



## Declarative Mapping Sentences as a Co-ordinating Framework for Qualitative Health and Well-being Research?

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Published Online: 10<sup>th</sup> April 2019.

[www.ssahp.com](http://www.ssahp.com)

### Abstract

The declarative mapping sentence approach to research is both a research tool and an orientation towards conceiving of and undertaking health related enquiries. In this positional paper I propose the declarative mapping sentence as being a highly appropriate approach to devising, designing, conducting and analysing research in the area of health and wellbeing. Traditionally, the mapping sentence has been used within the quantitative/statistical realm of research, but I have been developing the approach within qualitative research and as a philosophical method of investigation. In this paper I briefly present the mapping sentence both as it has usually been used and in the form of my development of this called the declarative mapping sentence. I suggest that the declarative mapping sentence when used as a way of undertaking health and wellbeing research has the potential to allow the researcher to develop precise definitions of the content of their research and to ensure that their research clearly addresses the area in which they are interested. Research that clearly addresses its intended subject matter, I contend, is also frequently more able to yield valid findings for specific studies. Furthermore, I offer the declarative mapping sentence as a guide for conducting individual studies and to lead to the development of knowledge in the areas of health and wellbeing.

### Introduction: Categorical Thinking

Human beings think about the world categorially. By this statement I mean that when we think about ourselves, other people, the environment around us, and in fact any aspect of our life, we tend to sub-divide this into identifiable categories. Indeed, we think about the world through a myriad of sub-divisions. These are statements of obvious fact that a moment's reflection will endorse. Examples of categories are the people around us, family, friends or strangers. The categories we use may be allies or foes, specific gender classifications or a wide variety of age categories. Health services are divided into many different categories, such as medical specialities or we may categorise services providers as private or public. As well as these, and many other

objective categories, we may assign events to subjective categories based upon the psychological appraisals that we make. For instance, how comfortable we feel working with a particular practitioner, how friendly they are, whether we feel confident or not in the type of intervention they provide.

I have presented some examples above and from these it should be apparent that categories are everywhere in our lives and that my examples are simply the very tip of the iceberg. If my claims regarding the pervasiveness, and many times subjective nature, of categories, are accepted, then another assertion may be made that: we can better understand a person's health and wellbeing by investigating these qualities using a categorical system of pertinent sub-components.

In this brief essay I will keep this claim in mind and present an approach to health related research that employs the use of categories. The approach I present is rooted in the meta-theoretical orientation of facet theory, which is embodied a categorial conception of social research (see Canter, (1) for details of facet theory). More precisely, I will be suggesting that the major tool of facet theory, and specifically the mapping sentence, offers researchers a template for conducting both quantitative and qualitative research.

### Mapping Sentence as a Co-ordinating framework

Initially, mapping sentences were developed almost 75 years ago by Louis Guttman (2,3,4) when he formulated these within the theoretical orientation towards social research that he developed called facet theory. Guttman’s writing, and that of the scholars who have followed him, (see for example 1,5,6,7,8) have used facet theory as a way of investigating many different types of complex human behaviour and experiences, including the investigation of well-being (9,10). In this essay I will consider mapping sentences within the context of health and wellbeing research and I suggest that this type of applied research could benefit from using the mapping sentence, especially when the mapping sentence is considered as a qualitative research approach.

### Why is a mapping sentence approach needed?

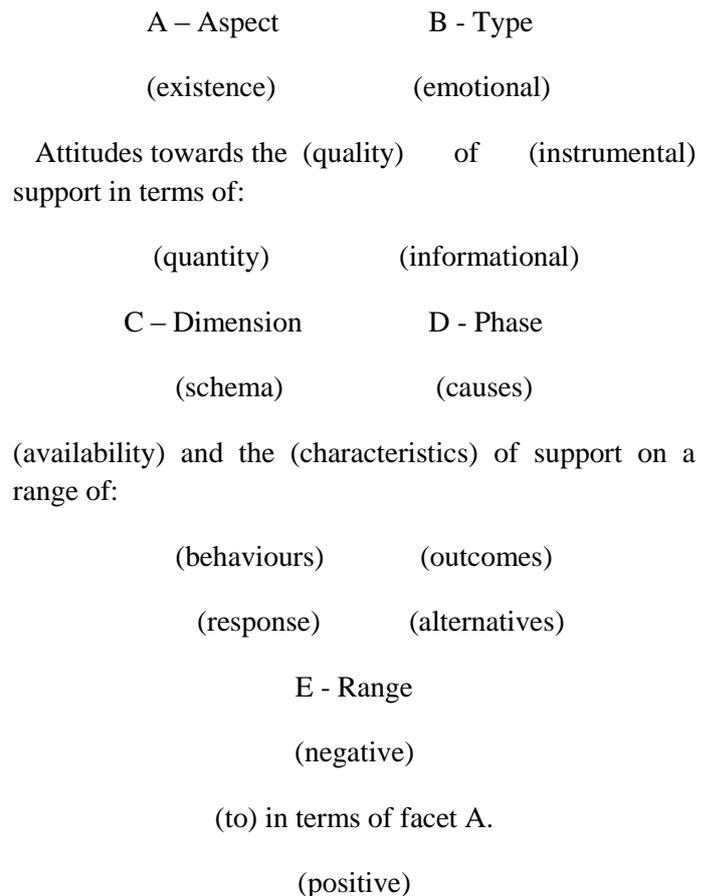
Before I go into detail about mapping sentences, the first have to first address the question why we need the mapping sentence approach to health and wellbeing research? My answer has multiple components and I will highlight some of these below. My first reason is that health and wellbeing research is conducted within a multivariate context where research questions often are concerned with the simultaneous consideration of many aspects of the individual person, intricate interventions, physical contexts, friends, families, etc. One of the strengths of facet theory and mapping sentences are that they are designed to allow the appreciation of the effects and relationships of multiple influences that have multiple outcomes within a specific context.

Another and more specific answer to the question is that facet theory has previously been used to ask questions of the important variables that are involved in a

particular research area in terms of what are the sub-components of these variables and how do the variables and sub-variables interrelate and account for some form of outcome associated with the research area. Under the nomenclature of facet theory, the pertinent components of a research area are termed facets and their sub-components are called elements. The facets and their elements are then linked together in the format of a sentence of fairly normal prose, which is called a mapping sentence (mapping sentences and facet theory have been used in health related research, e.g., 11,12,13).

### Mapping Sentences

An example of a mapping sentence will help the reader to better understand the structure of a mapping sentence as a tool for applied research. Hereunder I present a mapping sentence that presents the multiple components of couple support and how these interrelate and impact upon attitudes towards couple support.



*Figure.1: Mapping sentence for couple support in intimate relationships (14)*

Figure 1 is the traditional mapping sentence from a study by Gilad and colleagues (14) which depicts the research area of their study which had the aim of increasing understanding regarding couple support through studying the structure of support relationships (14). The researchers posited that couples with one partner who was disabled over the long-term would have different support needs to couples in which neither partner had a long-term disability with these differences being apparent in the support relationship. They therefore used the definitional framework of the mapping sentence to identify the variables in this research area in a detailed manner. By doing this they were able to assess attitudes towards: reciprocated support in couple relations; the perceived availability of support, the degree of support for giving and receiving behaviours; how much needs are met by the support available; how the individuals responded to the support they received; whether support was preferred from within the couple partnership or from external sources. Gilad et al (14) used the mapping sentence to design a self-report instrument (the Couple Support Inventory (CSI)) to gather data from the couples. Eighty-three questions were designed for the CSI based upon the mapping sentence. Questions were designed which were representative of a combination of one element from each and all of the facets joined together in the fashion of the mapping sentence. This resulted in 83 questions. Gilad, et al (14) commented that by following this protocol they assembled an instrument that was able to, “measure the existence, quality and quantity (aspect) of emotional, instrumental/practical and informational support (type) from the point of view of its various dimensions (schemata, availability, behaviours, etc.), as well as its motives, characteristics and outcomes (phase).” After having administered the CSI to gather data this was analysed using smallest space analysis (SSA). This form of analysis investigates the correlations between the responses to questions. Based upon these correlations items representing all of the questions are plotted in multidimensional space. Lines are then drawn in an attempt to capture similar facet elements in discrete regions of the plot. If lines are able to capture elements exhaustively and exclusively then this supports the validity of the mapping sentence’s content as being representative of the domain of couple support.

## **Declarative Mapping Sentences**

The mapping sentences I have spoken about above are traditional mapping sentences that have been designed to allow the focussed investigation of a research area with quantitative outcome measures. This form of mapping sentence is suited to research that has clearly identifiable outcomes that may be understood in terms of the numerical extent of a specified outcome. Whilst quantitative research is often appropriate in health research, it is perhaps even more common for enquiries into health and wellbeing to take a qualitative format. Examples of qualitative research include, narrative based research that arises from interviews with the users of medical services, doctors and nurses who provide services, patient’s’ experiences, etc. When this is the case then the traditional mapping sentence may impose too rigid a structure on research and the declarative mapping sentence is more appropriate as it usually does not specify a range facet.

If research takes this form it is vital that the researcher does his or her utmost to not impose their pre-conceptions upon the research. This attempt at neutrality is imperative at all stages of the research process. It commences at the point at which a researcher conceives of a project and then designs tools to investigate the questions they have chosen. This importance continues all the way through data gathering, data analysis and the interpretation of research findings in the light of the questions that the research posed at its outset. As a consequence of this need to be open to the qualitative expressions that are received from those who participate in a research project, there may be a tendency for qualitative researchers to have no structure, or a post-hoc structure, to their data gathering, write-up or the interpretation of results. This position is also one that has its dangers as it may result in research conclusions that are not grounded in existing knowledge. In such a situation it is difficult for the researcher to ensure his or her findings become part of a growing body of knowledge based upon the existing literature or professional experience. Furthermore, if research is esoteric it may be more of a problem for the findings to support or refute current knowledge or clinical practice.

Because of the above difficulties that the qualitative researcher faces I suggest that what is needed is a framework for qualitative research design, data collection and result interpretation that allows for the inclusion of existing knowledge in the research process

whilst not distorting the current research through the imposition of expectations and biases. Providing this type of framework for research may seem like an impossible task, and indeed, it is extremely difficult to achieve the competing aims of allowing participants the freedom to express what they wish whilst attempting to ensure these expressions fall within, and are relevant to, the present research questions and are clearly related to existing knowledge. Through my research in many areas of health related research, and indeed in other psychological and philosophical domains, I have developed a framework or template, known as a declarative mapping sentence (see primarily Hackett, (15) and also 16,17, 18) for details of this approach), for the design of qualitative research that I believe offers a potential solution to the balancing of these pressures on qualitative research.

The declarative mapping sentence that I offer directly below as an example of this sort of research tool takes as its subject matter the very broad area of health and wellbeing as defined by the National Health Service (NHS).

### **Mapping Sentence for the NHS definition of Health and Wellbeing**

The NHS defined health and wellbeing as the whole person having:

Facet A - Type

(physical health )

(mental health)

Which they experience in terms of the:

Facet B - Absence

(absence of physical ill health and disease)

(absence of emotional ill health and disease)

(absence of psychological ill health and disease)

And/or the:

Facet C - Presence

(presences of physical health and wellness)

(presences of emotional health and wellness)

(presences of psychological health and wellness )

Facet D - Location

(inside the workplace)

(outside the workplace)

The mapping sentence for the definition of health and well-being is very broad in its scope. Furthermore, the sentence does not specify the type of qualitative observations or narrative writing (the range) that the researcher may produce. However, it provides a structure for designing qualitative research and a framework or template for writing about health and wellbeing. However, most health related studies will be concerned with more specific issues rather than defining health and wellbeing in a general sense. This being the case the mapping sentence would be designed to be more specific and would include different facets and facet elements. A theoretical example of how a declarative mapping sentence may be used to qualitatively investigate type-two diabetes is as follows:

Person (x) who has type-two diabetes is interviewed about how diabetes impacts:

Facet A - Modality

(cognitive)

(affective)

(behavioural)

In their:

Facet B – Activity

(physical activity)

(diet)

(sleep)

(sexual health)  
(alcohol)  
(tobacco)  
(drugs)  
(mental Health )

In the context of their:

Facet C – Life Context

upon their:

(work)  
(family)  
(friends)  
(spiritual)

The above declarative mapping sentence would be used to selecting one of the elements from each of the 3 facets and combining these to develop and interpret observations, questions, to view narrative output, etc.

## Conclusions

In this paper I have argued for the utility of the traditional mapping sentence, and more specifically, the declarative mapping sentence, to be used in research that is concerned with investigating health and wellbeing. This claim is supported by my own research and also by that of other researchers. For example, in a project that was attempting to investigate the process of sacrilization of public space, Lucyna Przybylska (19) modified the mapping sentence developed by Hackett (20) that addressed the understanding of environmental concern. She developed her mapping sentence in the light of theoretical advances in the use of mapping sentences that I reported (15). Przybylska (19) developed a declarative mapping sentence for her area of interest, which assisted her to frame and interpret her research. Using the declarative mapping sentence is a new way of conducting

research and as the approach is used in more studies the value of the approach will be revealed.

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