yourself a challenge and hoping, in the end, that you get there.

The sample still makes sense, if a little clumsily in parts, but it has lost a lot of it's colour and character. For instance, referring to the 'body' of knowledge, is much more colourful and mentally stimulating in the form of a picture than 'collection of details'. The colour and mental images generated by 'corpus' are even more vivid. 'Field' is not so colourful but it expresses an expanse to one's ideas that is not found in 'area of operation'.

The result of the above exercise is to increase the literal understanding of the text. The replacement words are more literal than the metaphors they replace. Thus one of the functions of MIP in its strictest, most clinical mode, is to draw our attention to, and illustrate in more detail, the literal meaning of the text. In effect, MIP forces us to look at and consider the literal meaning of the text.

Conclusions

In general I found MIP to be a useful method of finding the metaphors in the survey responses. The procedure as laid

down by the Pragglejazz Group (2007) is rigorous and is relatively easy to use once it is understood. Some complexities are necessary since the finding of the metaphors is not, itself, a simple task. It must be tackled with care, thought, and vigilance, all of which follow from the proper use of MIP.

6. The Implications of Using MIP

Introduction

In this chapter I discuss some of the implications of my work for the connection between qualitative and quantitative analysis. In the work leading to this thesis I have moved from a beginning using a qualitative method, my intuition to find the metaphors, towards a quantitative approach using MIP in its strictest sense. I am now moving back again towards a more qualitative approach because it has advantages for me as a researcher in that it reveals more about the people who responded to my survey. I have shown that MIP is capable of working in both qualitative and quantitative modes, each of which has its advantages and disadvantages. I shall here discuss the way in which MIP can be seen to bridge the gap between the two approaches.

Using MIP in its simplest mode produced a virtually identical result to that produced by finding the metaphors using my intuition. In other words, MIP in its simplest form produces a good qualitative result. The responses can be seen, in this result, as containing plenty of metaphors to give the response colour and personality.

As I moved towards a more strict mode of using MIP I found less metaphors, until, in the strictest mode, there were very few words recognised as metaphors and much of the colour and personality in the responses had disappeared. This effect was caused by a narrowing of the focus of MIP and produced a similar narrowing of my focus on the metaphors that were left.

At first this narrowing of the focus seemed to have unpleasant consequences in that the colour and personality were lost from the responses. However, further thought has shown that this narrowing of the focus actually brings the literal meaning of the response into a clearer light. It also produces a quantitative result that is less subjective and more reproducible.

Thus with MIP I narrowed the focus to a very much smaller part than in the beginning. I now broaden out my focus

again by considering the implications for the qualitative/quantitative nexus and what that means for the use of MIP, metaphor analysis and the choice between qualitative or quantitative analysis.

The Nature of the Metaphors

In my working with metaphors and MIP I have come across some similarities and differences that need to be explicitly stated. These are basically the ways that using my intuition to find the metaphors contrasts with MIP in its simplest or strictest usage have reflected the nature of the metaphors recognised and the way in which using these modes of finding metaphors can be characterised.

Using my intuition to find the metaphors reveals metaphors that have a full subjective value. That is, they are what seems to be metaphors to me and stimulate my thinking about them and their usage. Using my intuition has the characteristics of being subjective, of limited reproducibility since it depends on my opinion as to what constitutes a metaphor and is non-rigorous for that same reason. It also shows signs of being warm-blooded, involving the whole of the user's imagination and having an emotional and sensual engagement.

Using MIP in its simplest form, that is, using only the first definition in the dictionary, differs in that the identified metaphors have a relative metaphoric power, depending how old or absorbed into common speech they have become as indicated by their being or not being identified by the first dictionary definition. This method is only reproducible by anyone using the same dictionary and the same definition. The rigour is better than the intuitive method but less than the strictest use of MIP.

MIP in its strictest form, using all the dictionary definitions, provides the most contrast with the intuitive method. It dictates that only those words that pass the strict MIP test by being compared to all the dictionary definitions have any metaphorical power. This method is clinical, replicable and rigorous. It can also be described as cool- or cold-blooded, as not

engaging the user's imagination to any extent and having little or no emotional or sensual engagement.

The metaphors can be described as 'active', 'dying' or 'dead'. Active means new, fresh, creative, not established nor clichéd and not found as defined in any of the major dictionaries. These active metaphors are considered valid by the intuitive process or MIP in either its simple or strict mode. Dying means conventional or partly clichéd, and recently defined in a major dictionary. Dying metaphors have reduced metaphoric power and are revealed by the intuitive process and MIP in its simplest mode. Dead metaphors have become part of normal language and are no longer recognised as metaphors using MIP in its strictest mode. Definitions of these words are found in most dictionaries and they may or may not be recognised using one's intuition.

In summary, MIP in its strictest form identifies only 'active' metaphors. MIP in its simplest form identifies 'active' and 'dying' metaphors. The intuitive method refuses to see any metaphor as 'dead' if there is any response in the analyst to the residual metaphorical power of the word as used in the text.

Which of the above methods is best depends upon the use to which the results are to be put. If the requirement is for a subjective, qualitative result which can represent the participants' conceptions with the most colour and personality then the intuitive method may be considered as the best. However, if the results are to be used quantitatively to indicate the data by figures or graphs in an objective way then the strictest use of MIP is required. The simplest form of MIP falls somewhere in the middle and has some disadvantages when compared to the other modes of analysis. Its results show less colour and personality than the intuitive approach and also lack the rigour and repeatability of the strictest use of MIP.

In my work I am looking for metaphors whose implicit meanings give insights into their writer's underlying feelings or meanings regarding their explicitly identified topic. MIP only authenticates words whose metaphoric power has not been eroded by frequent and common use. Applying MIP rigorously can protect the textual analyst from the temptation to either

uncritically ascribe full metaphoric power to words whose power has been eroded by frequency of use, or to uncritically ascribe a metaphoric intent to the writer.

The partial, significant or complete erosion of the metaphoric power of an expression - is indicated by the expression's inclusion in a respected dictionary, with an accompanying gloss giving the literal meaning(s) the expression has assumed over time.

The fact that 'old' metaphors can still have some measure of metaphoric power in the minds of individual readers (and textual analysts) means that the protection offered by MIP may need to be re-enforced by substitution. Substitution in this context means replacing the 'old' metaphors with wording that approximates the emotion-neutral wording ascribed to them in the dictionary's 'literal' gloss. The substitution of the 'literal' meaning of the word or expression may be done mentally, but doing it physically, by removing the 'old' metaphor from the page and putting its more literal meaning in its place, re-enforces the protection provided by MIP.

The protection provided by MIP comes at a price: It reduces the number of words or expressions a researcher might use in seeking the underlying or implicit feelings or meanings in a given text. The researcher is therefore presented with a need to make a judgment: whether to apply MIP rigorously and only use the few remaining MIP-authenticated metaphors in the search for the underlying or implicit feeling and meanings in a text, or to justify including some or all the MIP-excluded metaphors on the grounds of their residual metaphoric power.

Qualitative and Quantitative Research

Quantitative research is more objective than qualitative. However, it can never be completely objective. The influence of the researcher's personality and ideas must have some effect on it, whatever steps are taken to reduce that effect to the minimum. Qualitative research, on the other hand, is more subjective than quantitative research and the personality of the researcher is allowed to influence it much more. Due to these factors,

quantitative research is more reproducible than qualitative research.

However, qualitative researchers who are aware of the effects of the researcher's self on their results will take them into account, and not allow them to detract from the results of their work. Qualitative research is seen as providing a more colourful and personal account of the participants than quantitative research because it allows for the person to show through the data. Quantitative research removes the personality and colour that can only appear when the whole of the person's response is taken into account. Metaphors provide much of the colour and personality that is lost in a quantitative analysis but remain to provide extra interest in a qualitative analysis.

There are two types of researcher who can use MIP to their advantage.

There is the researcher who seeks objectivity and who uses MIP in its strictest mode as protection against wrongly assigning metaphoricity to a word. For this researcher the text is turned grey and colourless in the process.

Secondly there is the researcher who seeks more credibility in finding all the metaphors regardless of how 'fresh' or out of date their metaphorical power might be. This type of researcher works with a colourful, rainbow, text full of personality, but must consider other ways of providing protection against wrongful attribution of metaphoricity.

Each of these researchers will find their own way to their desired ends, using MIP in the appropriate fashion, either strictly or simply. Each researcher must use the appropriate mode of operation of MIP; using the wrong mode will not produce the desired type of analysis, either quantitative or qualitative. Thus each researcher must select the mode s/he intends to use before starting. The desired effect can only be obtained by using the appropriate method. The researcher who desires a qualitative result must use the simplest mode, using the strictest mode will not provide the required result. Conversely, the researcher who seeks a quantitative result must use the strictest mode. Only in that way can each researcher achieve the desired result.

Used as described above the quantitative researcher will have the protection of MIP's strictest mode to provide protection against going wrong in the identification of the metaphors. The qualitative researcher must provide his or her own protection. That is where the subjectivity of the process will appear since the choice of the type of protection and how it is used will be used is a subjective decision of the researcher.

Quantitative versus Qualitative Research

MIP works to isolate the metaphors in the text by comparing all the words, one by one, with the definitions in a dictionary. Once the metaphors have been isolated that data can then be used quantitatively or qualitatively. Isolating the metaphors using MIP has caused me to think about the relationship between quantitative and qualitative analysis.

Denzin and Lincoln (2011b: 9) note that quantitative research involves the measurement and counting of some variables whereas qualitative research investigates social relationships and phenomena and how those affect the participants view of reality. Quantitative research is claimed to be value free – although this is a hotly debated claim – whereas qualitative researchers emphasise the socially constructed nature of their research.

To show how MIP can be used to give a quantitative result I took six words from my transcripts. Three of those words were identified as metaphors in my earlier analysis using MIP in its strictest sense and The Shorter Oxford English Dictionary (2007), and the other three were found to be used literally. I then repeated the MIP analysis using three on-line dictionaries: The Merrium-Webster, the Cambridge and the Macmillan.

The results can be expressed quantitatively as the 'aliveness' or 'deadness' of the words as metaphors. That is, the more dictionaries that show the word to be a metaphor are an indication of its 'aliveness', or to the contrary, the more that show the word to be used literally are an indication of its 'deadness' as a metaphor. This figure can be shown as a percentage of dictionaries that identify the word as a metaphor

as a measure of its being a 'living' metaphor. Its 'deadness' as a metaphor is the reciprocal of this percentage.

For example, 'field' and 'track' are each identified as being metaphors by one of the four dictionaries and thus have a status as a 'living' metaphor of 25%, whereas 'region' and 'pool' are identified as metaphors in three dictionaries and so both have a 'living' metaphor status of 75%. 'Step' and 'area' are positioned in between these two figures at 50%, since they are each defined as metaphors in two dictionaries.

The figures calculated in this way will depend to some extent on the dictionaries used to characterise the word. A choice of different dictionaries here may have given different results. The more dictionaries used the more accurate will be the final figures. The differences between dictionaries' identification of the metaphors and the final figures also indicate how the choice of dictionary will affect the results of using MIP to identify the metaphors, both in the amount of metaphors identified and which particular words are identified as metaphors.

These figures and relationships can be used quantitatively to give a measure of how 'alive' or 'dead' a metaphor has become. They can be expressed as graphs, pie-charts, scatter diagrams or other figures to illustrate the numbers and relationships graphically.

I must point out that the above analysis and the resulting definitions of the metaphors as 'live' or 'dead' only applies to the particular transcript that was analysed. Using different material might provide a different result, because it uses the words in a different context.

For instance, in a text discussing the characteristics of various sports some of the words analysed above, such as 'field', 'track', 'step', and 'pool', would be used literally and have no metaphorical status.

The differences in the nature of the metaphors in different texts could also be represented quantitatively by contrasting graphically the different numbers and types of metaphors used in texts with different topics.

For instance if a quantitative result is required the number of metaphors recognised using MIP can be used to

derive the frequency of metaphor usage as it relates to demographic factors such as gender or education. This result can then be analysed statistically and expressed as graphs, tables or pie charts in the usual quantitative manner.

If a qualitative result is required the metaphors recognised using MIP can be interpreted for their meanings as they relate to the participants' conceptions of whatever was discussed in the interviews while gathering the data. These results can be then expressed as statements about how the person or group see their place in the world in the form of tables, charts and descriptions of the participants' conceptions.

There is no reason why both a quantitative and qualitative approach can not be taken with the same data. Once the metaphors are isolated with MIP the choice of which method to use to further the analysis is open to the researcher's choice. There is no reason why the further analysis cannot use both approaches. There is no need to limit the further work to just one approach.

Brannen (2005: 173) states that the fact that qualitative and quantitative research "hold different epistemological assumptions, belong to different research cultures and have different researcher biographies" is often given as a reason for keeping them separate. However, she goes on to argue that, in practice, they are mixed together in the process of research (Brannen 2005: 173). She further argues that the distinctions that are claimed between qualitative and quantitative research break down in practice, as there "are more overlaps than differences". In enumerating the differences she shows that the two methods overlap most of the time (Brannan 2005: 175). Brennan goes on to add that:

A multi-method strategy should be adopted to serve particular theoretical, methodological and practical purposes. Such a strategy is not a tool kit or a technical fix. Nor should it be seen as belt and braces approach. Rather it is an approach employed to address the variety of questions posed in a research investigation that, with

further framing, may lead to the use of a range of methods. (Brennan 2005: 182).

In other words, the two methods should be used together because they help each other to produce the best result not because they fill in the gaps in each other's usage.

Ercikan and Roth (2006) state that the dichotomy between qualitative and quantitative research distorts the results because the world has aspects of both qualities which will appear in the data gathered (Ercikan and Roth 2006: 14).

Thus I would conclude from these comments and my own conjectures that combining the two methods of analysis, that is, using both qualitative and quantitative methods, would be the best way to process the data and use the information combined in them.

Stepping Back (or Across) to Qualitative Analysis

As can be inferred from the name, qualitative research focuses on the qualities and meanings of the subject under investigation rather than the measurements that would be accumulated using quantitative methods. At the centre of qualitative research is the researcher who seeks out the ways in which the participants construct their worlds. Thus there is an important relationship between the researcher and the subject(s) under investigation. The researcher does not simply describe the situation but attempts to understand and describe the participants' world views and provide answers to the questions about how they experience their reality and give it meaning (Denzin and Lincoln 2000: 8).

Although using MIP in its strictest sense and producing a virtual quantitative analysis is interesting and useful for its rigour and repeatability, I find that I want to step back (or across, might be a better term) to a less strict application of MIP and produce a qualitative result.

Although the qualitative result will be more influenced by my decisions and thus be more subjective, it will also be more

colourful and show more of the personality of the respondents to my survey. I find this much more appealing than the more objective, quantitative, result produced by a stricter application of MIP.

My preferred method is to use my intuition as I look at the words in the survey response. Any words that I'm not sure about I check against the dictionary. This is using MIP in its simplest mode as a check on my intuition. Mostly I find that there is agreement. After I have found all that I consider to be metaphors I check them all against the dictionary definitions. This justifies the use of my intuition, but provides the protection of MIP. In the process of finding the metaphors I can enjoy the colour and personality in the respondent's words, and begin to get a feel for how s/he feels about the work.

I feel that using MIP in this way provides more pleasure for the analyst. Applying MIP in its strictest mode takes away a lot of the pleasure in finding this colour and personality. Since the analysis using MIP can be a long drawn-out and somewhat tedious process, finding some pleasure in locating and identifying the metaphors is a definite plus.

For all of these reasons I prefer the qualitative approach, using MIP in its simplest form to support my intuition. Others might prefer the quantitative approach. That is a decision that each researcher must make for her- or himself.

Conclusions

In using MIP the researcher must make a decision as to the number of dictionary definitions to use as the basic meaning of each word. In the simplest mode the first definition is ample. In the strictest mode all the definitions in the given dictionary must be used. How the user rationalises the choice is difficult. It must depend on the type of data that is required from the analysis. If the colour and personality of the respondent is to remain in the response than the simplest mode, using only the first definition, should be used. If the analysis is to provide the most reproducible, objective data then all the dictionary definitions must be used. As I mention above, there is no reason,

apart from the extra work involved, why both should not be undertaken to provide both subjective and objective data for further analysis.

MIP can be used in a single mode and provide a means of quantitative or qualitative analysis alone. MIP seems to work well in either of these ways depending on whether it is used in its simplest or strictest mode. Alternatively, it can be applied in both modes and provide a mixture of the two.

Perhaps the best way to use MIP is by doing a double scan for metaphors. The first scan can be made using MIP in its simplest mode to draw out the colour and personality in the text. The second scan can be made using MIP in its strictest mode to draw out the words that are used metaphorically. Alternatively, the two scans can be reversed in order, if that suits the researcher and whichever aspect of the text most appeals to her or him or is more important for the understanding of the text and the person who wrote it.

Thus MIP provides a number of alternatives. It can provide a qualitative result, a quantitative result or a blend of the two. The choice depends on the use to which the selection of metaphors will be put. MIP can provide either objectivity of quantitative analysis or the colour and personality of qualitative analysis. The choice is up to the user.

7. Conclusions

MIP as I have developed it a much stronger tool than originally designed. I have shown that it can be used quantitatively or qualitatively, and that the resulting metaphors can be used as quantitative or qualitative data. As I now use it it is a very reliable, valid and rigorous form of metaphor analysis. The results are repeatable by anyone within the limitations of using the same dictionary as I use for my analysis. If a different dictionary is used then the results may differ somewhat. However, that does not detract from the attractiveness of using MIP. Previously metaphor analysis was done by using the researcher's intuition to obtain the metaphors in the text being examined. MIP is far superior to this subjective approach and provides a satisfyingly objective result.

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