Nomadic Concepts, variable choice, and the social sciences.

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Abstract:

The observation that concepts used by social scientists are often problematic is not new; they have been described as *Ballung* concepts, cluster concepts, essentially contested, and reflexive (see Cartwright & Runhardt (2014), Little (1993), Gallie (1957) and Hacking (1995)); however, the need to work with these concepts remains. This article addresses the problem of variable choice in the social sciences by exploring and extending Woodward's (2016) recommendations. This paper demonstrates why Woodward's criteria are difficult to apply in the social sciences and proposes an alternative, but complementary, framework for assessing variables.

Key words:

Variable choice, wellbeing, democracy, concepts

Conceptual analysis is receiving increasing attention in the philosophy of social sciences. Some recent examples include Fumagalli (2018) who advocates eliminating the concept of 'life worth living' from the philosophical vocabulary because it "suffers from multiple ambiguities". Krauss (2016) describes the concepts 'democracy' and 'inequality' as "complex social phenomena", arguing that the potential for social scientists to find links between such phenomena is much more limited than ordinarily supposed. Gasper (2010) notes that the concepts of 'well being' and of 'quality of life' do not refer to one objective entity- they are "umbrella terms, which cover many different possible concepts" (2010, pg. 359). The observation that concepts used by social scientists are often problematic is not new, and they have been described as *Ballung* concepts, cluster concepts, essentially contested, and reflexive (see Cartwright & Runhardt (2014), Little (1993), Gallie (1957) and Hacking (1995)); however, the need to work with these concepts remains. This article addresses the problem of variable choice in the social sciences by exploring, and extending, Woodward's (2016) recommendations. The term 'social science' should be understood rather loosely in this paper to mean the study of human beings. Following the convention of the British Academy

(www.thebritishacademy.ac.uk) this term applies to fields including economics, history, politics, law, psychology, sociology and anthropology, and makes no sharp division between 'social sciences' and 'humanities'.

Woodward (2016) sets out to tackle the following problem: "Suppose we are in a situation in which we can construct or define new previously unconsidered variables either *de novo* or by transforming or combining or aggregating old variables, and where our goal is to find variables that are best or most perspicuous from the point of view of causal analysis/ explanation. Is there anything useful that can be said about the considerations that should guide such choices?" (2016, p. 1048). He proposes a number of criteria that are intended to guide variable choice but writes that his proposal is only partial, and hopes that his paper will motivate further exploration of the topic of variable choice. This paper takes up this challenge. It argues that, while helpful, Woodward's criteria are difficult to apply to the social sciences. Woodward is explicit in his hope that a framework should be applicable to the social sciences and is aware that this is often problematic because variables are often heterogeneous. This paper demonstrates why Woodward's criteria are difficult to apply and proposes an alternative, but complementary, framework for assessing variables in the social sciences.

1. **Woodward's criteria**

Woodward's analysis in his 2016 paper relies on his manipulationsist account of causation (outlined in detail in Woodward, 2003). This paper will remain agnostic about how to understand causation, and the manipulationist account in particular. As Woodward writes "variable choice is equally an issue for *any* theory of causation or causal inference or apparatus of causal representation" (2016, p. 1050, italics in original). Or indeed if one's only goal is prediction (2016, p. 1051). With this in mind Woodward's criteria for good variable choice are:

> 1- "Choose variables that are well-defined targets for (single) interventions in the sense that they describe quantities or properties for which there is a clear answer to the question of what would happen if they were to be manipulated or intervened on. […] Possible candidates for variables failing to meet this criteria […] include 'age', 'gender' and 'obesity'."
>
> 2- "Choose variables that have unambiguous effects on other variables of interest under manipulation, rather than variables that have ambiguous or heterogeneous effects."
>
> 3- "Choose variables that are defined in such a way that we can in principle manipulate them to any of their possible values independently of the values taken

by other variables. […] This excludes, for example, variables that are logically or conceptually related."

4- Choose variables that "are relatively sparse in the sense that they postulate relatively few causal relationships among variables, rather than many."

5- "Choose variables that allow for the formulation of cause-effect relations that are as close to deterministic as possible or at least relations that exhibit strong correlations between cause and effect."

6- "Look for variables that allow for the formulation of causal relationships that are *stable* in the sense that they continue to hold under changes in background conditions."

7- "In general, look for variables such that the resulting graph accurately represents dependency relations, avoids unexplained correlations in exogenous variables, structure in residuals, and causal cycles with no obvious empirical rationale or interventionist interpretation."

(Woodward, 2016, pp. 1054-1055, italics in original)

These criteria are practical in the sense that they highlight the role that variables should perform in scientific analysis. For Woodward this means they should be good ones for manipulation. He is explicit about this, saying that what we consider to be a 'good' variable depends on the work we want that variable to do (2016, p. 1057). If we want accurate prediction rather than causal analysis our choice of variables may be very different. This practical focus leads Woodward to reject an *a priori* approach to variable choice, which would mean analysing variables in advance of knowing the work we want them to do. Variables that are good for causal analysis may not be the ones that are good for prediction.

2. **Woodward's criteria and the social sciences**

Woodward's criteria are difficult to apply to the social sciences because his criteria require us to know that variables are, for example, well defined targets for interventions, before we use them. For Woodward, this is a virtue of his approach despite acknowledging that this is sometimes difficult to do. He says that causal analysis in the social sciences is often plagued by heterogeneous effects of causal variables. He writes that this is exacerbated by the fact that the variables social scientists use are often proxies for the actual variables we want to analyse. He discusses is 'education', for which we might use years spent in school as a proxy. However, as Woodward correctly notes, the quality of schools varies widely, which results in unstable effects of 'education' as it is measured. The obvious suggestion is that we should work on measuring 'education' better, but Woodward writes that "there are obvious practical limits on our ability to

do this and so we may be stuck with heterogeneous or 'ambiguous' variables" (2016, pg. 1070). He is right about this, but when dealing with heterogeneous or ambiguous variables it is unclear whether they can, in fact, satisfy his criteria. The following two examples illustrate this in more detail:

Democracy

Krauss (2016) argues that our ability to understand complex social phenomena, such as 'democracy' and 'inequality', is much more limited than social scientists have historically supposed. His review of the literature on the link between inequality and democratisation finds that "it is laden with contradictory hypotheses and findings" (2016, p. 98). Some studies have found a positive relationship, some a negative relationship, some no relationship, and others a differentiated relationship which can be explained by a number of other factors. This appears to justify Woodward's concern that bad variables make it difficult to discover causal relationships. Krauss argues that more data, or more work on this topic, is unlikely to clarify the debate because there is no measure of democracy that is comparable across countries, given the significant heterogeneity of democratic regimes. He writes "The classification of democracies remains an ambiguous, arbitrary and disputed exercise" (2016, p. 100). Additionally, he notes that there are a large number of variables that may be correlated with both democracy and inequality, examples include the degree and enforceability of property rights, the taxation regime, financial regulation, and a number of other factors. He concludes that the analysis of inequality and its connection with democracy is more of a "qualitative narrative or art" than a quantitative science (2016, p. 106). If Krauss is right, 'democracy' is a bad variable, unless we are content with narrative description.

It is difficult to decide whether 'democracy' is a good variable using Woodward's criteria. If Krauss is right it is not a well-defined target for an intervention because of the heterogeneity of democratic regimes. If we were to manipulate 'democracy' we would be manipulating a variable that differs significantly in different contexts. Furthermore, the contradictory conclusions of analysis using 'democracy' suggest that Woodward's second criteria, that variables should have unambiguous effects, is not satisfied. If Krauss is right, the same manipulation might lead to different results. The same goes for his fifth criteria, which stipulates that variables allow for the formulation of cause and effect relationships that are as deterministic as possible. However, Krauss's discussion also highlights that despite these apparent problems different social scientists do judge that 'democracy' is a good variable to use and debate about the link between 'democracy' and other variables continues. For example, Martins (2016) assesses the link between democracy and popular rebellion in contemporary Brazil, and Idzalika, Kneib and Martinez-Zarzoso (2017) reassess the relationship between income and democracy and conclude that "rising income is associated with a probability of becoming fully democratic, but income is not generally associated with the mean level of democracy" (2017, pg. 1) The 2018 International Panel on Social Progress report devotes a chapter to the link between inequality and democracy (2018, Ch. 14). While Krauss is convinced that he is right that

'democracy' and 'inequality' are bad variables, other social scientists disagree. To summarise, there is no clear answer as to whether 'democracy' satisfies Woodward's criteria for variable choice.

Wellbeing

Hausman and Alexandrova disagree in a similar way about the concept 'wellbeing'. Hausman's concern is with health, and his book discusses whether health should be valued by its contribution to wellbeing. He argues that although we know what wellbeing is—for him it is an all things considered judgement about how well my life is going for me—we can't measure it. He writes, "utterly different lives may be good lives and good, in part, because of their differences rather than despite them" (2015, p. 121). He adds that for some people a good life is a life filled with adventure, for others it lies in contemplation, or academic endeavour, or any number of other things. Later, he lists friendships, intimate relationships, pleasures, success in worthwhile activities, and good health as the sorts of things that contribute to wellbeing (2015, p. 125). Different people value different things on this list, and assign different weights to things on this list that they share. For him, this is because what counts as a good life for me depends on who I am. He summarises that there is "enormous heterogeneity of the constituents of wellbeing" (2015, p. 125). This is what underpins his scepticism about measuring wellbeing. If wellbeing is heterogeneous in this way, and depends on the people's individual characteristics then it is extremely difficult to make interpersonal comparisons of wellbeing. For Hausman, 'wellbeing' is not a good variable.

Alexandrova analyses wellbeing differently. She begins by doubting the existence of a unified concept of wellbeing, despite philosophers' preoccupation with wellbeing as an 'all things considered' judgement. Her doubt is based on the diversity of ways in which 'wellbeing' is used in different disciples, by psychologists, health professionals, or those working with children. These are not overall judgements about how well a person's life is going for them, they are judgements about specific aspects of a person's life. She describes this view as 'contextualism' which is "a view that wellbeing expressions have varying content depending on the context in which wellbeing is assessed." (2017, p. 23). For Alexandrova, there might be no single theory that tells us when a concept "is applicable and what states realise it" (2017, p. 42). But there may be "theories of wellbeing in a particular context" (2017, pg. 51). For example, we might have a theory of the wellbeing of people over 75 years old which tells us what wellbeing means for such people, for example various health related factors and levels of social interaction. Other theories of wellbeing exist for children, members of economic groups, etc. For her, therefore, 'wellbeing' is a good variable, although she means something different to Hausman when she uses the word.

van der Deijl writes that parts of the debate about wellbeing are characterised by "deep conceptual disagreement on the nature of wellbeing" (2017, p. 210). This appears to be the case here. For Hausman wellbeing is an inferior variable, while for Alexandrova we can use different notions of wellbeing as variables in specific situations. What we have here is not just a disagreement about what wellbeing is, but a difference

in how to go about thinking about what wellbeing is; is it a unified concept or not? Woodward has the same worry about whether 'intelligence' or 'risk taking' should be seen as single variables. He asks whether there are different types of intelligence or risk taking and therefore whether these concepts should be seen as unified variables. Woodward would presumably say that whether wellbeing is a good variable depends on the work we want it to do. For Hausman's purposes it isn't, but for Alexandrova's it is. This response is somewhat puzzling because Hausman and Alexandrova are not using a variable about which they agree for different purposes; they disagree fundamentally about the nature of the variable itself.

Whether we think 'wellbeing' satisfies Woodward's criteria for good variable choice depends on what we think 'wellbeing' is, and there is little agreement about what 'wellbeing' really is. If we try to apply Woodward's criteria to it, they are of little help. The first criterion is that it should be clear what would happen if these variables were to be manipulated. This is not the case for 'wellbeing', because it remains unclear what 'wellbeing' is. For Hausman, it isn't clear what happens when 'wellbeing' is manipulated because it is a very heterogeneous concept. For Alexandrova, some of her specific 'wellbeing' concepts, such as the wellbeing of children, may meet Woodward's criteria. She gives criteria for child wellbeing, which she describes as a mid-level theory (2017, pg. 69). This theory will, she writes, need to be specified more fully for studies of child wellbeing. If we do manage to specify, in sufficient detail, what the 'wellbeing of children' is, then it might satisfy Woodward's criteria.

To conclude, the concept 'wellbeing' is conceived of in different ways by different social scientists, including Hausman and Alexandrova. This disagreement makes it difficult to decide whether Woodward's criteria are satisfied. Whether we think 'wellbeing' is a good target for an intervention, whether it has unambiguous effects, or is interconnected with other variables, depends on what we think 'wellbeing' is. If we think it is an 'all things considered' judgement then it is difficult to see how it can satisfy Woodward's criteria, but if we restrict ourselves to specific 'wellbeings' in the way that Alexandrova suggests we may draw more optimistic conclusions about using 'wellbeing' as a variable.

In Woodward's analysis, bad variables are just variables that lack some or all of his characteristics. In the social sciences there is disagreement about whether variables are 'good' or 'bad' that reflects fundamental disagreements about what these variables really are. It is therefore difficult to tell whether these variables are 'good'. Furthermore, as Krauss' criticism of 'democracy' illustrates, there is also disagreement about whether the results of using 'democracy' as a variable have been successful. The framework presented in the following section aims to explain why such conceptual disagreements are so protracted, and why this is important for variable choice.

3. **Nomadic Concepts**

The social science literature gives us many reasons for thinking that the concepts used in the social sciences are problematic. Woodward describes them as heterogenous and ambiguous. Cartwright and

Runhardt (2014) describe many concepts that social scientists use as *Ballung* concepts; which they say are "concepts that are characterised by family resemblance between individuals rather than by a definite property." (2014, pg. 268) The example they discuss is civil war. They note that Neurath worried about *Ballung* concepts in science because these concepts do not have strict boundaries, nor do all instances have any essential features in common. Little (1993) describes concepts used in the social sciences as 'cluster concepts', which he describes as encompassing "a variety of phenomena that share some among a cluster of properties" and that concepts like 'riot', 'revolution', 'class', and 'religion' are a "class of social entities that share a common causal structure", however, this causal structure is not "homogenous" (1993, pg. 190). These authors give reasons for thinking that something separates 'scientific' concepts from concepts used in the social sciences, either because we cannot give necessary and sufficient criteria to define the concept, or because there is no homogenous causal structure underlying them.

Concepts used in the social sciences are also thought to be problematic because debate about some of them is entrenched. Gallie proposed that some concepts are 'essentially contested'. His examples include 'work of art', 'democracy' and 'social justice'. These concepts are essentially contested because they are characterised by disputes about what, really, counts as a 'work of art', or 'democracy' (Gallie, 1957, 169). He writes that "there are disputes […] which are perfectly genuine: which, although not resolvable by argument of any kind, are nevertheless sustained by perfectly respectable arguments and evidence." (Gallie, 1957, pg. 169) In other words, despite dispute, argument, and the presentation of evidence, no agreement is reached. The difference between essentially contested concepts and more scientific concepts is that "Competition between scientific hypotheses works successfully largely because there are acknowledged general methods or principles for deciding between rival hypotheses." (Gallie, 1957, pg. 179) McKnight (2003) points out that it is impossible to define essentially contested concepts in terms of necessary and sufficient conditions, and that "The open-endedness of the concepts concerned means that we cannot lay down in advance laws for their future application and any attempted statement of such conditions will itself be disputable." (McKnight, 2003, pg. 262)

The final reason for thinking that concepts used in the social sciences are problematic is due to Hacking, who shows that when we apply a label to a person it not only changes the way we view that person, and how we act towards them; it may also may also change the way the person views themselves. This may lead them to behave in new ways, such as in accordance with their beliefs about how a person of that kind behaves, or conversely in such a way that the label or 'kind' no longer applies to them. As people of a kind change their behaviour this, in turn, leads social scientists to change the way they think about the kind. This process generates the so-called "looping effect" of human kinds (Hacking, 1995, Ch. 12). Where concepts refer to groups of people, these people may change their behaviour in response to the concepts that are used to refer to them. These concepts may then also change in response to this changing behaviour.

This literature describes characteristics that concepts in the social sciences often have that can make them difficult to use in analysis. However, while each of these characteristics are interesting, what is

missing is a synthesis. The framework below draws on this literature and brings it together in a way that allows for the systematic assessment of concepts, and their suitability for use as variables. Concepts that are often used in the social sciences will be described as Nomadic. The word 'Nomadic' is intended to convey the shifting and changing path of a concept across the social landscape. As with a nomadic tribe or group the boundaries of this tribe change over time. The landscape thorough which these nomads roam should be thought of as representing the social world; all phenomena that might be of interest to a social scientist.

The central aim of this approach is to demonstrate why social scientists can disagree about whether some specific aspect of the social world falls under the scope of a particular concept (for example, whether a particular political system is 'democratic'), and also why they can disagree about which parts of the social world fall under the scope of a particular concept (for example, which political systems fall under the scope of the concept 'democracy'). The first is a bottom up approach because it begins with a particular political system and asks whether it is 'democratic', while the second is a top down approach which begins with the concept of 'democracy' and searches for political systems to which this concept applies. Where concepts are Nomadic both of these tasks are contentious because social scientists can potentially include a lot of the social world within the scope of such concepts. As such, these disagreements are not easily resolved. This contrasts with concepts that are more precise; when a concept is precise social scientists focus on the same aspects of the social world when using this concept. Social scientists agree about which aspects of the social world fall under the scope of a particular concept. The following section describes the characteristics of Nomadic concepts, which are unclarity of boundaries, change over time, and many possible meanings. These characteristics demonstrate that there are a number of ways in which a concept can be Nomadic, and that concepts may be more or less Nomadic.

4. **What is a Nomadic concept?**

Nomadic concepts are defined by the following criteria:

1- A wide variety of social phenomena can be included within the scope of the concept. This results from these concepts having many possible meanings, unclear boundaries, and changing over time. These characteristics are not an all or nothing matter because these concepts can vary in the number of meanings they have, how unclear their boundaries are, and the extent to which they change over time.

2- The characteristics outlined in criteria 1 mean that disagreements about Nomadic concepts, and arguments making use of them, are difficult to resolve with academic analysis. Over time, analysis of a Nomadic concept leads to the incorporation of different social phenomena.

'Social exclusion' is an example of a Nomadic concept. Criteria 1 is satisfied because a wide variety of social phenomena can be included within the scope of the concept 'social exclusion'. There are many things 'social exclusion' can mean. Amongst other things it can mean an inability to participate in economic life, a lack of interaction with the community (as in the case of the house bound elderly), or a refusal by other people to interact with the people in question in a constructive way (as in the case of children bullied at school), and a lack of access to normal means of communication. Following Sen (2004), we might also argue that people are excluded from society if they do not have access to certain capabilities. In this case technological capabilities are important. Each of these meanings does not have precise boundaries; for example, how little interaction do we need with the community in order for it to count as a 'lack of interaction'? Or, how little access to technology counts? We might agree that someone is socially excluded if they have no internet access and no phone. But what if they have a shared mobile and access to the internet at a local library? We could argue this either way. Furthermore, these meanings can be expected to change during the time period of our analysis. We would not have considered children socially excluded if they lacked access to the internet in 1995, but we would arguably consider them so today. Some aspects of the concept of social exclusion have changed significantly over a relatively short period of time.

'Social exclusion' meets condition 2 because academic analysis has not resulted in agreement about what social exclusion is. For example, Axford writes that "the concept is used indiscriminately to describe myriad phenomena, from unemployment to being sexually abused, with some commentators even arguing that children as a class are excluded." (2010, p. 738) Over time new ideas have been brought to bear on the concept, as illustrated by Sen's capabilities approach. It is not unreasonable to suppose that in the future social scientists will find new ways in which people are 'socially excluded'. Indeed, see Richardson & Le Grand (2002) for a paper outlining modifications to academic definitions of social exclusion based on discussions with people who are socially excluded. This is not to say that there is anything about 'social exclusion' that means that in principle it is impossible to reach agreement about the phenomena relevant to understanding this concept. In the future there might be such agreement. However, this would require agreement that 'social exclusion' has only one meaning, which has clear boundaries, and does not change over time. Were this to happen, then the concept would no longer be Nomadic. The following section discusses the characteristics of Nomadic concepts in more detail, with the aim of clarifying this definition.

Nomadic concepts have unclear boundaries

The meanings of 'social exclusion' have unclear boundaries because it is difficult to decide, for example, how much social interaction is needed for children to feel socially integrated. Characterising concepts as Nomadic is a different way of describing boundary problems. To see this we need to think about the analogy with a Nomadic tribe. Firstly, consider a tightly bunched tribe that has put up a fence around its camp. In this case the boundary issues will be almost non-existent. People living within the boundary are part of the tribe, and people living outside are not. Once we remove the fence things become

more complicated. Members of the tribe may leave for periods of time, sometimes living within the tribe, and sometimes living elsewhere. In such a case we might specify a number of days spent with the rest of the tribe as necessary for being a member of this group. In this case we can describe the boundary as vague, in the philosophy of language sense. We are trying to draw a boundary around the tribe and adding or subtracting units that are identical for the purposes of this analysis.

Continuing with the current metaphor there is clearly more to membership of a tribe than the number of nights per year spent with other members. Other criteria for membership may include biological descent, adoption of social practices, and proximity to the main tribe. We may find people living at some distance from the main tribe and judging whether they are members of the same tribe requires assessment of factors including what both groups of people tell us, whether they appear to act in similar ways, whether they have similar beliefs, and the degree to which they interact. This is like the difficulty with judging whether a child is socially excluded; we attempt to generate a list of criteria that help to decide whether someone is a member of a group. Where concepts that social scientists use have unclear boundaries in either of the senses outlined above this contributes to them being Nomadic, and increases the potential for disagreement about which aspects of the social world fall under the scope of the concept.

Nomadic concepts change over time

The concept of 'social exclusion' has changed over time; for example, through the inclusion of access to technological capabilities. This change is due to social scientists reflecting on the concept and finding new ways in which people might be 'socially excluded'. This is not the only way in which concepts can change. Hacking describes how people change in response to the way they are studied, the way they think of themselves, or in reaction to what they think will happen. As people who are 'socially excluded' begin to think of themselves in new ways, and behave in new ways, this also changes the way in which experts interact with them and think about their condition. The notion of what it means to be 'socially excluded' is therefore not static. Ferguson (2003) describes how 'social exclusion' can be reflexive. He describes the process by which excluded women and children have been encouraged to see their own situations differently, such as by finding a sense of community with those who have shared similar experiences. This has changed the relationship between experts and these women (2003, pp. 213-214). He writes;

> The circularity of knowledge from media coverage, court cases and local knowledge, feed back into people's reflexive awareness of their lives and decisions and more victims feel empowered to come forward to seek help. The public telling of sexual and other deeply personal stories of abuse and recovery awakens and confirms victims sense of their suffering and that they are not alone binds them together providing a quality of belonging to a wider community of survivors. (2003, p. 206)

There is one further way in which concepts that social scientists use change. We describe many things as games today, including diplomacy and tiddly winks. However, perhaps in the future people will just use the word to refer to games played at home. There need be no particular reason for this, just a change in language and culture. Nevertheless, in the future the link with our current understanding of the word 'game' remains, and we see this as a change in the use of the concept, rather than the invention of a new concept. This can be characterised as a situation where the concept moves across the landscape, but where there is little or no interaction between this movement and the landscape itself. The movement of the concept leaves the landscape unchanged.

To summarise, a concept can move across the landscape, and in doing so incorporates different aspects of the social world over time. Where this movement results just from the changing use of a concept, the concept and the landscape do not interact. Where there is reflexivity, the concept changes the social world, which in turn leads to changes in the concept. This interaction between a concept and the landscape is not an all or nothing matter and may happen to greater or lesser degrees. Where concepts change over time, this contributes to them being Nomadic because they move across the landscape (which is the traditional way of understanding a nomadic tribe). The changes in the aspects of the social world that are seen to fall under the scope of the concept over time increases the potential for disagreement between social scientists about what 'really' does fall under the scope of the concept. In a very basic sense, they are arguing about a moving target.

Nomadic concepts have many meanings

Many concepts that social scientists use have many different meanings. The concept of 'social exclusion' illustrates this. Other concepts used by social scientists also have many possible meanings; for example, Adcock and Collier note that 'background concepts' (which are the headline, pre-analysis, concepts, such as 'poverty') "routinely include a variety of meanings, the formation of systematized concepts often involves choosing among them" (Adcock & Collier, 2001, p. 532).

Where a concept has many meanings this should be understood as different areas of the landscape falling under the scope of a concept. A concept with many meanings is like a tribe that exists in a number of locations. When using a concept with many meanings social scientists need to specify which meaning they have in mind. However, in some cases this may not be possible because social scientists may not always be aware that they are using the same concept to refer to different parts of the landscape. For example, for Alexandrova, there are different things that wellbeing can mean, including wellbeing after an operation, the wellbeing of children, and the wellbeing of refugees. We can therefore think of her meanings of wellbeing as separate locations on the landscape. For Hausman, there is only one meaning of wellbeing which exists at one location on the landscape.

To summarise, the concepts that social scientists use often have many meanings. In some cases, the different meanings a concept can have are transparent. In this case, social scientists have a relatively clear picture of how a concept sits on the landscape and specify which meaning, or which aspects of the social world, they intend to discuss when using this concept.

Nomadic concepts can have many meanings and social scientists may all agree about what these meanings are, or they may not. Additionally, these meanings may be far apart or close together on the landscape. There are two other complications relating to the different meanings that concepts used in the social sciences. The first is that there are many things we can mean, when we say that a concept has a particular meaning. We may argue that one of the things 'democracy' can mean is 'contestation', (in other words that there is competition and openness in the electoral process). However, there are also many things that 'contestation' can mean. We might take it to mean that there are a number of candidates standing for political positions, or that there are a certain minimum number of political parties, or that the agendas of the political parties are sufficiently different, or that the media is independent of political parties, or any number of other things. A concept that is Nomadic because it has many meanings, like 'democracy', may have meanings that are themselves Nomadic for the same reason.

In conclusion, when concepts are Nomadic because they have many meanings this increases the potential for social scientists to disagree about whether specific aspects of the social world fall under the scope of this concept, and which aspects of the social world the concept covers. Specifically, when a concept has many meanings which are agreed upon by social scientists, they can usually just specify which meaning they have in mind. In other cases, they might not agree about the different meanings the concept can have or may even be unaware that other social scientists have a different meaning in mind. In the first case the concept is less Nomadic than in the second case, because there is greater potential for disagreement about which aspects of the social world fall under the scope of the second concept. These different meanings, regardless of whether they are agreed upon or not, may be further away or closer together on the landscape. Additionally, each of these meanings may itself have a number of meanings.

Before moving on it is important to note that the framework outlined above is intended to help social scientists think about the concepts they are using in a systematic way. It is not intended as a tool to determine, once and for all, the structure of social science concepts. It is unlikely that social scientists will agree on this. For example, it is possible to disagree with the characterisation of 'social exclusion' sketched out above. However, with this framework in hand it is possible to discuss this disagreement in a structured way by discovering how different social scientists specify a concept in terms of meanings, change over time, and boundary issues.

5. **Nomadic concepts and variable choice**

The following section illustrates how this framework illuminates the concepts discussed earlier in this paper.

'Democracy': Democracy is a Nomadic concept. The concept of 'democracy' has many meanings. A democracy may mean the presence of 'political liberties', or 'popular sovereignty', or 'contested elections', or 'competition', or a variety of other things. The number of meanings of 'democracy' that are relevant in a particular context is likely to vary. The V-Dem Electoral Democracy Index uses 'freedom of expression', 'freedom of association', 'share of population with suffrage', 'clean elections' and an 'elected officials index' in their project to measure democracy in a multi-dimensional way (see issuu.com/v-dem) These meanings are themselves Nomadic. V-Dem break down 'freedom of expression' into Government censorship of media and internet, harassment of journalists, media self-censorship, freedom of discussion and a number of other factors. There are also a number of things that 'self-censorship' can mean. Democracy therefore has many meanings, which themselves are Nomadic. Boundary issues are also present; there are degrees of 'harassment of journalists' and 'Government censorship of the media'. Change is also relevant for understanding 'democracy', in the most obvious sense, if we are concerned with ancient democracies we may focus on different meanings than if our interest is on post 1945 democracies. On a shorter timeframe, the rise of digital communication has changed the nature of elections and has had an effect on what 'participation' in an electoral process looks like.

Describing 'democracy' as Nomadic therefore illuminates the disagreement about whether this concept is a good variable, and why Gallie describes it as essentially contested. It is plausible that some social scientists define 'democracy' in such a way as to restrict its meaning to a relatively precise location on the social landscape. However, other social scientists, such as Krauss, view such approaches with scepticism because the Nomadic nature of 'democracy' means that the concept can be characterised and understood in a variety of ways. When a concept is very Nomadic it is difficult to assess using Woodward's criteria.

'Wellbeing': For Hausman 'wellbeing' seems to have a clear meaning; an overall life assessment, but this concept is itself Nomadic because there are many things that an overall assessment of how someone's life is going for them can mean. Hausman says it is heterogeneous in terms of the phenomena we can look at. For Alexandrova 'wellbeing' is Nomadic, but in her case this is because there are many contextual meanings of 'wellbeing'. These have been described above. Hausman and Alexandrova disagree about what 'wellbeing' is, but both their characterisations of the concept illustrate the extent to which social phenomena can be included within the scope of the concept. For Hausman this is because 'wellbeing' is a conglomerate concept that can encompass a wide variety of social phenomena, depending on the situation at hand. For Alexandrova, this is because there are many meanings of 'wellbeing' which together encompass a large amount of social phenomena. Although they disagree about what 'wellbeing' means, their differing conceptions of wellbeing are different ways of encompassing a variety of social phenomena. Boundary issues are likely to be a problem with most of the meanings of 'wellbeing'. Change is also important because,

as Alexandrova argues, new theories of wellbeing are being developed; her example is a theory of child wellbeing. Both Alexandrova's and Hausman's understanding of 'wellbeing' are legitimate and, because of the Nomadic nature of the concept, the disputes about what wellbeing is are unlikely to find resolution.

It is no surprise that concepts that allow for the inclusion of a wide variety of social phenomena within their scope are difficult to assess using Woodward's criteria for good variable choice. His suggestion that variables "that are logically or conceptually related" should be excluded (2016, pg. 1054) suggests that Nomadic concepts should be excluded at the outset. More specifically, when a concept is Nomadic because it has many meanings it is difficult to see how there can be a clear answer to what would happen when it is intervened on, or that a manipulation will have unambiguous effects. This is because different social scientists may be looking at different social phenomena. Even if we settle on one meaning of a concept the existence of boundary issues may still affect the ambiguity of the results of manipulation. This is not to say that Woodward's criteria are mistaken, indeed, he describes his observations as "partial and miscellaneous" (2016, pg. 1048). The purpose of this discussion is to highlight *why* applying his criteria to the social sciences and to his 'age', 'gender' and 'obesity' examples is problematic. Furthermore, not all concepts used in the social sciences suffer from these problems. It is potentially easier to assess Alexandrova's specific wellbeings using Woodward's criteria.

6. **Working with Nomadic concepts**

Alexandrova's different wellbeings reduce the social phenomena that can be included within the scope of the concept 'wellbeing' and therefore have the potential to make the concept less Nomadic, at least as it is used in a particular context. She writes that children do well to the extent that they:

1. Develop those stage-appropriate capacities that would, for all we know, equip them for successful future, given their environment.
2. And engage with the world in child-appropriate ways, for instance, with curiosity and exploration, spontaneity, and emotional security. (2017, pg. 69)

Different environments dictate different 'stage appropriate capacities', and she says that what these capacities are is an empirical question. Nevertheless, she argues that scientific findings on child development yield a list of core capacities including learning to use their bodies appropriately, communication, forming trust, forming and holding relationships, and learning about the environment (2017, pg. 70). This can be supplemented further in particular contexts, or with reference to particular groups of children. This is a very brief summary of Alexandrova's position, however, it illustrates the general approach that can be taken with Nomadic concepts. This involves limiting the social phenomena that can be included within the scope of the concept. We begin with 'wellbeing', and then limit our attention to 'childhood wellbeing', which is then more precisely defined. However, many of the concepts used to define 'childhood wellbeing' are also Nomadic. For example, there are many things that 'child appropriate ways' can mean. Alexandrova writes,

"…the notion of 'child appropriate ways' will remain what Bernard Williams and others since have called a 'thick concept', in which the normative and descriptive elements are intertwined. Child appropriate ways are those ways practiced by the young that are worth protecting because they make for a good childhood. Specifying a full list of them might be impossible." (2017, pg. 73) Although at first sight we appear to have limited the extent of the social phenomena that can be included within the scope of the concept 'childhood wellbeing' by providing a definition, when the definition itself includes Nomadic concepts the potential to include a great deal of social phenomena remains.

Not all concepts in the social scientists work this way. The concept of demand in economics is the amount of a good or service that customers are willing to buy at a particular price. Now, admittedly, some imprecision results from the notion of 'willing to buy'. They may be willing to buy 400 T-shirts at £5 each, but may, due to time, transport, or other constraints only buy 200 T-shirts. Is their demand for T-shirts 400 or 200 at £5? In other words, do we mean actual demand, or potential demand? However, these two meanings are closely related because both apply where people are buying and selling something, and just measure, in different ways, the amount they want at a certain price. So, although the concept 'demand' may have different locations these are close together, if not overlapping. Both meanings are also themselves well defined, although taking demand as the actual amount bought is the better defined of the two—it is synonymous with the number of T-shirts bought at a certain price. Determining a 'willingness' to buy at a certain price is harder to gauge, but, in principle is roughly determinable by asking people. The concept of 'demand' is unlikely to change over time. 'Demand' is not as Nomadic as 'social exclusion', or 'wellbeing' or even 'childhood wellbeing'. Consequently, there isn't extensive debate about what 'demand' is.

This implies that when social scientists discuss 'demand' they largely agree about the aspects of the social world that are relevant to analysing 'demand'. The concept occupies are relatively clear location on the social landscape. When using Nomadic concepts, attempts to make a concept more precise will only succeed to the extent to which they enable all social scientists using the concepts to focus on the same social phenomena.

Demand is a concept that is much easier to assess using Woodward's criteria. Although there are exceptions, manipulating demand does have clear consequences. When demand for something rises, its' price rises. This consequence is relatively unambiguous, and 'demand' can sometimes be manipulated independently of other variables, such as 'price', and 'supply'. Few causal relationships are postulated, with the exception of the standard laws of supply and demand. The cause and effect relationship between 'demand' and 'price' and 'supply' are relatively deterministic and stable.

7. **Summary**

This paper is motivated by Woodward's observation that variables in the social sciences are often 'heterogeneous', and explores the difficulties that arise when trying to apply his criteria for variable choice to these variables. The Nomadic framework helps to clarify thinking about these sorts of variables. Before using a variable, such as 'wellbeing' or 'democracy', a social scientist can ask themselves whether, in the context of the research they would like to do, but before beginning a research project, whether the concept they want to use has many meanings, boundary issues, and whether it changes over time. 'Wellbeing' and 'democracy' are Nomadic concepts and, because of this, disagreements about the definitions and the application of these concepts are likely to continue. A natural response is to make these concepts more precise, based on the specific work the concept is intended to do. Such attempts are likely to succeed when they successfully restrict the extent of the social phenomena that can be included within their scope. In other words, when these concepts are not defined in terms of other Nomadic concepts. Concepts that are less Nomadic are ones which can be more successfully assessed using Woodward's criteria.

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