

How to define – a tutorial

Sven Ove Hansson *

Abstract: Practical methods are introduced for the construction of definitions, both for philosophical purposes and for uses in other disciplines. The structural and contentual requirements on definitions are clarified. It is emphasized that the development of a definition should begin with careful choice of a primary definiendum, followed by the selection of appropriate variables for the definition. Two methods are proposed for the construction of the definiens, the case list method and the method of successive improvements. Four classes of concepts are discussed that are particularly difficult to define: vague concepts, value-laden concepts, controversial concepts, and inconsistent concepts.

Keywords: Concepts, Definition, Formal philosophy

Resumo: Introduzem-se aqui métodos práticos para a construção de definições, tanto para propósitos filosóficos quanto para usos em outras disciplinas. Clarificam-se os pré-requisitos que se aplicam sobre a estrutura e o conteúdo das definições. Enfatiza-se que o desenvolvimento de uma definição deve começar com a escolha cuidadosa de um *definiendum* principal, seguido da seleção de variáveis apropriadas para a definição. Propõem-se dois métodos para a construção do *definiens*, o método da enumeração de casos e o método dos aperfeiçoamentos sucessivos. Discutem-se quatro classes de conceitos que são particularmente difíceis de se definir: conceitos vagos, conceitos que envolvem julgamentos de valor, conceitos controversos e conceitos inconsistentes.

Palavras-chave: Conceitos, Definição, Filosofia formal

1. Introduction

Careful analysis and development of our own terminology is an essential part of modern philosophy. Definitions and conceptual analysis provide us with philosophical tools in the form of precise concepts that can be used in philosophical arguments. In addition, definitions are an important part of our contributions to other disciplines. In interdisciplinary co-operations, it is often the role of philosophers to work out precise definitions and distinctions.

* Department of Philosophy and the History of Technology. Royal Institute of Technology (KTH). Stockholm, Sweden. *E-mail:* soh@kth.se

The present paper is a tutorial on how to construct useful definitions, both for philosophical purposes and for use in other disciplines. Section 2 provides a background on different uses of definitions, and Section 3 introduces the basic structural and contentual requirements on a definition. After this follow four sections that show, step by step, how to develop a definition: choosing a primary definiendum (Section 4), selecting the variables of the definition (Section 5), and after that constructing a definiens either according to the case list method (Section 6) or the method of successive improvements (Section 7). The next four sections focus on classes of concepts that are particularly difficult to define: vague concepts (Section 8), value-laden concepts (Section 9), controversial concepts (Section 10), and inconsistent concepts (Section 11).

2. The uses of definitions

Definitions can be either lexical (descriptive) or stipulative. In principle, the difference is simple. A lexical definition reports actual linguistic usage. Therefore, it can be correct or incorrect (i.e., true or false, although that terminology is seldom used). A stipulative definition reports how the definer is going to use a term, or how she recommends others to use it. A stipulative definition cannot be correct or incorrect, but it can be enlightening or confusing, fruitful or barren, adequate or inadequate.

It is often difficult to draw a sharp line between lexical and stipulative definitions. How, for instance, should we classify the extensive philosophical literature on the meaning of “knowledge”? Do the authors aim at a lexical definition describing what we mean by “knowledge” in ordinary language, a lexical definition of what “knowledge” means in philosophy, a stipulative definition for a fruitful concept in philosophy, or perhaps even a real definition (i.e. a definition of the essence of what it is to know something, rather than a definition of the word “knowledge” or the concept knowledge)?¹ In practice, this is often far from clear. A major

¹ In what follows I will focus on nominal definitions, i.e definitions of terms in the language or concepts that can be expressed in the language.

reason for this is that stipulative definitions are circumscribed by linguistic practice. The common saying that you can stipulate arbitrarily is just a myth. Of course there is a sense in which you “can” choose to define “believe” to mean “know with certainty” or “compound” to mean “atom”, but such a venture is almost sure to be unsuccessful. Chances are minuscule that others will adopt your definition, and – what is worse – chances are also small that they will keep track of how you use the words. To be successful, a stipulative definition should correspond to needs of precision and clarity among those who use the term in question.

Lexical and stipulative definitions tend to differ in how they treat the ambiguities and unclarity of ordinary language. A lexical definition should, at least in principle, exhibit actual uses even when they are unclear or even confused. If a term has several different meanings or uses, they should be listed and distinguished between. In contrast, stipulative definitions are usually developed in order to eliminate ambiguity and vagueness.

There are at least three different attitudes that a stipulative definer can take to the lack of clarity in ordinary language. First, one can choose to do essentially as in lexical definitions, namely to accept but clarify what is confused or obscure in ordinary usage. This approach is justified when it can be shown that the lack of clarity is not a disadvantage given the purpose of the definition.

Secondly, one can restrict the meaning of the word, for instance in the following way:

With “person” we will mean here a human being who is conscious or capable of gaining consciousness.

This definition excludes legal persons. Such a restriction on the term “person” may be useful for instance in moral philosophy, but it is probably not useful in legal philosophy or in legal contexts generally.

Thirdly, one can split the concept by introducing new terms that distinguish between different meanings of the word under scrutiny, for instance in the following way:

With “person-H” we will mean a human being who is conscious or capable of gaining consciousness. With “person-L” we will mean a legal entity that can, according to the legal system in force, be a contracting party in a legally binding contract or have rights that are acknowledged by the legal system.

In this case it would also be adequate to use the established term “legal person” instead of “person-L”, and similarly, “human person” instead of “person-H”.

Definitions may either be briefly stated as preconditions for a study, or they may be the major topic of an investigation that has the development of a definition as its purpose. Although the former case is more common, we will be more concerned here with the latter case.

It is a good practice to state, as a precondition for an argument or an investigation, what one means by the central terms and (whenever applicable) what deviations one makes from common usage. Such definitions should either be presented in an introductory part of the text or introduced when the term in question is used for the first time. They have the role of terminological commitments:

With a counterfactual sentence we will mean a sentence of the form “If A then B” in which A is false.

With a consensus decision we will mean a group decision in which none of the participants in the final vote voted against the winning alternative.

The term “reason” will be used here in accordance with Kant’s usage of the German term “Vernunft”.

By “intuitionism” we will mean moral intuitionism.

The first two of these are full definitions. The last two are incomplete definitions. They explain how a term will be used by reference to definitions by others, or to a particular well-known usage of the term.

If you make terminological commitments, you should also follow them through, i.e. use the defined terms as you have defined them. It is often more difficult than what one initially believes to be consistent in this respect. A good way to avoid such inconsistency is to check through the text at a late stage to verify that one has honoured one's own terminological commitments.

3. The structure of a definition

A definition has three constitutive parts. It consists of the definiendum (that which is to be defined), the definiens (that which defines) and a defining connective². Hence in the definition “A bachelor is an unmarried man”, “a bachelor” is the definiendum, “an unmarried man” the definiens and “is” the defining connective.

In this case, it will be understood from the context that “is” is used as a defining connective (and not in the same sense as in “My uncle is an unmarried man”). When needed, this can be clarified for instance with the notation “is_{def}”. In more precise contexts, “if and only if” (often abbreviated: iff) is often used as the defining connective:

A man is a widower if and only if some woman died while married to him.

However, “if and only if” is not either specific for defining. It may for instance be true that “A person is a full professor of the philosophy department of this University if and only if that person is male, above 45 years old, and an employee of the department”. But even if this is true it is certainly not a definition. There are two major ways to clarify that “if and only if” is definitional: The index “def” can be used:

A man is a widower iff_{def} some woman died while married to him.

² The word “definition” is used here to cover the whole complex consisting of these three parts. It can also be used as a synonym of “definiens”.

Or, the definitional character of the sentence can be stated in a heading or in some other way in the surrounding text:

Definition:

A man is a widower if and only if some woman died while married to him.

The definiens of a definition should have the same meaning as the definiendum has (or is given). It is common for proposed definitions to fall short of this requirement in ways that can be discovered without detailed knowledge of the meanings of the terms. The reason for this is that sameness in meaning can only be obtained if the definition satisfies three important formal congruence requirements, namely linguistic congruence, categorial congruence, and congruence in variables.

Perhaps most obviously, definiendum and definiens should be *linguistically congruent*. Hence a noun should not be defined by a verb phrase, or a plural noun by a singular noun, etc.

Not:

method = doing something
systematically

Acceleration means to increase velocity.

But rather:

method = a systematic way of doing
something

An acceleration is an increase in
velocity.

By *categorial congruence* is meant that definiens and definiendum belong to the same general category of concepts. A state of mind should not be defined as a state of the external world, an evaluative concept should not be defined as a descriptive one, etc. There is of course no general list of categories that can be appealed to when checking categorial congruence. A good education in philosophy furnishes us with useful distinctions that can be used to identify relevant categories in each particular case.

Not:

Preference means that something is
better than something else.

But rather:

A preference is a standpoint that
something is better than something else.

Remorse is when a person seriously deplors that she has made a mistake.

Remorse is the attitude or emotion a person has when she seriously deplors that she has made a mistake.

In the first of these two examples, the left-hand definition defines preference as an objective relational property of two objects. The right-hand, improved definition, treats preference as a potential element of a state of mind. (The definiens of the left definition would have been more appropriate for the definiendum “betterness”.) In the second example, the problem with the left-hand definition is that it does not clarify what category the definiendum belongs to. In the right-hand definition it is made clear that remorse is an attitude or an emotion, i.e. some kind of state of mind.

Finally, in addition to linguistic and categorial congruence, *congruence in variables* is required. This means that the same variables should be used in the definiens as in the definiendum.

Not:

A substance is a carcinogen at dose d if and only if it gives rise to an increased frequency of some malignant disease.

A person is a suspect if and only if at a particular point in time, the police is actively investigating a suspicion that this person has committed a crime.

An object is a market good in a particular jurisdiction if and only if it can be owned and its owner has the right to sell it to a new owner.

But rather:

A substance is a carcinogen at dose d if and only if exposure to dose d of the substance gives rise to an increased frequency of some malignant disease.

A person is a suspect at a particular point in time if and only if the police is at that point in time actively investigating a suspicion that this person has committed a crime.

An object is a market good in a particular jurisdiction if and only if it can in that jurisdiction be owned and its owner has the right to sell it to a new owner.

It could be argued in these examples that the variable is implicit on the side of the definition on which it was not explicitly stated. However, experience shows that it is better to write out

definitions meticulously. The practice, shown in the first example, of writing out variables as letters is often preferable in precise definitional work.

Even if a definition satisfies the three congruences, it may of course be faulty due to unintended or unserviceable differences in meaning between the definiens and the definiendum. Discussions about such differences are often couched in terms of how “wide” or “narrow” the definition is. If the definiens includes something that should be excluded, then the definition is said to be too wide. If it excludes something that should be included, then it is called too narrow. A definition can be too wide and too narrow at the same time:

A Scandinavian is a person who lives in Sweden. (too narrow)

A Scandinavian is a person who lives in Northern Europe. (too wide)

A Scandinavian is a person who understands the Swedish language. (both too narrow and too wide)

4. Choosing a primary definiendum

An often-neglected aspect of definition work is the choice of an expedient form of the definiendum. It is a common mistake to believe that if we want to define a term from either ordinary or scientific language, then we should take this term as it stands and make it the definiendum of our definition.

The term in question may be more difficult to work with as a definiendum than some other, related term from which it can in its turn be defined. Hence, if we want to define “stability”, it is advisable not to proceed in the format “stability is...”. It is much easier in this case to get started if we define stability as the property of being stable, and then focus our serious definitional work on the term “stable”. A (preliminary) format for that definition is “X is stable if and only if...”.

Many of the terms that we wish to define come in clusters of closely related terms. “Stability” and “stable” belong to one such cluster; “know” and “knowledge” to another, “safety”, “safe”, and “safer” to a third. In serious definition work it is essential to identify

the cluster to which the term that we began with belongs. A dictionary is a useful tool for doing this, but it should not be taken for granted that the dictionary provides all the relevant forms. Hence, in the case of “stable”, the comparative form “more stable than” will not be found in most dictionaries.

After the cluster has been identified, a preliminary analysis should be performed of the interrelations among its elements, in order to determine if and how they can be defined in terms of each other. On the basis of this analysis, one of these concepts can be chosen as the primary definiendum, the definiendum on which the work will be focused.

Using the concept of safety as an example, let us begin by identifying the cluster of concepts to which it belongs. A dictionary will provide us with the words “safety”, “safe”, “safer”, “safest”, “safely”, and “safeness”. We need to investigate the relationships of interdefinability between these words.

“Safely” is an adverb. Like many other adverbs, it can in general be defined in terms of the corresponding adjective. Hence, to say that someone drives safely is equivalent to saying that her driving is safe. On the other hand, not all uses of the adjective “safe” can be expressed in terms of the adverb “safely”. The problematic cases are those in which the adjective is applied to a noun that does not express an activity for which there is a corresponding verb to which the adverb can be applied. A “safe drive” is an act of driving safely, but when we say that somebody stood at a “safe distance” from the fire, there is no activity corresponding to the noun “distance” to which we can apply the adverb “safely”. (Admittedly, we can reformulate the whole phrase and speak about “a distance at which one can stand safely”, but this is not satisfactory since no such reformulation covers all uses of the phrase “safe distance”.) Therefore, “safely” is definable in terms of “safe” but not the other way around. This is a good reason for preferring “safe” to “safely” as a definiendum.

“Safety” and the more unusual “safeness” are synonyms (terms for the same concept) and thus trivially interdefinable. Safety

is a property, and must be related to something that possesses this property, hence a preliminary definiendum for safety can have the form “Safety is the property which something *X* has if and only if...”. The adjective “safe” also denotes a property that must be related to something that has the property, hence a preliminary definiendum for “safe” can be: “Something *X* is safe if and only if...” We can reasonably take “*X* has the property of safety” and “*X* is safe” to be synonymous. This means that “safe” and “safety” are fully interdefinable. Since “safe” gives rise to more straight-forward linguistic constructions, it is the better choice of the two.

However, the adjective “safe” has three forms, namely the absolute “safe”, the comparative “safer” and the superlative “safest”. It remains to choose which of the three to use as a primary definiendum.

“Safest” is definable in terms of “safer”. The safest car is the car that is safer than all the other cars. Similarly, “safer” can be defined in terms of “safest”: *X* is safer than *Y* if and only if *X* is safest among the two cars *X* and *Y*. Hence, the two forms are interchangeable. Since the definition of the comparative in terms of the superlative is much more awkward, “safer” will be used as a representative of these two interchangeable forms.

With this we have reduced our list to two terms, namely the absolute “safe” and the comparative “safer”. The choice between these two forms will have to depend on whether we are going to treat safety as an absolute or a relative concept. If “safe” is an absolute concept, in the sense that it only comes in two degrees (safe and unsafe), then the relative form “safer” has no use (other than for the trivial observation that *X* is safer than *Y* if and only if *X* is safe and *Y* is unsafe). If, on the other hand, “safe” is a relative concept, then the term “safer” will be much more useful.

The two words “safe” and “safer” exemplify a relationship that holds for many other such pairs of an absolute and a relative property-concept. (The most philosophically important such pair is “good” and “better”, see Hansson 2001.) We have a scale from the least to the most safe, and the relative concept “safer” can be used to

express relative positions on that scale. At some point on the scale, we can insert a limit for the “safe”. Similarly, there is a scale from the destitute to the very rich, with relative positions defined by the term “richer”. Somewhere on that scale the limit for “rich” can be inserted.

It is typical of such scales that the relative concept is more easily defined than the absolute one. The criterion for when one person is richer than another can be determined in a relatively precise and non-arbitrary way, but to determine the level at which a person is “rich” is a more arbitrary undertaking. Similarly, the criteria for when a ski-lift is safer than another ski-lift are relatively easy to decide, but it is much more difficult to decide at what level of fulfilment of these criteria the lift can be said to be “safe” simpliciter.

Another way to express this is that in order to define an absolute property-concept such as “safe” or “rich” we need to determine both the quality and the quantity of the property. In order to define the corresponding relative concept, “safer” respectively “richer”, we only need to determine the quality. Therefore, it is expedient to begin with the relative concept, and define it as precisely as we can before we proceed to deal with the absolute concept. This way of proceeding has the advantage that we can distinguish between those problems in the definition that relate to the qualitative respectively quantitative aspects of the concept.

However, we are still not finished. “Safer” is closely related to two other relative concepts, namely “at least as safe as” and “equally safe as”. It is well-known from the logic of relations that “at least as safe as” is more convenient as a logical primitive than the other two, since they can both be defined in terms of it. Clearly, X is safer than Y if and only if X is at least as safe as Y and Y is not at least as safe as X . Similarly, X is equally safe as Y if and only if X is at least as safe as Y and Y is at least as safe as X . For the sake of simplicity it is therefore preferable to use “at least as safe” instead of “safer” as a primary definiendum for the relative concept. This amounts to the following preliminary format for the definition:

X is at least as safe as Y if and only if...³

5. Selecting the variables

Another reason why the definiendum must be chosen with care is that it is often necessary to add variables to it, that will then reappear in the definiens. Hence, in the definition of “stable”, the variable-free format “stable is...” will be difficult to treat. The essential variable that must be added here is of course the object or entity that is stable. Once the definiendum has been reformulated as “ X is stable if and only if...” it will be much easier to start looking for a definiens that does the job.

In most non-philosophical contexts it is advisable to avoid clumsy phrases such as “at a certain point in time and in a certain place”. In philosophical contexts, however, such constructions are often useful, and one should not then avoid them for stylistic reasons. In particular, they are often essential components of a definition, without which it may be impossible to achieve sufficient precision. Furthermore, as already mentioned, it is often convenient to use symbols such as letters to keep track of the variables. This also makes it easier to check that the same variables appear in both the definiens and the definiendum.

Less precise:

A cousin is a person with whom one has at least one grandparent in common but no parent in common.

More precise:

Person A is a cousin of person B if and only if (1) there is a person who is a grandparent of both A and B, and (2) there is no person who is a parent of both A and B.

It is often far from obvious what variables should be included in a definition. In cases of doubt, it is a good working rule to include rather than exclude a variable. If one finds out later that the variable does no useful work, it can then easily be removed.

³ For a discussion of how this definiendum can be defined, see Möller et al 2006.

In some cases the identification of the relevant variables in a definition can be philosophically, or even politically, controversial. Hence, it is a contested issue in moral philosophy if “duty” should be defined with one or two person variables:

Person A has a duty to do X if and only if...

Person A has a duty towards person B to do X if and only if...

The substantial issue here is whether duties can be impersonal or all duties are owed to some particular person (counterparty), as is presupposed in the second of these definitions. (Makinson 1986)

The choice of variables for “free” is no less controversial. Here the major alternatives include:

A is free if and only if...

A is free from the obstacle X if and only if...

A is free to perform the action Y if and only if...

A is free from the obstacle X to perform the action Y if and only if...

The choice between these alternatives is controversial in political philosophy. The second of these definienda corresponds to the “negative” notion of freedom, according to which freedom consists in the lack of (human-made) obstacles, and the third to the “positive” notion of freedom according to which freedom consists in ability to make and implement one’s own choices. (Berlin 1969) The fourth definiendum is based on Gerald MacCallum’s (1967) attempt at a unified analysis of the notion of freedom. The negative notion of freedom is usually associated with right-oriented and the positive notion with left-oriented politics. MacCallum’s definition has been accused of both a left-wing and a right-wing bias (Gould 1980. Parent 1983, p. 253). From an analytical point of view, MacCallum’s proposal (and the fourth of the above definienda) has the advantage that different views on freedom can be represented in one and the same format.

6. The case-list method

Given that we have chosen an appropriate primary definiendum and associated with it an appropriate list of variables, our task is now to develop a definiens that includes exactly that which it should cover, nothing more, nothing less. Two methods to do this will be presented here. They will be called the case-list method and the method of successive improvements. Both these methods take as their starting-point a preliminary definition that is then improved.

A good way to find that starting-point is often to consult a dictionary. Large dictionaries such as the Oxford English Dictionary and the corresponding large dictionaries in other languages usually provide good lexical definitions that can be used as starting-points. It is often also useful to consult dictionary definitions of related terms in other languages. Hence, if we wish to define the English word “science”, we can learn from comparisons with the (wider) German term “Wissenschaft”.

The case-list method is best suited for lexical definitions. It begins with the compilation of two extensive lists of test cases. One of these contains cases that should be covered by the definition, and the other cases that should not be covered. Both lists should include “limiting” cases, i.e. cases that are close to the limit of what the definition should cover. The preliminary definition is checked against the two lists, and after that the definition is adjusted in order to comply better with them. This is repeated until the resulting definition conforms completely with the two lists. If the lists are representative of common usage, then the resulting definition will be an appropriate lexical definition of the term in question.

Suppose for an example that we want to define “traffic accident”, and that the two lists are as follows: (In a full discussion of this definition, the lists would have to be longer, but these short lists can be used to illustrate the method.)

Positive list (traffic accidents)
 1+
 A car-driver loses control of his vehicle and drives into a house. Two

Negative list (not traffic accidents)
 1-
 Two pedestrians run into each other on a zebra crossing, and one of them is

persons in the house are injured.

2+

Two cyclists collide. One of the bicycles is damaged, but no person is hurt.

3+

A parked car rolls down a hill due to malfunction of the handbrake, and hits another car. No person is hurt.

4+

A jogger runs into a car that is driving on a parking lot, and breaks her arm.

hurt.

2–

A jogger runs into a car that is parked on the pavement, and breaks her arm.

3–

A cyclist standing still while waiting for green light is hit by a snowball, falls and is hurt.

4–

A man wilfully kills his ex-wife by driving over her when she crosses a street.

Suppose that we begin with the following preliminary definition of a traffic accident:

A traffic accident is an event in which a motor vehicle causes personal injury.

We can then see from 2+ that the vehicle need not be a motor vehicle. However, as can be seen from 1– some kind of vehicle (not only pedestrians) have to be involved. It follows from 2– and 3– that the vehicle has to be moving and from 3+ that it does not have to be driven. All this can be summarized by replacing “motor vehicle” by “moving vehicle”. It follows from 2+ and 3+ that the event need not cause personal injury to qualify as a traffic accident; material damage is enough. Thus “personal injury” should be replaced by “personal injury or material damage”. Finally, it can be seen from 4– that an event in which the damage is caused intentionally is not a traffic accident, thus we should add the word “unintentional” to the definition. These considerations give rise to the following, improved definition.

A traffic accident is an event in which a moving vehicle causes unintentional personal injury or material damage.

7. The method of successive improvements

As already noted, the case-list method is primarily intended for lexical definitions. It can be used for stipulative definitions as well. However, it easily leads to entangled definitions with many exception clauses. In order to achieve a stipulative definition that is reasonably simple, the *method of successive improvements* is usually preferable.

In this method as well, we begin with a preliminary definition that can have its origin in a dictionary or in some other report of common usage. If that definition is not found to be satisfactory, we identify its major (or most obvious) deficiency. The next step is to carefully consider how this deficiency can be avoided and whether the improvement is worth other possible drawbacks such as making the definition more complex. The resulting definition is evaluated, discussed and possibly amended. In this way we approach a new definition through a series of successive improvements. The process is halted when a definition has been obtained that we do not manage to improve without overweighing drawbacks, typically in terms of complexity.

As an example of this method we can define the political concept of “discrimination”. (Hansson 2005) Probably the most obvious feature of discrimination is that certain persons receive worse treatment than others. We can therefore begin with the following tentative definition:

- (1) A person is subject to discrimination if and only if she receives worse treatment, or less of some advantage, than others.

This definition is obviously too wide. An employee who steals from the workplace will probably receive worse treatment from the employer than her colleagues, but we would not call that discrimination. Generally speaking we do not call a deservedly worse treatment discrimination. The definition can be adjusted to accommodate this insight:

- (2) A person is subject to discrimination if and only if she receives worse treatment, or less of some advantage, than others, without sufficient justification to select her for such inferior treatment.

Clearly, “sufficient justification” is open to interpretation, but that is not necessarily a drawback. We cannot require of a definition of discrimination that it contains in itself the answer to whether or not discrimination is at hand in a particular case. It should, however, tell us what needs to be determined in order to answer that question. Whether or not the inferior treatment is well-deserved seems to be something that has to be determined for this purpose.

However, discrimination does not refer to undeservedly inferior treatment in general. A person who criticizes minimum wages for being too low would not typically describe this as a case of discrimination⁴. In other words, we need to distinguish discrimination from general inequality. The difference can be seen from the typical cases of discrimination that we usually refer to, such as discrimination of women, ethnic and religious groups, sexual minorities etc. A crucial issue is the *selection* of persons for these different treatments. Someone can, for instance, complain that women are discriminated against since they have most of the low-paid jobs, without having any complaint against the existence of such low-paid jobs. Hence, whereas “inequality” refers to differences in treatment or conditions, “discrimination” refers primarily to selection for such treatment or conditions. This should be reflected in a definition of discrimination.

In the cases that have attracted public attention, discrimination affects the members of certain groups, such as those just mentioned. Adverse treatment can also affect a single person, but this is not normally called discrimination. (We have other words such as “harassment” to denote individual mistreatment.) In a

⁴ Unless, of course, as a way to point out that those who receive minimum wages predominantly belong to some group, such as an ethnic group, that is at disadvantage also in other respects.

stipulative definition, a terminological decision has to be made whether or not the meaning of the term should be extended to cover unfair treatment of an individual that does not depend on her being a member of some group. Let us assume here that we decide not to extend the term in this way. We can then amend the definition as follows:

- (3) A person is subject to discrimination if and only if she receives worse treatment, or less of some advantage, than others, because she belongs to a group that has been selected for such treatment without sufficient justification.

The phrase “without sufficient justification” will have to be retained in the revised definition because there may be groups of persons (such as justly convicted criminals) who are subject to worse treatments than others for good reasons.

Definition (3) is a reasonable definition of “discrimination”, but it is not necessarily a final definition. In order to determine whether to stop here or to further modify the definition it is useful to consider carefully each of the key terms of the definiens. We can exemplify this by considering the phrase “worse treatment, or less of some advantage” in definition (3).

One of the most intriguing issues about discrimination is in what areas of human life non-discrimination should be enforced. Many acts that treat members of a discriminated group unfairly take place in the private sphere, in which we do not enforce the standards of fairness and equal treatment that are upheld in the public sphere. Our choices of friends and acquaintances are examples of this. A white family that never invites non-whites to visit their home may be prejudiced and bigoted, but we would nevertheless consider them to be acting completely within their rights when choosing the company they want. “The pleasure of my company may, or may not, be one of the great goods, but it is for me to decide on whom to bestow it, however ardently you may yearn for it”. (Lucas 1985) Nevertheless, many such permissible small private evils can add up to a great social evil. When defining “discrimination” we will have

to decide whether or not unfair treatment in the private sphere should be included. If we choose not to include it, then definition (3) will have to be amended.

The final choices in a case like this will depend on the purpose of the definition. It is advisable not to “load” a definition with too many details. Therefore, depending on the purpose of the definition it may be advisable to let a relatively simple definition such as (3) stand, after careful consideration of possible further provisos that would make it more precise at the price of also making it less straightforward.

The above descriptions of the case-list and successive improvement methods may give the impression that the construction of a definition is a routine activity. Therefore, it should be added that in many cases, a fair amount of ingeniousness is needed to construct a workable definition. An interesting example of this is the definition of “game”. Wittgenstein (1953) claimed that there is no set of characteristics that is common to everything that we call a game. Therefore, he said, the best that we can do is to give a list of characteristics such that all games have some of these characteristics. (This is still the standard example of a “family resemblance”.) It took a quarter of a century until Bernard Suits (1978) presented a unifying definition of a game, of precisely the type that Wittgenstein claimed to be impossible. A game is, according to this definition, an activity in which one pursues a goal that can be described independently of the game (such as getting a ball into a hole in the ground) but willingly accepts rules that forbid the most efficient way to achieve that goal (such as placing the ball in the hole by hand). (Cf. Hurka 2004 p. 251-252)

8. Defining vague concepts

The definition of a vague term is often problematic. We have the choice between constructing a *vagueness-preserving* or a *vagueness-resolving* definition. In the former case, the definiens will be vague just like the definiendum. This can be perceived as unsatisfactory. In the latter case, the definiens will be more precise than the

definiendum. This means that the definiens will not mirror the meaning of the term to be defined, which can also be seen as unsatisfactory.

For practical purposes we can distinguish between two types of vagueness, namely one-dimensional and multi-dimensional vagueness. Vagueness is one-dimensional if it refers to a property for which we have a well-defined scale. The vagueness consists here in the lack of a precise point on the scale where the property starts to hold. As an example we can consider the property of a chemical substance to be water-soluble. The relevant scale here is solubility in water, that is well-defined. We can easily determine how water-soluble a substance is, and compare it in that respect to other substances. The vagueness inherent in the concept concerns how soluble a substance has to be in water in order to count as water-soluble. Similarly, to be bald is to have few hairs, but it is not well-determined how few the hairs on a head must be for the person to count as bald.

In cases like these, i.e. cases of one-dimensional vagueness, we can choose between a vagueness-preserving and a vagueness-resolving definition. The following are examples of vagueness-preserving definitions:

A person is bald if and only if she has few or no hairs on her scalp.

A substance is water-soluble to the extent that it can be dissolved in water at 20 °C.

In the second of these definitions, the phrase “to the extent that” serves as the defining connective.

The following is a vagueness-resolving definition:

A substance is water-soluble if and only if at least 1 weight-unit of the substance can be dissolved in 10 weight-units of water at 20 °C.

No vagueness-resolving definition of baldness seems to be available, and indeed, none is needed. Generally speaking, vagueness-resolving definitions are primarily used when they are

needed for scientific or technical standard-setting or for legal purposes. We have legal rules for how to handle inflammable substances, and therefore we have vagueness-resolving definitions of inflammability. Since we have no special rules for dealing with bald persons, we do not need any vagueness-resolving definition of baldness.

Multi-dimensional vagueness is exemplified by the concept of a “safe car”. There are many criteria that a car should satisfy in order to be counted as safe: it should have proper safety belts and airbags, proper seating for children, a well-constructed crumple zone, an anti-lock breaking system, a pedestrian protection system, etc. It is difficult, arguably impossible, to reduce all these properties of a vehicle into a single, one-dimensional measure. In cases like this, a definition will have to be vagueness-preserving, such as:

A motor vehicle is safe to the extent that it has features that reduce either the probability of accidents or the effects on human health of any accident in which it may be involved.

9. Defining value-laden concepts

Many of the words that we may want to define are strongly value-laden. Their value-ladenness can be uncontroversially positive, hence we all consider “justice” to denote something positive, or uncontroversially negative as in the case of “bureaucracy”. It can also be contested, as in the case of “religion” and “liberal”. These are words that some consider to have positive, others negative connotations.

Value-ladenness of any of these three types tends to be strongly connected to the word and almost impossible to remove. This is important to observe both in lexical and stipulative definition work. A lexical definition of a value-laden term should have a definiens that is value-laden in the same way, since otherwise the definiens and the definiendum will not have the same meaning. Hence, a value-neutral definition of “betrayal”, “pseudoscience”, or “accident” would be misleading.

In particular in the social sciences, attempts are often made to produce value-neutral versions of concepts that are value-laden in everyday language. This is sometimes done by constructing stipulative definitions that assign a value-neutral definiens to a word that is normally conceived as value-laden. Hence, some social scientists have wanted to define “bureaucracy” in a value-neutral way. A value-neutral concept of this nature is certainly useful for social science, but it turns out to be difficult to use the word “bureaucracy” for it. This word tends to retain its negative connotations however much one tries to define it as value-neutral. It is better to use some other word, in this case perhaps “administration”, for the value-neutral concept.

10. Defining controversial concepts

Many words and concepts, perhaps in particular those used in politics and religion, are difficult or impossible to define in an uncontroversial way since there are widely divergent views on how they should be used. WB Gallie (1956) proposed that some of these concepts should be seen as essentially contested (essentially contestable). By this he meant that it is in their very nature to be interpreted differently according to the ideology of the interpreter. The exact delineation of these concepts cannot be unequivocally determined by rational argument. Gallie provided four examples of essentially contested concepts, namely democracy, social justice, art, and Christian faith.

Not all contested concepts are *essentially* so. The touchstone of essentiality is that if the concept is made uncontested through some modification, then this modification also distorts it so seriously that it is hardly the same concept any more.

Even if a term is essentially contested, it may be possible to conduct a rational discussion on what it means. HLA Hart’s (1961, p. 156) analysis of the concept of justice is a classic example of how this can be done. He maintained that this concept consists of two parts: (1) a constant part, namely the injunction to treat equal cases equally, and (2) a variable part that consists of (competing) criteria

for what it means that two cases are equal. John Rawls (1972, p. 5), who makes a similar distinction, calls the common part of the idea of justice the “concept” of justice and refers to variants of the variable part as different “conceptions” of justice. A libertarian and a left-winger can agree that equal cases should be treated equally, but they will have quite different views on what makes cases equal in the relevant sense. The left-winger will consider a rich and a poor person with the same medical condition as equally positioned in relation to a just distribution of medical resources, whereas the libertarian will tend to regard their cases as different in a relevant respect.

This distinction between concept and conception is often highly useful also in the definition of other contested terms. A definition that clarifies exactly what is common, and what differs, between different views on the meaning of a term, can be an important contribution to conceptual clarity.

11. Defining inconsistent concepts

Some concepts are said to be even worse than contested: they are claimed to be inconsistent. Age-old examples can be found in the philosophy of religion. According to a common atheist approach to theodicy, the concept of God includes the properties of being omnipotent, omniscient, and perfectly good. Since these properties cannot be combined in one and the same being, it is claimed, the concept of God is inconsistent. Some authors have gone further and maintained that one or other of these three essential properties of God is in itself inconsistent. Most commonly, this has been said of omnipotence. Arguably, an omnipotent being cannot make a stone that it cannot itself lift, thus it cannot be omnipotent after all. (Anderson 1984. Cf. Puccetti 1963.) Theologians have dealt with these problems by refining the concepts involved. Hence, omnipotence can be restricted at least so that logically impossible feats are not required, and other restrictions can be applied to the other two properties that give rise to the theodicy problem.

However, the type of blatant inconsistency that threatens in the theodicy problem is relatively uncommon. Most cases of conceptual inconsistency are more sophisticated than that. In particular, some concepts will emerge as inconsistent only in the sense that there are logically possible situations in which they will be inconsistent. (Hansson 2000) The concepts that we use have been tailored to deal with the world that we live in, not with every logically possible world. Many such concepts are “overdetermined” with respect to empirical conditions. When, in real life, x and y always come together, we tend to incorporate this combination into a common concept. Such a practice has obvious advantages in terms of simplicity, but it also makes us conceptually unprepared for analyzing hypothetical situations in which x and y do not come together.

One of the best examples of a potentially inconsistent concept is that of a person. This concept has the two properties that (1) one person can never branch into two, and (2) continued consciousness constitutes identity of person. This combination is unproblematic in real life since both properties hold without exceptions for human beings as we know and conceive them. However, it gives rise to inconsistency in certain science fiction contexts where persons can be duplicated, with continuity of consciousness preserved in both replicas.

What is the appropriate philosophical reaction to the potential inconsistency of concepts such as that of a person? A radical approach is to discontinue any serious use of them and in particular to block any argument that depends on them. This approach is exemplified by Parfit's (1987 [1984]) appeal to the (potential) inconsistency of the concept of a person when arguing against the moral relevance of persons, and hence in favour of an impersonal ethical theory. The problematic nature of this way of conducting philosophy was pointed out by Quine:

To seek what is 'logically required' for sameness of person under unprecedented circumstances is to suggest that words have the same

logical force beyond what our past needs have invested them with. (Quine 1972, p. 490)

It would be overzealous to purge the language of potential inconsistencies. We can use a concept in our deliberations about the human condition and the world that we live in even if it would be inadequate in discussions on hypothetical worlds that differ radically from the one we live in. This is an application of the general principle that definitions should be adjusted to the intended usage of the terms we are defining.

References

- ANDERSON, C Anthony. “Divine omnipotence and impossible tasks: an intensional analysis”, *International Journal for Philosophy of Religion*, 1984, 15, p. 109-124.
- BERLIN, Isaiah. *Four Essays on Liberty*, Oxford, Oxford University Press, 1969.
- GALLIE, W.B. “Essentially Contested Concepts”, *Proceedings of the Aristotelian Society*, 1956, 56, p. 167-198.
- GOULD, James. “Freedom: Triadic or Tripartite?”, *Modern Schoolman*, 1980, 58, p. 47-52.
- HANSSON, Sven Ove. “Essentially inconsistent concepts”, *Conceptus*, 2000, 33, p. 57-66.
- _____. *The Structure of Values and Norms*, Cambridge University Press, 2001.
- _____. “Privacy, Discrimination, and Inequality in the Workplace”, p. 119-135 in Sven Ove Hansson and Elin Palm (eds.) *The Ethics of Workplace Privacy*, Peter Lang, Brussels, 2005.
- HART, H.L.A. *The Concept of Law*, Oxford, Clarendon Press. 1961.
- HURKA, Thomas. “Normative Ethics: Back to the Future”, p. 246-264 in Brian Leiter (ed.) *The Future for Philosophy*, Oxford: Clarendon Press, 2004.
- LUCAS, J.R. “Discrimination”, *Aristotelian Society, Supplement*, 1985, 59, p. 307-324.

- MAcCALLUM, Gerald. "Negative and Positive Freedom", *Philosophical Review*, 1967, 76, p. 312-334.
- MAKINSON, David. "On the Formal Representation of Rights Relations", *Journal of Philosophical Logic*, 1986, 15:403-425.
- MÖLLER, Niklas, Sven Ove Hansson, and Martin Peterson. "Safety is More Than the Antonym of Risk", *Journal of Applied Philosophy*, 2006, 23(4), p. 419-432.
- PARENT, William. "Recent Work on the Concept of Liberty", p. 247-275 in KG Lucey and TR Machan (eds.), *Recent Work in Philosophy*, Totowa, N.J, Rowman and Allanheld, 1983.
- PARFIT, Derek. *Reasons and Persons*, Clarendon Press, Oxford, 1987 [1984].
- PUC CETTI, Roland. "Is omniscience possible?", *Australasian Journal of Philosophy*, 1963, 41, p. 92-93.
- QUINE, W.V. Review, *Journal of Philosophy*, 1972, 69, p. 488-497.
- RAWLS, John. *A Theory of Justice*, Oxford, Clarendon Press, 1972.
- SUITS, Bernard. *The Grasshopper: Games, Life and Utopia*, University of Toronto Press, 1978.
- WITTGENSTEIN, Ludwig. *Philosophical Investigations* (transl. G.E.M. Anscombe), Oxford, Blackwell, 1953.