# REASONING FROM CLASSIFICATIONS AND DEFINITIONS

Many argumentation schemes have now been studied in modern argumentation theories (Hastings, 1963; Kienpointner, 1992; Walton, 2006), and there has been in-depth inquiry into well-known schemes like argument from expert opinion, argument from analogy, and so forth. However, it is interesting to notice that very little attention has been paid to what is arguably one of the most fundamental schemes, namely what has been in the history of schemes referred to as "argument from verbal classification". Classification is fundamental for the simple reason that reality must be named and linguistically organized in order to talk about it. Moreover, verbal classification is in many ways the subtlest and most powerful argumentative tool. Accepting a verbal classification, that is, the use of a particular word to denote a fragment of reality, requires accepting the classified object's possession of certain properties. The acceptance of these properties, without the audience (respondent) realizing it, may, by inference, warrant the acceptance of a conclusion. In this paper we will look at several examples from which lessons can be drawn. In particular, we will show how the process of "naming reality" or classifying it can be used in inferences leading to value judgments.[1] For instance, the conclusion "This is a bad company" can be supported by a factual premise such as "It has monopolized the market". Schiappa (2003, p. 131) and Zarefsky (2006, p. 404) call this strategy argument by definition (Zarefsky uses also the name 'persuasive definition') and represent it as a pattern of the following kind: *x* is *P (*therefore, *x* is good/bad). These argumentation patterns, both based on endoxical propositions, can be used fallaciously by manipulating the commitments (or *endoxa*) of the interlocutor.

The modern concept of classification or naming describes the effects of a process of inference grounded on a semantic link between premises and conclusion called in the ancient tradition "*locus a definitione*", namely topics from definition. Definition, in other words, describes the semantic reason linking a premise such as *P*, "Bounce – O Company controls the manufacture of all ping-pong balls in the U.S." to the conclusion *C* "Therefore Bounce – O company is a ping-pong ball monopoly" (Windes – Hastings 1965, p. 160). The logical link between the classification conclusion to the premise can be described by the missing premise "monopoly is control of the market", namely a definition of the concept of "monopoly".

If the argument from verbal classification shows how the conclusion is a classification of a fragment of reality based on some characteristics (namely how *C* follows from *P* in virtue of a link of classification), it does not show the semantic-ontological reason why the premises and the conclusion are linked (namely why "monopoly" and "control of the market" are connected, and how). The concept of definition, grounded in the Aristotelian semantic system, can help understand the missing relation between the logical aspects of the reasoning, based on a logical relationship, and the reasons of its reasonableness.

## 2. The role of classification and definition in argumentation

[1] This is not to interpret such arguments as purely verbal in nature. Argument from values (positive or negative) is a distinct argumentation scheme in its own right, and it can be joined to arguments from classification in significant ways, as several of the examples in this paper will show.

Definition plays a fundamental role in the process of classification. However, before analyzing how reasoning from classification works and the relation between definition and classification, we want to take into account its argumentative power, namely how classification and definitions can become powerful argumentative strategies.

The use of definition and classification is extremely complex and deeply embedded in argumentation [2]. The primary role of definition is the determination of the issue at stake. If two parties in a dialogue do not share the same understanding of the problem, there is a risk that the goal of the argumentation will not be achieved. In other words, the interlocutors can talk about the same words without talking about the same concepts. Aristotle highlighted this fundamental role of definition (*Sophistical Refutations*, *Topics*) taking into consideration the concept of polisemy and fallacies from ambiguity. Definitions however play other functions in argumentation and in particular they can be powerful instruments of persuasion, as emerges from the theories of Perelman, Stevenson, and Schiappa. In particular, definition is the instrument of naming reality, namely the aspect of shared knowledge allowing one to give a name to a fragment of reality. However, naming in many cases is not an argumentatively neutral process. On the contrary, names can constitute powerful instruments of persuasion and manipulation.

### *1.1. The argumentative and persuasive uses of definition*

In Perelman and Olbrecht-Tyteca's *The New Rhetoric* definitions are seen as standpoints that need to be supported by arguments (such as, for instance, etymology or consequences), and as arguments grounding a thesis. Definitions, for this reason, are analyzed as the result of an argumentation and as the premises for an ulterior argumentative move. In *The New Rhetoric*, definitions are seen as instruments which can be used to influence the relations between the concept and a whole system of thought (Perelman and Olbrechts-Tyteca, 1969, p. 213). A definition, for this reason, is always a matter of choice. The correspondence of identity between the *definiens* and the *definiendum* is a quasi-logical relation, argumentatively warranted. The most prominent argumentative strategy based on definition highlighted by Perelman is the dissociation of concepts. In order to support a point of view, a definition is used to reduce the denotation of a concept, by splitting the previous meaning of the term into two concepts. For instance (p. 418),"true" equity is opposed to "apparent" equity, thereby introducing a polisemic use of the term "equity" and distinguishing between two different concepts. This theory has been developed by Van Rees (2005). Her proposal is based on the observation that dissociation is always employed to introduce a new meaning of the word defined, which bears a certain connotation or value judgment[3].

The notion of dissociation introduces another extremely interesting function of definition, namely emotive persuasion. Some words, in fact, have an "emotive force" or are associated to certain consequences, such as legal terms (for instance, if a person is characterized as a "thief" he will be prosecuted). The relation between definitions, emotive language, and argumentation has been approached in the principal works of Stevenson and Schiappa.

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[2] For an insight into the argumentative use of definition, see (Robinson, 1950), (Walton, 2005),

[3] The concept of dissociation and of the emotive force of words is analyzed also in (Hallden, 1960).

Stevenson in *Ethics and Language* grounds his account of persuasive definition upon a behaviorist theory of language. The meaning of a word is the correlation between the sign and the reaction it provokes in the interlocutor (Stevenson, 1944, p. 54). There are two principal reactions, or types of meaning: the cognitive and the emotive reaction. The descriptive (cognitive) meaning is in some instances based on the emotive meaning. Some terms, in fact, are emotively charged because their referent is positively considered by the community of speakers. On the other hand, in some cases, such as ethical terms (the adjective "good" for instance), the two meanings cannot be distinguished. At the same time, these terms signify certain properties and evoke a certain behavior. This linguistic foundation is basic to understanding the strategies of persuasive definitions and quasi-definitions. In cases of persuasive definitions, a term that has a descriptive and an emotive meaning is re-defined in order to change its denotation. Its denotation can be restricted or enlarged, in order for the emotive reaction to apply to the categorization of a particular fragment of reality. The emotions of the interlocutors are directed towards the desired object. For instance, a positively valued term such as "culture" can be re-defined as being grounded on the fundamental property of "originality", and thereby including in this positive category of "cultured" people who have no wide knowledge. The mirror image of the persuasive definition is the quasi-definition. In this argumentative technique, the descriptive meaning is left unaltered, while the emotive meaning is changed. For instance, the positive emotive attitude elicited by the word "virtue" may be changed by the quasi definition "virtue is an antiquated rubbish which robs a man of all individuality". In this case, a positively connoted term can be used to express a negative emotive attitude that, in effect, works as an unstated premise in an argument.

Another interesting approach to definitions and to their use in argumentation is Schiappa's pragmatic theory. Schiappa refuses to recognize that words have an essential meaning, and instead defends a "social constructionist" conception of reality and language. He develops this position to support the conclusion that defining reality means advocating a theory and a point of view. Defining, in his opinion, is describing the use of a word to refer to objects according to the way that they are conceived by people. Every definition is based on a set of similarity-difference relationships, by means of which the speakers can classify reality. These relationships derive from the process of learning, and the meaning of a word is identified in the denotative conformity of a community of speakers. Schiappa, considering learning to be the result of a process of persuasion in which a theory is imposed on the learner, describes definition as a means of leading the interlocutor to accepting a specific theory. For this reason definition is depicted as an argumentative act whose goal is to alter our valuation of reality, an act imposing a different way of thinking. Schiappa applied this theory to the study of the "definitional ruptures", or re-definitions. A re-definition is always advanced to defend a particular viewpoint, such as in the case of the redefinition of "death" as "brain death". This terminological change was done for the purpose of extending the denotation of the term. On the other hand, a definitional change can be performed for the purpose of changing a determinate perspective on a fragment of reality. In sum, to fully grasp a definition we need to see it as dependent on the goal of the definer in a talk exchange.

Schiappa distinguished between two main schemes relative to definition:

| **Argument from definition** | **Argument by definition** |
|---|---|

| All X are Z; Y is an X; therefore Y is Z | X is Y (therefore R) |
|---|---|

The second scheme, by definition, is based on the persuasive use of naming. Naming a state of affairs X as Y is an argumentative strategy provoking an emotion (a reaction R). For instance, a complex reality can be denoted by a "domestic term" (for instance, a missile can be named "Peacekeeper") or a "bureaucratic term", incomprehensible for most of the interlocutors (for instance, neutron bombs are called "radiation enhancement weapon"). Names can enhance positive attitudes and at the same time denote or conceal a fragment of reality commonly considered negative. This characteristic of words is exploited in some descriptions. Defining and naming for Schiappa always express an attitude, orientating the interlocutor towards a certain conclusion. Describing reality is on his view never neutral either. The same reality can be differently framed, in order for it to be differently categorized. Some aspects of a situation or of an object can be emphasised while others are concealed or ignored. For this reason, the same fragment of reality can be differently described to defend specific points of view. Schiappa's theory, we can notice, is extremely interesting since it highlights the fundamental relation between definition, reality, and attitude. However, the "definitional relativism" his theory is grounded upon is problematic. His view that a definition is always aimed at altering our valuation of reality seems not to distinguish between redefinitions, fallacious definitions, and definitions shared by a community.

Schiappa and Stevenson point out the argumentative and persuasive use of definition. Both stress the fundamental relation between emotions and predication, and how a definition plays a crucial role in legitimating a predication of an emotive word or of a term which is argumentatively relevant (for instance, legal terms). In particular, whereas Schiappa focuses on the persuasive uses of definition, Stevenson analyzes the structure of persuasion through definition distinguishing between the descriptive and the emotive component of meaning.

### *1.2. Definitions, values, and argumentation*

If we take into consideration the persuasive uses of definition and Stevenson's distinction between emotive and descriptive meaning, we can try to reconstruct the inferential structure of the argumentative use of definition. In particular, if we inquire into Aristotle's concepts of choice and action, we can notice that the structure of the argumentative move can be analyzed as a two step reasoning: a process of classification and an inference drawn from the notion of "value".

In Aristotle's *Topics* and *Nicomachean Ethics*, the good, the pleasant and the useful, namely the desirable (αίρετόν) (*Topics* 118b, 27-30), are considered the principle of will and action (*Ethics* III, 4), "for everything aims at the good" (*Topics* 116a 18). Because the choice is based on the will which aims at the desirable, the desirable itself is the foundation of the decision making. The topics of the third book of Aristotle's *Topics* can be considered a set of reasons aimed at establishing what is desirable, on the basis of the interlocutor's interests and experiences. In other words, these topics can be used to determine what is good, what is bad, and what is better on the basis of values, namely reasons to act. If we apply the Aristotelian principles to the argumentation based on definition and classification, we can see how the connection between a classification and

the evaluation is simply a matter of common knowledge. Concepts such as “beauty”, “youth”, “courage”, “culture” are commonly considered to be positive in our culture (obviously this evaluation is highly subjective and culturally bound). In other words, these concepts are positive values and therefore desirable and reasons to act. The classification itself works in these cases as an implicit argument as in the analysis of the following classification of “the suppression of the opponents of Bolshevism”:

> These actions [the suppression of the opponents of the Bolshevism] are acts of peace.

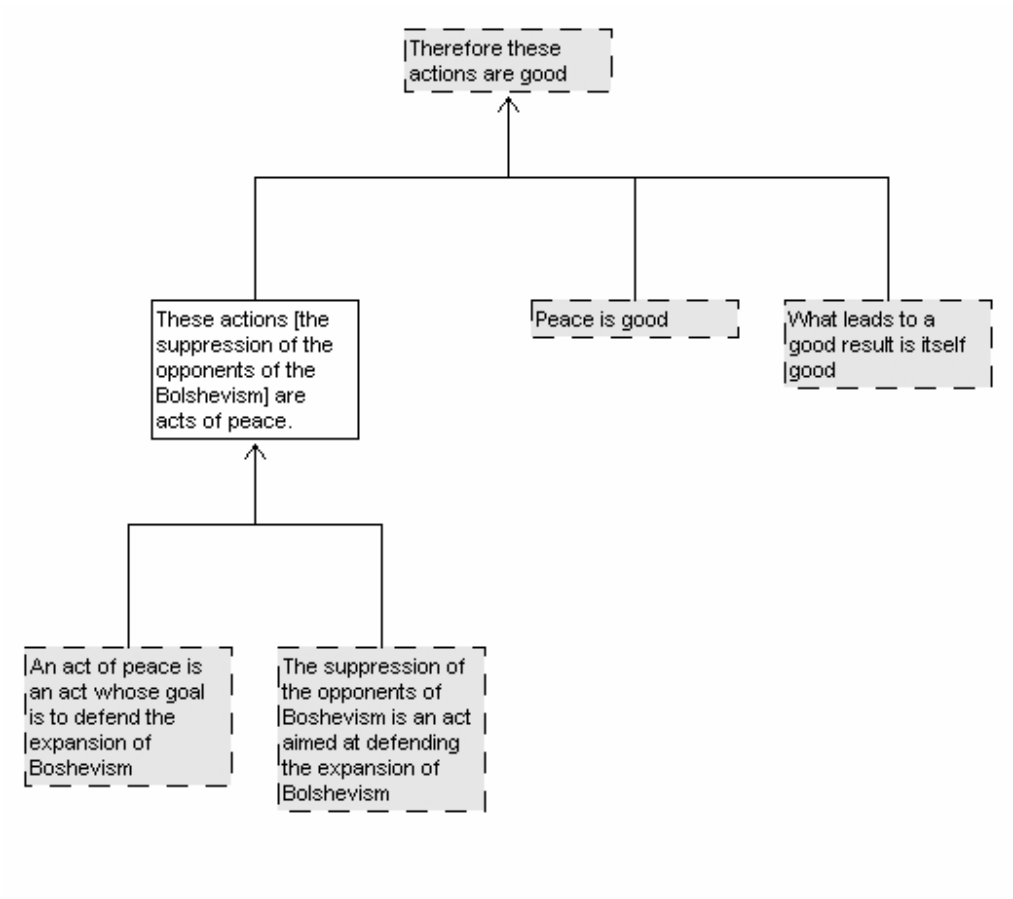


**Figure 1: Argument Diagram for the Bolshevism Example**

In the grey boxes the implicit premises are represented. We should observe that in the argument represented by the classification of “suppression of the opponents of Bolshevism” two crucial steps can be identified. The first step is the process of characterizing the fragment of reality considered as “acts of peace” by means of an implicit redefinition of “act of peace”. The second step is the evaluation of the suppression of the opponents, grounded on an endoxical premise (peace is good) and a maxim, what leads to good results is itself good (Aristotle, *Rhetoric* I, 6). This second implicit step leads to the conclusion that the suppression of the opponents is good (desirable). This evaluation is an implicit commitment to the rightfulness of the action.

The argumentation process leading from values to an evaluation, and therefore to a commitment, can be represented by the following argumentation scheme from values (Walton, Reed and Macagno, cap. 9):

***Argumentation from Values***

| | |
|---|---|
| PREMISE 1: | Value *V* is *positive* as judged by agent *A* (judgment value) |
| PREMISE 2: | The fact that value *V* is *positive* affects the interpretation and therefore the evaluation of goal *G* of agent *A* (If value *V* is *good*, it supports commitment to goal *G*, ). |
| CONCLUSION: | *V* is a reason for retaining commitment to goal *G* |

The second premise, in particular, represents an abstraction of the possible maxims connecting values and evaluations. It leads from a classification of a situation (acts of peace) to an evaluation (acts of peace are desirable), which is in itself an action (agent A supports acts of peace). By distinguishing between the process of classification from the evaluation (using the argumentation from values mentioned in (Walton, Reed and Macagno, cap. 9)), we can identify the role of definition plays in the persuasive process of persuasive definitions and how a definition can become manipulative.

*1.3. Manipulating definitions*

If we analyze the possible types of manipulation proceeding from the persuasive uses of definition, we can see that there are three main typologies of fallacies related to the process of classification. First, it is possible for the definition not to be shared by the interlocutor. Second, it can be the case not only that the definition is not shared, but also that the evaluation of the concept defined is altered. Third, the interlocutors might agree on the fact that the features given occur in a definition of an object, but the description of the fragment of reality (the object) is altered by the speaker in order for the object to fall into the classification.

An example of the first case is the Leninist definition of peace (Codevilla, 2003, pp. 69-70). Peace is defined as everything that favored the expansion of Bolshevism, included war itself. This new meaning of the word “peace” is used (or imposed) to classify acts of war. Obviously, this concept of “peace”, like many other concepts (such as “revolution’ itself (Codevilla, 2003, p. 63)) is not commonly shared by all interlocutors. The same word, for this reason, can be used to signify two contradictory concepts, and thereby manipulate communication.

In other cases, it can be the case that the definition is shared, but the evaluation of the concept it refers to is not. For instance, as Aristotle pointed out in (*Topics* II, 11), in some communities it is honorable to sacrifice the father, whereas in others it is not. The same concept (for instance “to sacrifice a relative”) can be defined in the same fashion, but differently evaluated. However definitions can be used to change the evaluation of the concept, as we can notice in the following case (Molière, 2000, p. 98), in which Don Juan is trying to persuade his interlocutor, Sganarelle, of the negativity of marriage and fidelity:

> **DON JUAN:** What! Would you restrict a man to staying chained to the first woman who takes his fancy, have him give up everything for her and never look at any others again? The idea is ludicrous – making a bogus virtue out of being faithful, being trapped forever in the same relationship and as good as dead from youth onwards to the other pretty faces that might catch our eye! No no: fidelity is for imbeciles. All beautiful women are entitled to our love, and the accident of being the first on the scene shouldn't deprive the rest of the rightful claims they have on our affections.

In this example, it is interesting to notice how the situation is described not only using a not-shared definition of marriage, fidelity and love, but also a not-shared evaluation of these concepts. In this argument, in fact, the speaker presupposes that being committed to a relationship is not desirable (trapped), that the women look for the kind of affection described as "love" and that the men have to fulfill the appetitive desires of women. These premises are hardly accepted as true by the interlocutor, a defendant of the faithfulness in the marriage and of the positive value of the original concepts. This redefinition takes into consideration only some accidental aspects of the concept defined, namely that a relationship can be a trap. The manipulation of the concept defined leading to altering the values associated to the *definiendum* can consist of narrowing or broadening a concept that sometimes is vague (see Aberdein, 2000), including positive (negative) accidental aspects or excluding positive (negative) essential aspects of the concept. There is nothing inherently fallacious in the speaker's defining a particular way he is using a term. The risk of fallacy can arise when he is presenting the particular word use as the proper use of the word everybody agrees upon. The risk of sophistry lies in the fact that the concept defined by the speaker is not the same as the hearer's, but is presented as such. By narrowing down a concept, it is possible to select only the worst or best aspects of the reality it refers to. We can examine the following example, in order to make this concept clearer (Goarke, Tindale 2004, p. 99):

> Socialism is that form of government that steals wealth from energetic people and divides it among the lazy poor.

Here the definition is of a commonly shared concept, socialism. The definition, instead of referring to the whole reality of what is commonly intended to be "socialism", takes into consideration only a particular aspect of it, namely its degeneration. The thing, the concept defined is another concept, namely the degenerated socialism, or the worst effects of socialism, not "socialism" itself. The definer, in other words, defines a new concept and make the negative emotive inferences of "degenerate socialism" apply to "socialism in its entirety.

The last case regards the relation between a shared definition and a not-shared framing of the situation. In order for a state of affairs to fall into a definition, it has to present the essential features stated in the definition. The speaker can use a shared definition, but presuppose that the situation presents some inexistent features, or suppress relevant evidence. For instance we can analyze the example below[4]:

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4 http://www.cwfpac.com/chairmans_corner_speeches_05_14_01.htm

> **Reverend BARRY LYNN (Americans United):** I just think it's incredibly inappropriate when you've got the head of an agency or a department of government having a daily religious ritual that includes some people and of course, by definition...
> **MATTHEWS:** OK, ritual--loaded term.
> **Rev. LYNN:** ...excludes some.
> **MATTHEWS:** Loaded term, ritual.
> **Rev. LYNN:** Oh, sure. But it is--but it is a prayer session, a study section. It does include a prayer as well and I think that the proof...

The word "ritual" presupposes a situation including not only prayers, but also some ceremonials making the situation itself a "religious ceremony". Here the definition is shared, but the situation is framed including facts that are not accepted by the other party, such as the presence of prayers. In fact, in the last move, Rev. Lynn has to prove that there are prayers as well. The classification can be based also on the suppression of relevant evidence. For instance we can consider the following case[5]:

> 'Once again Britain has been found sucking up to dictatorships.' (Or maintaining friendly relations with strong governments. Note how 'found' implies that we were discovered in a guilty secret.)

Here the classification is put forward referring to the relationships between Britain and fascist countries. If we consider this statement, which can be used as an implicit argument for drawing a value judgement on Britain, we can notice that the move consisting of classifying dictatorships as "strong governments" is fallacious. The definitions of "government" and "dictatorship" are shared, and in particular nobody would think that "dictatorship" does not include in its definition the suppression of political rights. The classification move presupposes that the countries mentioned do not suppress political rights (otherwise they would be dictatorships, and not governments), framing the situation in a fallacious way. The suppression of pieces of information relevant to the making of a classification can be considered as a case of suppression of evidence. This strategy is often used to depict a complex reality under a single label (see Rigotti 2005; Lakoff, 1996, p. 320; Goarke, Tindale 2004, pp. 86-87).

## 2. Schemes from verbal classification

As seen in the section above, naming reality can be examined as having two argumentative aspects: it is grounded on definitions and it often leads to evaluative inferences. In this section the inference leading from a definition to a classification, or to naming reality, will be analyzed, starting from the leading theories on argument from classification.

We can observe that the accounts presented approach the topic of reasoning from classification from two different points of view. On the one hand, Hastings is concerned with the logical structure of the link between premises and the classificatory conclusion, without considering the semantic reason allowing the factual premise to support the classificatory conclusion. On the other hand, Kienpointner's approach to argument schemes is more related to the connection between the conclusion and the semantic

[5] http://www.adamsmith.org/logicalfallacies/000638.php

reason. In particular, he examines the argument from definition. From the analysis of Hastings' and Kienpointner's schemes we come to assess the potential weaknesses of Walton's argumentation scheme from verbal classification and propose a new formulation of this inferential pattern.

*2.1 Hastings*

Hastings, in his Ph.D. thesis (1963), identified two schemes that can be treated under the label of argument from classification. The first scheme, in fact, leads from a set of characteristics to the attribution of a predicate to a subject, much like the process of classification described above. In the second scheme, a subject, classified as X, is predicated of the definition of X. In other words, first a predicate is attributed to a subject (the subject is classified); then in virtue of the definition of the predicate some fundamental characteristics are attributed to the subject.

We can notice that the second scheme is the mirror image of the first. The definition used to classify a subject is in the latter scheme applied to the classified subject. We can represent the two argument schemes as follows (see Hastings, 1963, pp. 36-52):

Argument from Criteria to Verbal Classification

> Event or object X has characteristics A, B, C…
> If *x* has characteristics A, B, C… then *x* is Q
> Therefore, event or object X is Q.

For example, Hastings gives the following example (p. 36):

> In Voluntary health insurance you generally get a poor return for your money because overhead and profits of the insurance company eat up huge chunks of the premiums you pay. On individual policies these companies spend for overhead and profits an average of about 60% of what you pay them and only about 40 cents of your premium dollar goes for benefits to policyholders. Obviously such insurance is a mighty poor buy.

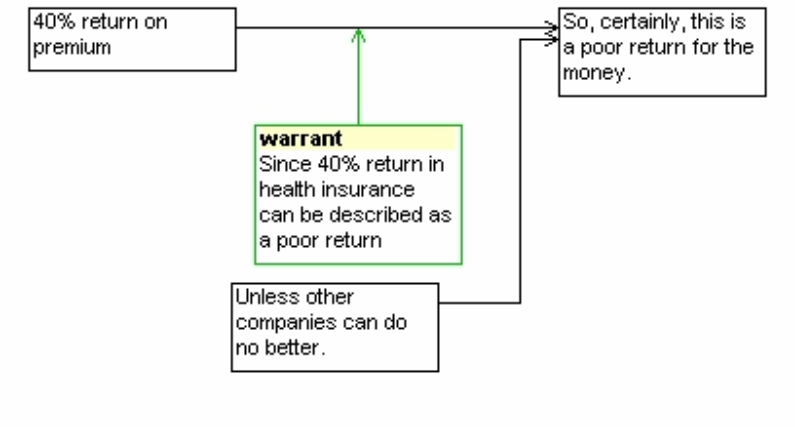


**Figure 2: Hastings' Insurance Example**

Hastings highlights the fact that the classification proceeds from the evidence *that is presented.* This is an extremely interesting observation, since we can notice that it is connected to the ancient studies on issues (*stasis*). According to this ancient theory (see Cicero and Hermagoras), the process of classification follows two other stages, in which evidence is collected and the definition of the terms is established.

The classification, moreover, proceeds from a rule of classification that is shared by the audience. There are seven critical questions attached to this scheme (pp. 42-45):

| | |
|---|---|
| C.Q.1 | What is the implicit definition being used? |
| C.Q.2 | Is the definition acceptable: are the criteria acceptable as a definition of the classification, label, adjectival category, etc.? |
| C.Q.3 | Are there exceptions or qualifications to the definition and criteria? |
| C.Q.4 | Are other criteria necessary for an adequate definition? |
| C.Q.5 | Do the characteristics described meet the criteria? |
| C.Q.6 | Are enough characteristics described to justify inclusion in this category? |
| C.Q.7 | Could the event fit better into another category, or be classified differently on the basis of its characteristics? |

In Hastings' argument from characteristics to verbal classification we can notice that the critical questions play a fundamental role. In the structure of the inference nothing is said about the nature of the conditional proposition, whereas the critical questions specify that the strength of the inference depends on the acceptability of the definition.

If the argument from criteria to verbal classification represents the conditions of the predication of a name, argument from definition to characteristics highlights the structure of the inferences that can be drawn from the predication itself. In his account of argument from definition to characteristics, Hastings (1963, 46-54) did not appear to offer any precise schematic form representing this argumentation scheme, even though he did set a list of three critical questions corresponding to this type of argument (53-54). The following new argumentation scheme for argument from definition to characteristics was put forward in (Walton, 2007, Pluto).

Argumentation Scheme for Argument from Definition to Characteristics

Premise: according to the definition *D* of concept *C*, property *P* is included in *C* according to *D*.
Conclusion: therefore *P* is a property of *C*.

In argument from definition to characteristics, a state of affairs is named in a certain way and, on the basis of the definition of the name, some characteristics are predicated of the state of affairs. The characteristics predicated in the conclusion might be semantic characteristics contained in the definition, or implications drawn from the definition. As in the case of argument from classification, the premise, that is the definition, must be acceptable and accepted by the interlocutors, as specified in the critical questions (Hastings, 1963, p. 53):

| | |
|---|---|
| C.Q. 1 | Is the definition an accurate or an agreed upon definition? |
| C.Q. 2 | Do the implications or characteristics follow from the premises? |

| C.Q. 3 | Are any conflicting, inconsistent, or superseding principles involved? |
|---|---|

The structure of the scheme can be understood by considering the following diagram displaying the structure of an argument from (Robinson, 1947, p. 200):

> Since you believe in tolerance in all things, you have no right to be so critical of this man's ungentlemanly conduct.

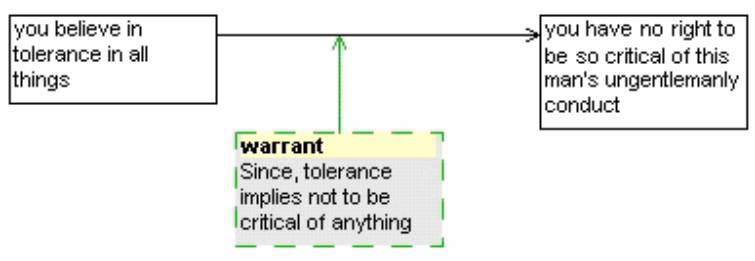


**Figure 3: Robinson's Tolerance Example**

Here the scheme proceeds from an implicit definition of tolerance (tolerance is the acceptance of any kind of behavior or position) accepted by the audience and presupposed by the assertion 'you believe in tolerance'. From the definition an implication is drawn in the conclusion. Tolerance, when understood as the acceptance of any kind of behavior or position, implies an absence of criticisms of any kind of conduct or position. This kind of argument can not only lead to a conclusion based on an implication, but also to a conclusion proceeding from the predication of a semantic feature of the definition, as follows (Hastings, 1963, p. 48):

> If the United States be not a government proper, but an association of States in the nature of contract merely, can it, as a contract be peaceably unmade, by less than all the parties who made it? One party to a contract may violate it – break it, so to speak, but does it not require all to lawfully rescind it?

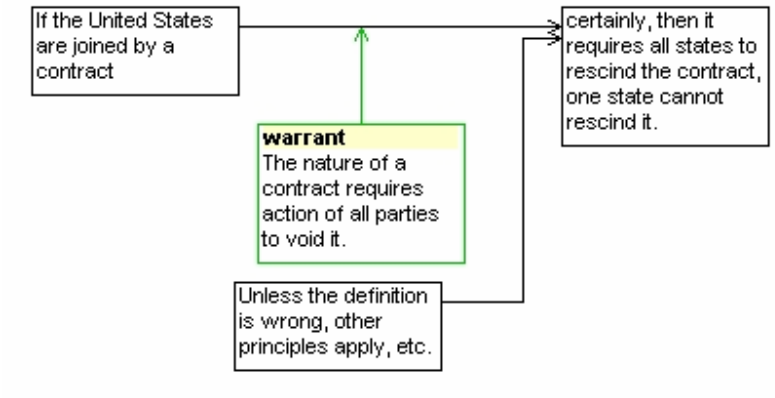


**Figure 4: Toulmin's Structure of Hastings' Contract Example**

*2.2 Kienpointner*

The most extensive account of arguments schemes from classification is given in Kienpointner (1992). In *Alltagslogik* four schemes from definition are identified and the classifications by means of *genus*, and whole and parts are analyzed. The schemes from definition can be represented as follows (1992, pp. 250-252):

| **Type of scheme** | **Scheme** |
|---|---|
| Descriptive | What is predicated of the definition is also predicated of the *definiendum* and *vice versa*.<br>X is predicated of the definition<br>Therefore X is predicated of the *definiendum*. |
| | What the *definiendum* is predicated of, also the definition is predicated of<br>The *definiendum* is predicated of X<br>Therefore the definition is predicated of X |
| Normative | If X is defined by means of definition Y, valuation Z relative to X is justified<br>X is defined by means of definition Y<br>Therefore valuation Z relative to X is justified |
| | If X is defined by means of definition Y, action Z is advisable.<br>X is defined by means of definition Y<br>Therefore action Z is advisable |

In these schemes, the definition can be substituted by the interpretation of the name (p. 259). The last two schemes are frequently used in persuasive definitions. In commercials, a product is described as having a certain number of qualities, leading to the conclusion that it should be bought. The scheme can be presented as follows:

> If product X is defined by means of Y, it is advisable to buy X.
> Product X is defined by means of Y
> It is advisable to buy X

The definition is necessary to the process of classification. If there is not a unique definition of a term, the same reality can be contradictorily classified. For instance, the word “full employment” can be defined as “a situation in which only 5.5% of the population of a country is unemployed”. If this definition is considered, a country like the U.S.A. can be classified as and characterized by “full employment”. On the other hand, the same term can be defined as “a country in which all the employable adult people have a full-time activity”. In this case, the same country would be not be classified as and not characterized by “full employment”.

Kienpointner’s account, we can notice, revives the ancient tradition on topics. The “major” premise of the schemes, such as for instance ‘What is predicated of the definition is also predicated of the definiendum and vice versa’ represents the ancient maxim of the *locus* from definition (see for instance Boethius, 1988, 1059c). However, in its scheme it is not clear how the general principle (the maxim) is related to the endoxical premise,

namely the definition. This aspect of the argument scheme from definition opens an interesting perspective that will be developed in the following subsection.

*2.3. Developing argument schemes from classification*

The purpose of this subsection is to show how the argument schemes from classification presented in the last section are somehow inadequate to describe the semantics of the inferential structure of the argument. By taking into consideration the weaknesses of the schemes we can develop a new formulation of the argumentation from classification.
In Walton (2006, p. 129), the following scheme from verbal classification is advanced, maintaining the structure of the scheme presented in Hastings (1963):

*Walton 2006 Scheme*

| | |
|---|---|
| INDIVIDUAL PREMISE: | *a* has property *F*. |
| CLASSIFICATION PREMISE: | For all *x*, if x has property *F*, then *x* can be classified as having property *G*. |
| CONCLUSION: | *a* has property *G*. |

We should notice that in this scheme, such as in Hastings' argument schemes, the relation between *F* and *G* is not specified. If the structure of the inference represented is logically valid, the reasonableness of the inference itself does not seem to be considered in the classification scheme. The conclusion '*a* is blue' follows logically from the classification premise 'for all *x*, if x is red then *x* is blue' and from the premise 'a is red', but is unreasonable. In (Walton, Reed and Macagno, 2007), the nature of the classification was made clearer by developing the classification premise into the following one:

> CLASSIFICATION PREMISE (Walton, Reed and Macagno, 2007): *For all x, if a fits definition D, then x can be classified as having property G.*

Walton's (2006) scheme can be therefore refined and made more useful for describing the inferential structure by making the nature of the relation between *F* and *G* explicit. However, even in this scheme, the relation between D and G is not clear. A better formulation of the inferential passage can be found in Keinpointner.

If we take into consideration Kienpointner's scheme from definition and apply it to a case, the following argument will follow:

| | |
|---|---|
| The *definiendum* is predicated of X | Bob is a man |
| What the *definiendum* is predicated of, also the definition is predicated of | If Bob is a man, then Bob is a rational animal |
| Therefore the definition is predicated of X | Therefore Bob is a rational animal |

However, we can notice, the endoxical premise 'rational animal is the definition of man' is lacking here[6]. The only possible inference that can be drawn from the premises is the following:

[6] We would like to thank Eddo Rigotti for his advice and observation on this aspect of Kienpointner's argument schemes.

| | |
|---|---|
| The *definiendum* is predicated of X | Bob is a man |
| What the *definiendum* is predicated of, also the definition is predicated of | If Bob is a man, then the definition of man is predicated of Bob |
| Therefore the definition is predicated of X | Therefore the definition of man is predicated of Bob |

For this reason, we can represent the structure of the inference as follows (see Rigotti - Greco 2006):

| MAXIM | ENDOXON |
|---|---|
| What the *definiendum* is predicated of, also the definition is predicated of | |
| | Rational animal is the definition of man |
| PRELIMINARY CONCLUSION<br>What man is predicated of, also rational animal is predicated of | |
| The *definiendum* is predicated of X | Bob is a man |
| Therefore the definition is predicated of X | Bob is a rational animal |

Following the connection between the endoxon and the maxim, the argumentation scheme from criteria to verbal classification can be formulated as follows, merging together the schemes advanced in (Walton, Reed and Macagno, 2007) and (Walton 2008), in which :

| | |
|---|---|
| DEFINITION PREMISE: | *a* fits definition *D* |
| CLASSIFICATION PREMISE: | For all *x*, if *x* fits definition *D*, and D is the definition of G, then *x* can be classified as *G*. |
| CONCLUSION: | *a* has property *G*. |

In this scheme, we can notice, the reasonableness of the inference is guaranteed by the relation between the definition and its *definitum*, whereas the relation between the endoxical premise and the relation between *definiens* and *definiendum* is represented by the additional premise 'D is the definition of G'. The classification premise could be also represented as 'What the *definiendum* is predicated of, also the definition is predicated of, and D is the definition of G'. The critical questions appropriate for this version of the argument from verbal classification are the following (from Walton, Reed and Macagno, 2007, chapter 9)[7]:

> CQ1: What evidence is there that D is an adequate definition of G, in light of other possible alternative definitions that might exclude *a*'s having G?
> CQ2: Is the verbal classification in the classification premise based merely on a stipulative or biased definition that is subject to doubt?
> CQ3: Does *a* actually fit definition D?

On this view, the abstract inferential structure presented in Hastings is combined with an analysis of the semantic link between the definitional premise and the conclusion. In

[7] We would like to thank the anonymous referee for his comments on this point.

particular in the implemented argument scheme from definition we can notice that by making the link between the definition and the *definiendum* explicit ("D is the definition of G") the endoxical nature of definition is highlighted.

### 3. The nature of endoxical definitions: the tradition and the theory of predicables

The analysis of the argument schemes from verbal classification shows how the link between the premises and conclusion is grounded on a semantic link which was called by the tradition the maxim, and on an endoxical, or commonly shared premise, namely the definition itself. In the section above, in fact, we took into account the structure of the inference, showing how the conclusion depends on two conditions:

- the object *x* must fit the definition D
- D must be the (shared) definition of G

However, we can notice, there might be different types of definition of the same concept. For instance, a concept such as "man" can be defined as "the rational animal", "the animal that can pity the Gods" "the biped animal", "the being composed of two legs, a head, two arms…", "the being *Homo sapiens sapiens* and *Homo sapiens idaltu* belong to"…There might be many types of definition, different for the semantic content (for instance "man is the rational animal" and "man is the laughing animal") or for their structure (for instance "man is the rational animal" and "man is the being composed of two legs, a head, two arms…".

In the first case, we can notice, the acceptability of the conclusion of a reasoning from definition depends only on the acceptability of the definitional premise. For instance, we can consider the two different inferences drawn from two different definitions of "monopoly":

| | |
|---|---|
| 1. Pop Cola is *controlling the soft drinks market*. Therefore it is a monopoly. | Monopoly is a company that **exclusively controls the market**. |
| 2. Pop Cola is the *biggest soft drinks company*. Therefore it is a monopoly. | Monopoly is the **biggest industry in a field of activity**. |

Whereas in (1) the inference is drawn from a commonly accepted definitional premise, the conclusion in (2) follows from a definition of monopoly which is hardly acceptable. The conclusion in (1), we can notice, is much more acceptable, for this reason, than the conclusion in (2).

In the second case, however, the acceptability of the conclusion does not only depend on the acceptability of the definition, but also on what we can call its "nature", or type of definition. For instance, we can compare the two following inferences:

| | |
|---|---|
| 3. There is a building that serves as living quarters for one or a few families. Therefore there is a house. | House **is a building that serves as living quarters for one or a few families** |
| 4. There are four walls, a roof, the foundation. Therefore there is a house. | House is **four walls, a roof, the foundation**. |

Whereas in (3) the conclusion reasonably follows from the premise, in (4) the conclusion is not supported in the same fashion from the premise. If there is a building that serves as living quarters for one or a few families, there must be a house, but even if there are four walls, a roof, the foundation, it can be reasonably concluded that there is no house.

Moreover, if we consider other types of definitions, we can notice that they can be used for different purposes. We can introduce the topic by taking into consideration the two following inferences:

| | |
|---|---|
| 1. Man is **the being who can pity the Gods**. Therefore man is a good being. | To pity the Gods is good. |
| 2. Man is **the being who can despise the Gods**. Therefore man is a bad being. | To despise the Gods is bad. |

In these two examples, different types of evaluative inferences are drawn from the two definitions. In both cases, we can notice, the definition can be acceptable, and it is convertible with the *definiendum* (man is the only being who can pity or despise the Gods). However, according to the definition used, different conclusions can be supported.

From these examples, we can notice how definitions differ not only because of their different status as shared premises, namely whether they are commonly accepted or they are not, but also because of their nature. The question we want to address in this section regards the possibility of evaluating definitions. Our claim is that the existence of many different types of definitions does not lead to a definitional relativism, but, on the contrary, to argumentative discussions on what is the best definition. In order to have a discussion on definition, however, it is necessary first to establish what the best, or the "real" definition is. The starting point for our analysis is Aristotle's dialectical work, namely the *Topics*, in which the concept of dialectical definition is introduced.

### *3.1. Definition and the Aristotelian semantic system*

Aristotle in his *Topics* laid the fundamentals of his dialectical studies of classification. In this work, Aristotle distinguishes between the four predicables, that are four classes of semantic-logical relations of predication. These relations are formulated in the form of intrinsic topics, namely instruments of discovery and inference warrants directly connected to the subject of discussion. Aristotle distinguished four predicables: **genus** (for instance "house is a building"), **definition** (for instance "house is a building that serves as living quarters for one or a few families"), **property** (for instance "do up a house", which is said of "house" only), and **accident** (for instance "red" or "nice" said of "house"). All the predicables can be predicated of the species, which, in these examples, is for instance "house". The species, conceived by Aristotle as a thing, can be interpreted as a categorization of a fragment of reality that we can describe as the meaning of a word[8]. The species (or concept) is that which can be predicated of more individuals different in number (for instance "house" can be predicated of my house, or my

[8] This interpretation is coherent with Aristotle's perspective of dialectic. Dialectic does not deal with objects and individuals (what we can call "things"), but with species, namely linguistic organization of reality. He is not interested in the matter, but in the form, that is in the relevant semantic properties of the concepts.

neighbor's house….), and falls outside the domain of dialectic. Dialectic is concerned about relations between concepts, not about reasoning relative to the particular objects (Crowley & Hawhee, 1999, p. 54; Green Pedersen, 1984, p. 119)[9].

The predicables are divided into two groups according to their semantic properties. The first class incorporates the predicables that can reveal the essence of the thing, that is (see Rigotti – Greco 2006), what the concept is or, rather, its fundamental characteristics (see Stebbing, 1933, p. 429). In this group falls genus and definition. The second class is characterized by not expressing the essence of the thing and it incorporates property and accident. On the other hand, a second division of the predicables is advanced in the *Topics*, and is relative to the logical properties. While definition and property are convertible with the species they are predicated of, genus and accident are not. From this broad division it is possible to understand the definition of the predicables.

The **genus** answers the question "*What is it?*" and reveals the essence of the thing, without being convertible with the species it is predicated of. It is predicated of several species. For instance, the genus (or, rather, the proximate genus) of man is "animal": in fact, it would be meaningless to say: "*This is a man, but he is not an animate being*". The **definition** is that which is convertible with the species it is predicated of and reveals the essence of it. It is constituted by the proximate genus and the specific difference[10]. For instance, the definition of man that was agreed upon in the Middle Ages was "animal, mortal, rational". The **property** is what is convertible with the subject it is predicated of, without expressing the essence of the thing. In other words, the property is absolutely or relatively predicable of only one thing. In order to explain this concept, it is useful to use some examples. The word "pitch", used as an adjective, can only be predicated of the term "black". "*Grammaticus*", in the Aristotelian and medieval tradition, was considered the property of man, since it cannot be predicated of any other being. This property differentiates the concept from everything else. It is, in other words, absolute. However, the property might be relative. If nearby a stable there are horses, dogs, cows, and a kangaroo, the kangaroo can be identified as the "two-legged animal". *Two-leggedness* is in this case a property of kangaroo relatively to the other four-legged animals. Last in the Aristotelian semantic system comes the accident. Accident is defined as "something which can belong or not belong to some one particular thing" (*Topics* 102b, 6-7). For instance, a person can be sitting or not be sitting[11], or a house can be red or white, nice or tiny, big or small.

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[9] Aristotle (*Topics*, I, 10), considers a dialectical proposition to be a proposition held by everybody, or the majority, or the wise. Dialectic (*Topics*, I, 14) is about science, and science is not concerned with particulars. In the Middle Ages, the account of the predicables is different. Medieval tradition stems, in fact, from Prophyry's Isagoges, in which the species is considered to be a predicable, along with property, difference, genus and accident. This distinction is extremely helpful in the process of *stasis*.

[10] A good example of this procedure is found in Cicero's Topics (Topica, XXVIII): Hereditas est pecunia. Commune adhuc; multa enim genera pecuniae. Adde quod sequitur: quae morte alicuius ad quempiam pervenit. Nondum est definitio; multis enim modis sine hereditate teneri pecuniae mortuorum possunt. Unum adde verbum: iure; iam a communitate res diiuncta videbitur, ut sit explicata definitio sic: Hereditas est pecunia quae morte alicuius ad quempiam pervenit iure. Nondum est satis; adde: nec ea aut legata testamento aut possessione retenta; confectum est.

[11] It is interesting to notice (Rigotti, 1997) that a man can be sitting or standing, or he can be stretched out, but he must be in a position. Similarly, a stone can be green or grey, but cannot jump. Accident is related to the possibility of predication, to the semantic genera of the predicates, the ten categories.

From this distinction between the different relations of predication, it is possible to understand the Aristotelian treatment of the types of classification. It is possible to classify a concept (a thing) indicating its genus. For instance, a man is an animal. It is possible to identify a thing by using its definition. For instance, a man is a rational animal. Finally, it is possible to describe a concept by using a property, absolute or relative. For instance, a man is a being that is able to learn grammar, or is a two-legged being, or the animal at the top of the food chain. The Aristotelian semantic system allows one to understand what the definition is and how it can be explained as a method for the semantic analysis of a concept.

*3.2 Characteristics of the essential definition*

The notion of definition in Aristotle is crucial for understanding the importance of this predicable in the argumentation theory. Although in the traditional rhetorical treatises several kinds of definitions have been analyzed (see, for instance, Victorinus, *De Definitione*), in this section we will discuss the one type recognized by Aristotle, the definition by *genus* and *differentia*.

An awareness of this type of definition is fundamental to communication and argumentation. According to Aristotle, there must be only one definition of a thing, that is, of a concept (*Topics*, VI, 4, 141a 32-34; 143a 1). His interest is focused on the different possible uses of a word (*Topics*, 106a 9-10), namely, the different essences a word can be used to represent. This approach can be named, using the modern classification, as "terminological" (See De Besse`, 1990). Making distinctions between the different senses of a word (a semantic analysis) is a necessary preliminary step to any discussion, in order to avoid equivocations. In other words, only if the interlocutors speak about the same concepts it is possible for them to understand each other and avoid fallacies. The method to achieve this result is to share the same definitions of the concepts.

The methodology of definition given in the *Topics* is based on two main characteristics: the correctness of the definition, and the ability of the definition to express the essence of the thing. For a definition to be **correct**, two requisites must be respected (*Topics*. IV, 3):

a) Avoiding obscurity and unclear expressions;

b) Avoiding unnecessarily long descriptions.

Aristotle lists a series of topics, which can be understood as rules for the assessment of a definition. For instance we can analyze the topics below:

| **Obscurity** | |
|---|---|
| a. The definition contains equivocal words | a. A house is a *place* where a family lives |
| b. The definition does not distinguish between the different meanings of the *definiendum*. | b. A house is *a building with a roof* (Dwelling? Shelter?) |
| c. The definition contains words used in a metaphorical sense | c. A house it the *heart* of a family |
| d. The definition contains words whose use is unusual (not very well established and known) | d. A man is a being able to *vent* his emotions |

| | |
|---|---|
| e. The definition contains terms whose proper meaning does not describe the thing and that are not metaphors. The sense of these words cannot be recovered. | *e.* A boat is a vehicle with a *jetty* |
| **Length** | |
| a. The definition contains attributes universally applicable (attributes that are not the proximate genus or that apply to all the things under the same genus) | a. A house is a building that *has the foundation*. |
| b. The definition contains an attribute that is useless, that is not necessary to distinguish the thing from all the other concepts. | b. A house a dwelling, *sometimes very nice*, that serves as living quarters for *big or small* families. |
| c. The definition is not peculiar of the species defined, since it does not belong to all the individuals falling under the same species. | c. A house is a *big* dwelling that serves as living quarters for families |
| d. In the definition the same attributes are predicated more than once of the same thing. | d. A house is a dwelling *built by humans* that serves as living quarters for families |

Definition must express the essential property of a thing, in other words, its fundamental semantic features. The notion of essential property, or "semantically fundamental characteristic" depends upon the concepts of intelligibility and differentiation (*Topics*, VI, 4). The definition must make known the meaning of the concept, by describing it using the prior and more intelligible concepts[12], that is, the genus and the *differentia*. The genus is more intelligible than the species, since the species is more complex, being constituted by the genus and the difference. The same applies to the difference.
First, the semantic characteristic expressed in a definition must be prior:

| **Topic of prior terms** | |
|---|---|
| An opposite cannot be defined by means of its opposite (when it is possible to avoid this circular definition) | Good is what is not **bad** |
| A definition cannot contain the term defined | A house is a building that is a **house** for a family |
| A thing cannot be defined by its opposite belonging to the same division | A man is a being that is not a **beast** |
| A thing cannot be defined by using its species. | A boat is a vehicle a **ferry** belongs to |

Second, for a definition to express an essence, the genus must be attributed and attributed correctly. The concept of genus can be clarified by the most important topics it is characterized by (*Topics*, IV, 120b 12- 123a 27):

| | |
|---|---|
| The genus must include all the members of | Good is the genus of pleasure: therefore, |

[12] See, for the notion of basic elements of meaning, Mel'cuk's Sense – Text theory (I. Mel'cuk (1997) *Vers une linguistique Sens-Texte. Leçon inaugurale*. Paris: Collège de France)

| | |
|---|---|
| the species it is predicated of. | this kind of pleasure is good. |
| The genus is predicated in the category of essence. Genus and species must fall in the same category. | White is not the genus of the snow, since it does not tell what snow is.<br>White is a quality; snow is a substance |
| The species can be predicated of the definition of the genus, not vice versa. | Man is an animal. Therefore, man is an animate body. |
| The genus is predicated of what the species is predicated of. | Knowable is the genus of conjectural. Therefore, a not-existing thing is knowable. |
| It is impossible for something to be predicated of the genus if it is not predicated of one of its species. | Pleasure is not a motion, since it is neither locomotion, nor alteration nor any other kinds of movement. |
| What is placed in the genus cannot be predicated of the definition of anything contrary to the genus. | The soul is life; but, since the number does not live, the soul is not a number. |

A definition therefore must show the genus, and the right proximate genus of the *definiendum*. Aristotle expresses this rule in the following topics:

| **Topics of attribution of the genus** | |
|---|---|
| In a definition the genus must be specified | A house *serves as living quarters for families* |
| The genus must be attributed appropriately. It is possible to apply the topics from the genus in order to see if they hold. | A house is an *instrument* that serves as living quarters for families (an instrument is a *device* that requires skill for proper use. Therefore a house *is a device*). |
| The genus attributed must be the nearest. The nearest genus presupposes the highest ones, but not the contrary. | A house is an *artifact* that serves as living quarters for families |

Third, in the definition the genus must be specified by means of the specific difference.

| **Topics of the difference** | |
|---|---|
| The definition must divide the species by means of the difference from something else. There must be an opposite of the species in the division. The difference must be a difference of the genus considered. | A house is a dwelling with a roof (no dwelling without a roof); A man is a *biped featherless* animal (no featherless animals with four feet). A man is a rational *body* (difference of “animal”, not of “body”) |
| The genus cannot be divided by negation. | A house is a building which is *not dedicated to any business activity*. |
| The difference must not be a species of the genus or the genus of the one stated. | A house is building which is a *dwelling*. |
| The difference must signify an essential (not accidental) quality of the subject. It cannot signify affections, special or temporal indications. | A man is an animal that *pities the Gods*. |
| The genus is predicated of the species; the difference is predicated of the species. The genus cannot be predicated of the difference or vice | A man is *a rational* that is an animal. |

| | |
|---|---|
| versa. The species cannot be predicated of the difference. | |
| The difference of relatives must be relative and relative to the primary relation of the term. In case of an artifact, the difference must be relative to its natural purpose. | A boat is a vehicle designed for *transportation* (not the natural purpose). |
| The difference must not be an affection of the genus. | A man is a *reading* animal (if there are no books, there won't be men) |

The definition, in addition to being convertible with the subject[13] must express its fundamental characteristics. In other words, the definition must not be merely wider or narrower than the *definiendum*, but also respect semantic and logical conditions. The argumentative power of essential definition is based on its being hardly questionable. Semantics can be conceived as the deepest level of *endoxa* (or shared commitments): to refuse to accept the most basic semantic characteristics may result in refusing to accept a fragment of the shared semantic system. Moreover, the essential definition is always convertible with the *definiendum,* and it can be used to develop inferences based on the genus. For instance, if we consider the definition of "free speech" as "the human right regarding the freedom of expression", by showing that "free speech" has been forbidden we can support the conclusion that a human right has been violated (what is said of the species is said of the genus as well". These observations can be useful to understand the difference between the essential definition and the other kinds of definitions.

*3.3 Other methods of classification*

The methodology of definition Aristotle describes allows one to understand which is the best definition on the basis of a semantic analysis of the *definiendum*. The topics can be understood as rules for assessing what is a definition and which definition is the best one. The definition by genus and difference is the only definition recognized to be such by Aristotle. However, as seen above, the scheme from classification is grounded on other possible types of definitions, which Aristotle calls "definitory methods", namely definitions not in the proper meaning of the word "definition". In this section we will deal only with three of the most common types of definitory propositions, namely the definition by integral parts, definite description and etymology, showing why these types of definition are not argumentatively as powerful as the definition by genus and difference.

Aristotle analyzes the definition by integral (namely, not formal, or semantic) parts in his account of definition, in the *Topics*. The definition by integral parts has three main schemes:

| **Definitions** | | **Inferences** |
|---|---|---|
| *X* is *A* and *B* | A house is walls, the foundation, a roof. | There are walls, the foundation, a roof. Therefore there is a house (there might |

[13] For the use of the topics in rhetorical speech, see Weaver (1953). Analyzing the definition of "human referred to the black slaves ", for instance, he notices that the category of "not human" applies only in certain circumstances to the slaves and not to all the black people.

| | | |
|---|---|---|
| | | be not). |
| *X* is made of *A* and *B* | A house is made of walls, the foundation, a roof. | A house is destroyed. Therefore walls, the foundation, a roof are destroyed (they might be not destroyed) |
| *X* is *A* plus *B* | A house is walls plus foundation, plus a roof. (plus means *and* or *made of*) | |

In all these schemes, we should notice that the subject is not identical with the single part. In the first scheme, the whole is not identical to the compound of the parts. In other terms, the subject is not convertible with the *definiens*. In the second scheme, the subject and the *definiens* are not convertible since they cannot be subject to the same predications. For instance, if a house is destroyed, the parts it was made of can still be intact. The definition must indicate the specific composition of the parts, in order to indicate the essence of the compound. Finally, the third scheme can be reduced to the other two. The "definition" by integral parts is better explained as description by permanent property. The definition by integral parts is weaker than the definition by genus and species. It is useful, however, for destructive purposes (see Cicero, *Topica* 9). If one of the parts is missing, the whole cannot be the case.

The definition by definite description is analyzed in the section of the *Topics* relative to the property (*Topics*, V). Property can be used in fact as a description (132a): for instance, man can be described as the animal able to laugh. Aristotle distinguishes between four kinds of property (128b 34- 129a6): absolute (*per se*), relative, permanent, and temporary (see also Rigotti – Greco 2006). For instance, we can show the different types of description as follows:

| | |
|---|---|
| Absolute | Man is the animal which can laugh |
| Relative | Man is the animal that has two legs (if we want to distinguish it from quadrupeds) |
| Permanent | Man is the animal that is composed of soul and body |
| Temporary | Man is the animal living in houses |

In case of definitions composed of absolute and permanent properties, the *definiens* is always convertible with the *definiendum*, whereas in case of relative or temporary property the convertibility is not always convertible. Descriptions can be useful in argumentation for drawing evaluative inferences. For instance, we can describe "man" as "ubi rursus malitia versutia ceteraque vitia versantur" (Victorini, *Liber de Definitionibus*, 18, 19-20), and use this description to support the fact that man is evil. On the contrary, we can use the description of "man" as "ubi pietas est, ubi aequitas continentia" (Victorini, 18, 19-20) to praise him.

The last kind of classification we will here take into consideration is the etymology. Etymology is the interpretation of a name, namely, the linguistic strategy to manifest a meaning. Aristotle treats it in the *Rhetoric* (II, 23), and in the Latin and medieval tradition it was considered a kind of definition along with the division into parts and the division of the genus by means of the difference (Cicero, *Topica* 9; Quintilian, *Institutio Oratoria* V, 55). The nominal definition can be used as follows:

> "pecuniosum a pecorum copia" (Quintilian, *Institutio Oratoria* V, 55)[14] , or
> Cum lex assiduo vindicem assiduum esse iubeat, locupletem iubet locupleti; is est enim assiduus, ut ait L. Aelius, appellatus ab aere dando[15] (Cicero, *Topica* 9)

The interpretation of a word or of the name can be used to support a conclusion, but the force of this type of definition is extremely weak in most cases. This type of definition, however can be useful for the following types of inference: "You are a teacher, and not a politician. Therefore you should teach, and not be in politics".

*3.4. Definitions and essence: conclusion*

There is no space for us to try to build our own theory for evaluation of definitions and classifications here, but one thing we can do is sketch out some elements of a prior theory, Aristotle's theory, that offers an idea of how the task needs to be carried out. In so doing, although we do not advocate a strict form of Aristotelian essentialism of the kind that has been so often criticized in philosophy, we do feel that the necessary part of the task requires the notion of an essential property. On our view, this term refers to the most important and central property that needs to be specified for the purpose of the definition if it is to be successful for the purpose it was put forward. Thus our view of definition is an instrumental (pragmatic) one. Our reading of Aristotle's studies comes from an argumentation perspective and its goal is to highlight the importance and relevance of these concepts for modern argumentation theories.

## 5. Conclusion

Argument from verbal classification is a scheme that is crucial to all of argumentation theory, not only because it is so common and so easy to overlook, but because it can be used to lead to evaluative judgments. It is not easy to analyze, since the concepts and the theories, like those of classification and definition, involved are controversial and complex. The goals of this paper have been to advance a general methodological proposal for the analysis of argument from verbal classification. In particular, our claim is that the notion of classification, grounded on the concept of definition, should be analyzed starting from a clear definition of "definition" itself. The first step is to distinguish the two aspects of reasoning from definition:

1. the definition is an *endoxon*, which can be shared by the interlocutors or controversial;
2. there are different types of definition.

Reasoning from classification can be sometimes weak because the premise is not shared, or because the nature of the definition does not support the conclusion. In order to show how definitions can differ in nature, the Aristotelian theory on definition has been taken into consideration. Aristotle highlights the difference between the essential definition and

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[14] This example can be translated as «Rich (*pecuniosum*) from abundance of sheep (*pecorum*)».

[15] The argument can be interpreted as «According to the law, the patrician must help the patrician; therefore the rich must help the rich. In fact the patrician (assiduous) is who gives money (as do), and the rich gives money. Therefore the rich is the same as the patrician».

all the other types of definitory methods on dialectical grounds. The essential definition is an instrument of semantic analysis, which can be used to support conclusions proceeding from the convertibility of *definiens* and *definiendum*, and from the genus. The Aristotelian theory can be extremely useful not only for understanding why a type of definition can be argumentatively more powerful than the others, but also for delineating a method for the assessment of definition. The topics of definition provide an instrument which allows one to examine the logic-semantic relations underlying the structure of the argument scheme nowadays called argumentation from classification, and to show how the strength of the inference depends on both the type of definition and the acceptability of the definitional premise.

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Abstract: Reasoning from Classifications and Definitions

In this paper we analyze the uses and misuses of argumentation schemes from verbal classification, and show how argument from definition supports argumentation based on argument from verbal classification. The inquiry has inevitably included the broader study of the concept of definition. The paper presents the schemes for argument from classification and for argument from definition, and shows how the latter type of argument so typically supports the former. The problem of analyzing arguments based on classification is framed in a structure that reveals the crucial role it plays in the persuasion process. The survey of the literature includes the work of Hastings, Perelman, Kienpointner and Schiappa, but still finds much of value in Aristotle. Lessons drawn from Aristotle's *Topics* are shown to be useful for developing new tools for assessing definitions and arguments from definition.