

## CHAPTER 4

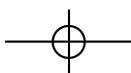
DIALECTICAL AND HEURISTIC ARGUMENTS: PRESUMPTIONS  
AND BURDEN OF PROOF*Fabrizio Macagno*

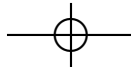
In law, as in everyday conversation, presumptive reasoning is one of the most common forms of drawing conclusions from a set of premises. On Walton's view (Walton 1996b: 13), whereas in deduction conclusions are necessarily true if the premises are true, the conclusion of a presumptive reasoning is a simple presumption, that is, it holds in conditions of incomplete knowledge and is subject to retraction should these conditions change. These arguments are grounded on generalizations such as, 'Birds fly' or 'Americans love cars', leading to conclusions of the kind: 'Plausibly, this bird flies' or 'Bob, who is from Michigan, probably loves cars'. However, these arguments cannot be evaluated in light of standards accepted in logic (Walton 1993: 3), and their function is not to provide that premises necessarily imply a conclusion or to provide evidence based on statistical results. Everyday conversation is characterized by incomplete knowledge, in which only few propositions can be considered necessarily true, and only a limited number of data is collected. What is the role of plausible or presumptive arguments, if not leading to truth or statistically backed generalizations? Moreover, how can they be assessed, if the logical standards do not apply? The answer can be found shifting the paradigm from the logical concept of truth of a conclusion to the pragmatic notion of dialectical effects of a conclusion. Presumptive arguments are not true or false; they produce some effects on the dialectical setting of the interaction between interlocutors. The function of presumptive arguments is to shift the burden of proof (Walton 1989: 16; Walton 1988), that is, if the interlocutor is committed to the premises, he should be committed to the conclusion as well, or he has to show why the conclusion is not acceptable.

The dialectical nature of presumptive reasoning can be analyzed by inquiring into what a presumption is. We can analyze the following arguments (see Walton 1996b: 17):

1. John's hat is not on the peg. Therefore, John has left the house.
2. John has been missing for 5 years. Therefore, he can be considered as dead.

These arguments are clearly different in nature, and presuppose different types of background information. However, we can notice how they are both grounded on implicit premises shared by the interlocutors, namely that 'When John leaves the house, he wears his hat' and that 'A person not heard from in five years is presumed to be dead'. They are both presumptions, as they provide a reason to infer a conclusion from a fact, and they are matter of common knowledge, namely they are not formal logical rules, but they are part of what is commonly known. However, while the first argument can be uttered in a context in which John's habits are known, the second is based on a rule of evidence (California Evidence Code,





section 667). Both arguments are reasonable and provide a probative weight in a situation in which a conclusion has to be reached from incomplete information.

The purpose of this article is to inquire into the grounds of Walton's theory of presumptive reasoning, examining the concept of presumption and its dialectical effects. In particular, the role of the presumption in shifting the burden of proof will be examined (see Walton 2007; Hahn, Oaksford 2007). The role of presumption in everyday conversation will be analyzed starting from a particular type of natural dialogue, the legal discussion. Legal argumentation, conceived as a highly codified type of dialectical reasoning, can provide some general principles, which can be applied to reasoning in other types of human communication.

#### 4.1 Presumption in argumentation

In order to describe what a presumption is, it is necessary to specify the level of our inquiry. As seen above in the introduction, presumptions are analyzed in argumentation considering factors such as the probative weight and the conclusion, or viewpoint, to be supported. However, such elements presuppose a dialogue, in which there must be necessarily subjects interacting. In such context, the first step is to describe what kind of action is performed by the subject when the presume something. Following Van Eemeren and Grootendorst (1984), we hold that when placed in a context of dialogue, every reasoning or argument is an action, or rather a complex action, carried out to accomplish a specific communicative purpose.

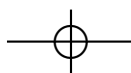
Walton (1992b; 1993, see also Walton and Godden 2007) describes presumption in the light of the rhetorical and logical theories as a particular speech act. Presumption can be described according to its propositional content and illocutionary effects (see Searle 1969: chapter 3) as "a proposition put in place as a commitment tentatively in argumentation to facilitate the goals of a dialogue" (Walton 1993: 138). From an illocutionary point of view, presumptions are acts, by means of which the Speaker requests the interlocutor in a dialogue to commit to a proposition, and should the Speaker fail to reject his or her commitment to the proposition, it will be taken as commitment of both parties in the subsequent dialogue (see Walton 1992b: 56). This provisional and mutual type of commitment pragmatically differentiates presumption from statements, which change the Speaker's commitments by including therein the proposition object of the speech act, and assumptions, which actually do not change the interlocutors' commitment store, as they can be freely rejected at any point in a dialogue. Walton summarizes the conditions for the speech act of presumption as follows (Walton 1992a: 6061):

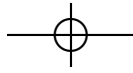
##### I. Preparatory Conditions

- A. A context of dialogue involves two participants, a proponent and a respondent.
- B. The dialogue provides a context within which a sequence of reasoning can go forward with a proposition A as a useful assumption in the sequence.

##### II. Placement Conditions

- A. At some point  $x$  in the sequence of dialogue, A is brought forward by the proponent, either as a proposition the respondent is asked explicitly to accept for the sake of argument, or as a nonexplicit assumption that is part of the proponent's sequence of reasoning.
- B. The respondent has an opportunity at  $x$  to reject A.





- C. If the respondent fails to reject A at x, then A becomes a commitment of both parties during the subsequent sequence of dialogue.

### III. Retraction Conditions

- A. If, at some subsequent point y in the dialogue ( $x \prec y$ ), any party wants to rebut A as a presumption, then that party can do so provided good reason for doing so can be given. Giving a good reason means showing that the circumstances of the particular case are exceptional or that new evidence has come in that falsifies the presumption.
- B. Having accepted A at x, however, the respondent is obliged to let the presumption A stay in place during the dialogue for a time sufficient to allow the proponent to use it for his argumentation (unless a good reason for rebuttal under clause III. A. can be given).

### IV. Burden Conditions

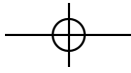
- A. Generally, at point x, the burden of showing that A has some practical value in a sequence of argumentation is on the proponent.
- B. Past point x in the dialogue, once A is in place as a working presumption (either explicitly or implicitly) the burden of proof falls to the respondent should he or she choose to rebut the presumption.

These conditions apply to all defeasible arguments (see Prakken, Reed, Walton 2005); however, an additional requirement is set in (Walton 2009), namely that A cannot be proved (or disproved) by evidence, i.e. the situation is one of incomplete knowledge. Therefore we have to add other conditions of presumption (Walton 2009; Prakken, Sartor 2009), in particular that the inference is sufficiently strong to shift the burden of providing evidence to the other party. The effect in the dialog must be that the interlocutor must give some argument against it, or else he will risk losing the exchange.

These conditions show the dialectical effects and requisites of the speech act of presumption. Presumption is shown as simply requiring a context of dialogue, and unless rejected it shifts the burden of proving or disproving the proposition onto the interlocutor.

This account describes how presumptions work in a dialogue game; however, this account of presumptions seems to have further implications on the argumentation theory. If we examine this type of speech act using Searle's categorises, we can notice that another difference between presumptions and assertives or assumptions can be found at the level of preparatory conditions. Whereas statements and assumptions have as a propositional content a sentence (for instance, 'I state (or assume) that Bob is ill'), presumptions always require a reason, which can be stated or simply presupposed. It would be perfectly sound to state 'I state (or assume) that Bob is ill, but there are no grounds to believe that', but stating that 'I presume that Bob is ill, even though there are not reasons' would be unreasonable. While assumptions are propositions put forth to prove a further conclusion, but need to be proven later in the discussion in order to be accepted, presumptions *are* the result of a reasoning. The act of presumption requires, as a preliminary condition, the existence of some grounds supporting it. For this reason, presumptions are always the conclusion of an explicit or implicit argument.

On this perspective, presumptions become integral part of the complex act of argumentation. Van Eemeren and Grootendorst maintain that argumentation is a complex speech act "composed of elementary illocutions belonging to the category of assertives" (Van Eemeren and Grootendorst 1984: 34; Walton 1992b: 177). However, Walton points out how the conclusions of arguments are attempts to



steer the interlocutor's commitment towards a specific proposition (see Walton 1996b: 38), while the function of an argument is "to effect a shift of presumption towards the proponent's side" (Walton 1992b: 189; for the discussion on the burden of proof, see Prakken2004; Prakken, Sartor 2006). Arguments, on Walton's account, are presumptive as their conclusions can be considered presumptions relative to a certain proposition, and because their purpose is to effect a shift of burden of proof relative to the thesis that the Speaker defends. On this view, we can notice how the success of an argumentative move can be evaluated according to the felicity of the act of presumption. A good presumptive argument is an argument that shifts the burden of proof onto the interlocutor. On this view, therefore, presumptions are considered as conclusions of a reasoning pursuing a specific dialogue effect, and at the same time speech acts characterized by their argumentative nature.

However, this relation between presumptions and arguments rises a crucial question: are all argument presumptive? Do all arguments shift the burden of proof in the same fashion?

## 4.2 Presumptions in law

A presumption in law is "an inference made about one fact from which the court is entitled to presume certain other facts without having those facts directly proven by evidence" (Hannibal, Mountford 2002: 464). Legal presumptions were introduced in Roman law to indicate different types of conclusions of inferences, and were divided into three categories, presumptions of fact, presumptions of law, and the so called *praesumptio iuris et de iure*, or irrefutable presumptions. When facts were deemed proved only on the grounds of logical rules, namely rules not provided by law but only shared by the common knowledge (Camp, Crowe 1909: 9 Ency. of Evidence, 882), the presumption was classified as *praesumptio facti* or *praesumptio hominis*, namely presumptions of fact (Berger 1954: 646) or permissible inferences (Park, Leonard, Goldberg 1998: 105). Presumptions of fact are simply conclusion that the court may draw from certain facts, that is, are not mandatory (Keane 2008: 656). They are based on rules of inference from a previous experience of the connection between the premises and the conclusion. For instance, an example of presumption of fact may be "things once proved to exist in a particular state continue to exist in that state". If one party in a trial proves that a man was alive on a certain date, the factfinder may presume that he was alive on a subsequent date.

Presumptions of law, or true presumptions (Park, Leonard, Goldberg 1998: 102-105), express legal and mandatory relationships between certain facts (called basic facts) and certain other facts (the presumed facts). They are not rules of inference drawn from everyday logic, but rules provided by law. An example of presumption of law can be the following ones (California Evidence Code, section 667; 663):

A person not heard from in five years is presumed to be dead  
A ceremonial marriage is presumed to be valid.

For instance, if one party wants to prove that a couple is married, but has not enough evidence, he just needs to prove that a marriage ceremony had been performed. In such case, the factfinder *must* presume that the marriage is valid.

The last type of presumptions, called irrebuttable presumptions, express mandatory relationships between the basic and the presumed facts, but they cannot be rebutted (Hannibal, Mountford 2002: 465). For instance, irrebuttable presumptions can be the following ones (Children and Young Persons Act 1933, s. 50; California Family Code 1994, s. 7540):

No child under the age of 10 can be guilty of an offence.  
The child of a wife cohabiting with her husband, who is not impotent or sterile, is conclusively presumed to be a child of a marriage.

Therefore, if a child is proven to be under the age of 10, he is innocent and no evidence can rebut this conclusion. Irrebuttable presumptions are rules of substantive laws, and they are judgments, not simply instruments of evidence (Park, Leonard, Goldberg 1998: 106).

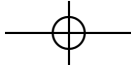
The three types of presumptions can be differently rebutted. Presumptions of fact can be rebutted by simply providing contrary evidence. Irrebuttable presumptions, on the other hand, do not admit any refutation. True presumptions, at last, admit different types of rebuttal strategies. The party against whom a presumption would operate has several choices (Park, Leonard, Goldberg 1998: 107). For instance, we can apply those possibilities to the rule of presumption of death in the following case (Miller v. Richardson, Secretary of Health, Education and Welfare, 457 F.2d 378 (1972)).

After twenty-two years of marriage, Mrs. Miller's husband permanently left the household on May 17, 1957. Aside from a telephone call received from him several days later, Mr. Miller has not been seen nor heard from since. All efforts to find Mr. Miller were unsuccessful. Mrs. Miller commenced a proceeding in the Orphans' Court of Allegheny County, Pennsylvania to have Mr. Miller declared a presumed decedent.

The possibilities of the appellee, in this case Mr. Richardson, the Secretary of Health Education and Welfare, were the following ones:

1. Offer not evidence challenging the existence of either the foundational facts or the presumed facts. E.g. Mr. Richardson does not provide evidence. The man is considered dead.
2. Offer evidence challenging the existence of only the foundational fact. E.g. Mr. Richardson proves that the man wrote a letter three years before the trial. In this case, the presumption of law is rebutted.
3. Offer evidence challenging the existence of only the presumed facts. E.g. Richardson shows that the man left the family home shortly after a woman, whom he had been seeing, also disappeared, and that he phoned his wife several days after his disappearance to state that he intended to begin a new life in California. In this case, the presumption is rebutted as Miller's disappearance was not unexplained and implicit in his departure was an intention to continue living.
4. Offer evidence challenging the existence of both the foundational and the presumed facts. In this case, simple foundational evidence would be sufficient to rebut the presumption. For instance, Richardson proves that the man wrote a letter three years before the trial stating that he intended to start a new life elsewhere.

This scenario shows the general principles of persuasion. However, true presumptions (or presumptions of law) are different in strength, namely they require different rebuttals fulfilling different standards. They can be classified in three levels (Andersen 2003: 112; Lempert et al. 2000: 1235-47):



1. mandatory burden-of-pleading-shifting presumptions: If the party proves A, then the factfinder must find B, unless the opposing party claims B is not true
2. mandatory burden-of-production-shifting presumptions: If the party proves A, then the factfinder must find B, unless the opposing party introduces evidence sufficient to prove B is not true. Sufficient evidence may be defined as any evidence, reasonable evidence, or substantial evidence.
3. mandatory burden-of-persuasion-shifting presumptions: If the party proves A, then the factfinder must find B, unless the opposing party persuades the factfinder that B is not true. Persuasion may be defined anywhere from a preponderance to beyond a reasonable doubt.

In the first case, the opposing party has only to deny the charges. This type of presumption is set at the beginning of the pleadings, in which the defendant has only to file an answer to the summons. The second and the third case involve a crucial distinction between burden of persuasion and burden of production. The difference can be explained as follows (Murphy 2007: 71):

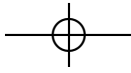
The term 'burden of proof', standing alone, is ambiguous. It may refer to the obligation to prove a fact in issue to the required standard of proof, or to the obligation to adduce enough evidence to support a favourable finding on that issue.

The allocation of the burden of persuasion follows general rules relative to the type of offence. In criminal cases burden is on the prosecution to prove the facts essential to their case (see *Woolmington v DPP* AC 462 (1935)), whereas in civil cases "he who asserts must prove", i.e., the burden rests with the plaintiff (the party bringing the action) (Keane 2008: 98). Another type of burden of proof is the evidential burden of proof, which corresponds to the burden of proving all elements essential to the claim.<sup>1</sup> As Murphy puts it (Murphy 2007: 71):

Every claim, charge or defence has certain essential elements, the proof of which is necessary to the success of the party asserting it. For example, a claimant who asserts a claim for negligence asserts: 1) that the defendant owed the claimant a duty of care; 2) that the defendant, by some act or omission, was in breach of that duty of care; and 3) that as a result of that breach, the claimant suffered injury or damage for which the law permits recovery. These elements derive, not from the law of evidence, but from the substantive law applicable to the claim, in the case the law of negligence. They are known as 'facts in issue' or 'ultimate facts'. The proof of these facts in issue depends, however, on the detailed facts of the individual case, which are referred to as 'evidential facts'. Thus, for example, in order to prove the fact in issue, negligence, the claimant might set out to prove the evidential facts that the defendant drove while drunk, too fast, on the wrong side of the road, and knocked the claimant down, breaking his leg.

If the claimant or the prosecution does not prove the essential elements (all or most of them, depending on the type of trial), the defendant is acquitted. If the elements have been supported by evidence, a *prima facie* case is established,

<sup>1</sup>A third type of burden of proof is the tactical burden (Walton 2008). This type of burden can be simply defined as the procedural shifting of the burden of production in a trial, when the opponent has discharged his burden of production (Tapper, Cross 2007: 137).



namely should the defendant not disprove any element, the case stands or falls only by this evidence. In this case, the burden is on the defendant to provide evidence contrary to the elements and contradicting the claim. The relation between burden of persuasion and the evidential burden of proof is represented in figure 4.1 (Murphy 2007: 73).

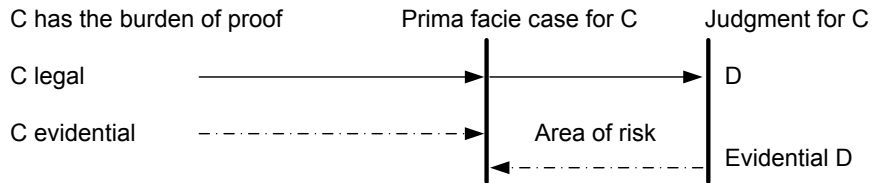
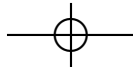


Figure 4.1: Burdens of proof

In this figure, the letters C and D stand for the Claimant (or prosecution) and the Defendant. The claimant has the burden of persuasion, or legal burden of proof; to meet such burden, he or she has to provide evidence (burden of production, or evidential). The defendant, once the prosecution or the claimant has established a prima facie case, bears the burden of providing contrary evidence (Evidential D).

A clear example can be provided by criminal proceedings. In criminal law, the prosecution has to prove beyond reasonable doubt that the defendant committed the crime he is charged with (C legal). For instance we can consider the case *Mullaney v. Wilbur*, 421 U.S. 684 (1975). The defendant was charged with murder, and the prosecution had to prove beyond a reasonable doubt that the defendant intentionally committed an unlawful homicide - i.e., neither justifiable nor excusable, and that he acted with malice aforethought by providing evidence, and therefore fulfilling a burden of producing evidence (C Evidential). Circumstantial evidence showed that he fatally assaulted the victim (C provides evidence and meets the evidential burden). The defense had the burden to produce evidence contrary to the findings (D evidential), and claimed that the homicide was not unlawful since respondent lacked criminal intent, and that he lacked malice aforethought, as he acted in the heat of passion provoked by the victim's assault (D meets the burden of producing evidence). After the defense fulfilled the burden of production, the prosecution had to prove beyond reasonable doubt the absence of the heat of passion. The area of risk is the relation between the burden of production of the claimant or the prosecution (C evidential), and the burden of production of the defendant (D evidential): if the defense cannot rebut the evidence provided by the prosecution, the verdict will be reached on the basis of the prosecution's arguments.

This case is particularly interesting, because it was based on a redefinition of the crime of murder including the concept of 'malice aforethought'. Before this case, in Maine (where the judgment was rendered), like in other states of the United States, the prosecution acted on the presumption that "if the prosecution established that the homicide was both intentional and unlawful, malice aforethought was to be conclusively implied unless the defendant proved by a fair preponderance of the evidence that he acted in the heat of passion on sudden provocation". In this case, the presumption would have shifted the burden of proof onto the defendant (see *Rhodes v. J Brigano* 91 F.3d 803 (1996)). The essential elements of murder were the fact that the accused caused the death of the victim, and that he acted on purpose. The classification of the homicide as a murder or a voluntary manslaughter was considered a matter of qualification: in



this case, the accused, already proven guilty of a crime, has to rebut the presumption that the crime has been committed in normal circumstances (presumption of sanity, see Tapper, Cross 2007: 145).

### 4.3 Presumptions: reasoning from lack of knowledge

The notion of presumption in law is extremely complex. Presumptions are instruments for legislatures and courts to shift burdens (Andersen 2003: 111); however, the reason of such a shift can be found in the notion of presumptive reasoning. Presumptive reasoning is a kind of reasoning that works in conditions of lack of knowledge. On Walton's account (see Walton 2008a), the notions of presumption and burden of proof are closely related to the argument from ignorance (Walton 1996a). The argument from ignorance can be described as follows (Walton 1995: 150; see also Walton, Reed and Macagno 2008):

MAJOR PREMISE: If A were true, then A would be known to be true.

MINOR PREMISE: It is not the case that A is known to be true.

CONCLUSION: Therefore A is not true.

This type of argument can be explained using the following example (Walton 1996a: 35):

If a serious F.B.I. investigation fails to unearth any evidence that Mr. X is a communist, it would be wrong to conclude that their research has left them ignorant. It has rather been established that Mr. X is not one.

This type of argument can be considered as a particular case of a type of reasoning from oppositions, in which the relation between absence of knowledge and negation is made explicit. For instance, we can examine the following pattern of reasoning:

This man is not dead. Therefore he is alive.

The paradigm of the possible men's conditions of existence is constituted of only two possibilities: dead or alive. If a man is not dead, he is alive. However, this type of reasoning in natural language is much more complex. The first complication is that paradigms often admit of several possibilities, like the color of the eyes; the second problem is that we do not have direct knowledge of what is negative (Sharma 2004): all we can know is that the man is not known to be dead. The more general pattern could be represented as follows:

#### Classification under lack of knowledge 1

PREMISE: If A were X, Y, Z, then A would be known to be X, Y, Z.

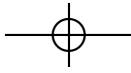
PREMISE: It is not the case that A is known to be X, Y, Z

PREMISE: A can be either X, Y, Z, or K. Other possibilities are not known.

CONCLUSION: Therefore A is K.

For instance, if the color of Bob's eyes is not known, and the only information available is that his eyes are not blue, not black, nor green, it could be concluded that his eyes are brown. The paradigm of the possible colors of a man's eyes is restricted to a closed paradigm. True or false, dead or alive, are special cases in which this type of reasoning from oppositions in closed paradigms applies. There are two possible strategies for rebutting this type of reasoning: showing that A is X (for instance, finding that Bob's eyes are blue), or attacking the





paradigm, showing that A can be something else but X, Y, Z, and K (for instance, showing that eyes can be gray).

Classificatory presumptions in law and in everyday conversation can be analyzed as inferences from lack of knowledge following the scheme above. For instance, a person is considered to be innocent if he is not known to be guilty; a murderer is considered to be sane, if he is not known to be insane or have his mental conditions impaired, a man missing from five years is considered dead if he not known to be alive.

The concept of paradigm and reasoning from lack of knowledge can be also applied to reasoning from best explanation. For instance, we can consider the presumption that a man who killed a person using a deadly weapon did it on purpose. The pattern of reasoning can be described as follows (from Walton 2002: 44):

**Explanation under lack of knowledge**

*F* is a finding or given set of facts.

*E* is a satisfactory explanation of *F*.

No alternative explanation *E'* is as satisfactory as *E*.

Therefore, *E* is plausible, as a hypothesis.

The lack of knowledge here regards the paradigm of the possible explanations. In the event that no other possible explanations of *F* (killing a person using a deadly weapon) are known, the conclusion will be that *E* (the killing was done on purpose) is the explanation. However, the paradigm of the possible explanations is not simply constituted of one possibility: it is simply not known.

The relation between paradigm and knowledge applies also to another type of presumption, namely the presumption raised by citing in trial the existence of a code of practice. Codes of practice stipulate what is the correct practice for carrying out some activities, such as the protection of personal data or ensuring a safe workplace. When the code of practice is cited in support of a prosecution, the burden on proof passes to the defendant to prove that what was done was at least as good as what prescribed in the code of practice (Ramsey 2007: 470). For instance, if the defendant is charged with violating the regulation requiring that an employer shall keep the workplace safe (Article 5(1) of the Order), the prosecution can cite the code of conduct provided in those situations. If the employer is shown not to have abided by one or more provisions, he is presumed to have violated the regulation (see Paul Scott v. AIB Group (UK) PLC t/a First Trust Bank, NICA 3 2003). In this case, the reasoning proceeds from the ignorance of other possible actions carried out to achieve a the wanted result, and can be represented as follows:

**Cause under lack of knowledge**

If actions A,B,C, are carried out, X is achieved.

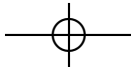
Action A has not been carried out.

No other actions to achieve X are known to have been carried out.

Therefore, X has not been achieved.

Also in this case, the reasoning proceeds from the absence of knowledge of the elements of a paradigm.

The types of schemes from presumption are particular forms of reasoning from classification, effect to cause, and cause to effect in conditions of lack of knowledge. They can be considered to be heuristic forms of reasoning, aimed at providing a conclusion in a dialogue setting. The presumption is grounded on the concept of lacking evidence; for this reason, it shifts the burden to complete



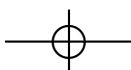
the missing information or incomplete paradigm to the other party. In criminal cases, the burden of persuasion never shifts in cases of presumption. The defendant is simply required to provide evidence and thereby complete the structure of reasoning. When the offense is determined, for instance the defendant has been found guilty of a crime, the issue changes, and he has the burden of proving some possible mitigations and qualifications. In civil cases, in some states in the United States, the party opposing a presumption has to disprove the presumption by preponderance of evidence. However, also in this case, the burden of persuasion regarding the issue remains on the claimant, and the party opposing the presumption has to either provide a different credible explanation or provide adequate evidence (see (Buckles 2003: 45).

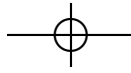
#### 4.4 Presumptions as heuristic patterns of reasoning

The analysis of legal presumptions highlights a crucial distinction between two patterns of reasoning. The formal paradigm of necessarily true inferences, based on the relation between quantifiers, cannot hold if applied to human reasoning, in which quantifiers are usually omitted, and in which only few absolute truths, if any, can be the ground for necessary conclusions. Human reasoning stems from commonly accepted premises, that is, *endoxa* (see Walton and Macagno 2006), and proceed to conclusions through another type of accepted propositions, the ancient maxims, or principles of inference, partially included in the modern concept of argumentation schemes. For instance, the passage from some data to a classification is warranted by the scheme from verbal classification, which can be represented as follows (Walton 2006: 129):

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 $G$

In the tradition, the classification premise was expressed as a maxim from definition, such as “what the definition is said of, the *definiendum* is said of as well” (see Macagno and Walton 2008a). In law like in everyday conversation, it often happens that the evidence we have does not fit the definition of the concept. For instance, one of the accepted definitions of manslaughter is “the unlawful killing of a human being without malice aforethought”; however, how can we classify an event as ‘unlawful’, or ‘without malice’? if malice is the ‘intention to do injury to another party’, how can an intention be established? If the law provides that ‘An individual who has sustained either (1) irreversible cessation of circulatory and respiratory functions, or (2) irreversible cessation of all functions of the entire brain, including the brain stem, is dead’, how can brain activities be considered to have ceased?. Furthermore, how can a man be considered dead or alive when he is missing? We can notice how the following types of reasoning are different:





Reasoning from definition	Reasoning from presumptions
— This man unlawfully killed a woman without malice aforethought — Manslaughter is the unlawful killing of a human being without malice aforethought — Therefore this man committed manslaughter	— This man stabbed a woman to death — If a wound is inflicted with a deadly weapon in a manner calculated to destroy life, malice is presumed. — This man acted with malice

The second pattern of reasoning is not grounded on a definition at all, even though it can be considered a kind of classification of malice. This type of heuristic classifications or reasoning from presumptions (see Gigerenzer et al. 1999) is grounded on a different type of commonly known propositions, namely rules of thumb, stereotypes, habits (Amossy, Herschberg-Perrot 1997; Schauer 2003; Cohen 1977). They do not constitute the shared semantic system, nor the legal semantic structure (see also Perelman 1963: 170). We can represent the different levels of commonly shared propositions as shown in figure 4.2.

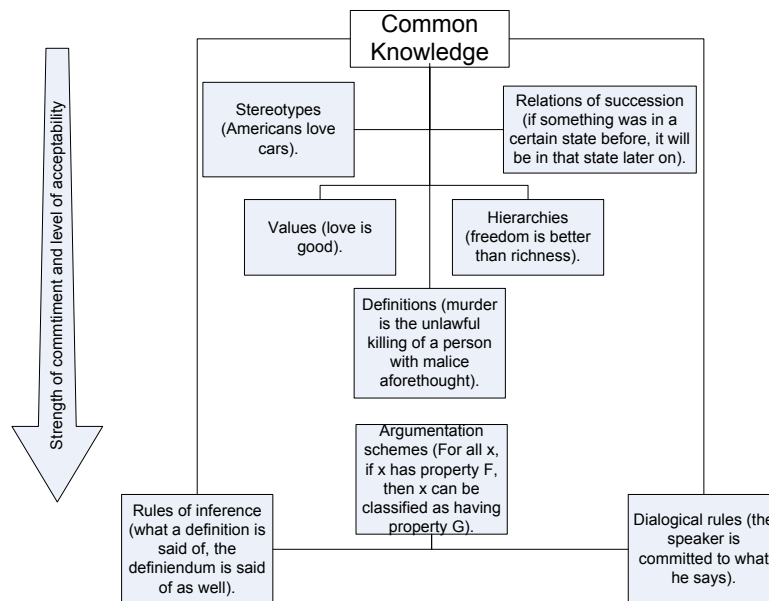
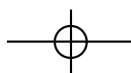
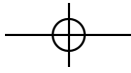


Figure 4.2: Levels of common knowledge

This figure is obviously an ideal representation of what ideally is considered as a stronger commitment. Depending on the type of discussion, and education and culture of the interlocutors, some stereotypes may even prevail over dialogue rules.

The two patterns of reasoning can be represented by two different versions of the same argument scheme. For instance, if we consider arguments from classification, we can notice that they can proceed from the normal scheme or the classification under lack of knowledge, namely from positive evidence or incomplete paradigms. Classificatory arguments can be grounded on definitions or





stereotypes, they can proceed from maxims of definition or other weaker rules of inference requiring qualifications (for instance, if I define a house as four walls and a roof, and if there are four walls and a roof, then in some circumstances there can be a house as well).

The distinction between these two types of schemes, what we can call the “dialectical” schemes using the medieval name for them, and the heuristic or presumptive schemes is the basis for examining the different force of the conclusions and the possibility of rebutting them. In the first case, the interlocutor has to rebut the premises in order to rebut the conclusion. For instance, if one party argues that Bob committed a murder because he killed a woman unlawfully and with malice aforethought, the opponent can dispute the facts or the definition of ‘murder’, even though in law this possibility would be extremely complex. In case of heuristic reasoning, the interlocutor does not have to rebut the premises, but simply introduce new evidence. For instance, if the prosecution presumes that the homicide was committed maliciously, as the accused stabbed the victim, the defendant can simply show that it was an accident. The different role and strength of the two patterns of reasoning can be shown by the effects of the redefinition of ‘rape’ in Canada. In Scotland and other states, the concept of no-consent to a sexual act is stated as a presumptive, heuristic definition, imposing onto the defendant only the burden of providing evidence (Ferguson, Raitt 2006: 196). For instance, no-consent is presumed when the victim was asleep, or if violence or threats were used (Sexual offences act, s. 42). On the contrary, the Canadian Criminal Code includes the presumptive elements as definitions of “no consent” (section 244(3); Temkin 2002: 117):

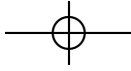
For the purpose of this section, no consent is obtained where the complainant submits or does not resist by reason of:

- (a) the application of force to the complainant or to a person other than the complainant
- (b) threats or fear of the application of force to the complainant or to a person other than the complainant
- (c) fraud
- (d) the exercise of authority

Whereas in the first case the defendant has only to provide evidence or a different explanation for the presumptions, in the second case he has burden of persuading that the victim was consentient. The two different treatments of the concept of ‘no-consent’ show how the strength of different types of human reasoning can affect the dialogue setting.

## 4.5 Conclusion

Presumption is a complex concept in law, affecting the dialogue setting. However, it is not clear how presumptions work in everyday argumentation, in which the concept of “plausible argumentation” seems to encompass all kinds of inferences. By analyzing the legal notion of presumption, it appears that this type of reasoning combines argument schemes with reasoning from ignorance. Presumptive reasoning can be considered a particular form of reasoning, which needs positive or negative evidence to carry a probative weight on the conclusion. For this reason, presumptions shift the burden of providing evidence or explanations onto the interlocutor. The latter can provide new information or fail to do so: whereas in the first case the new information rebuts the presumption, in the second case, the absence of information that the interlocutor could



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reasonably provide strengthen the conclusion of the presumptive reasoning. In both cases the result of the presumption is to strengthen the conclusion of the reasoning from lack of evidence.

As shown in the legal cases, the effect of presumption is to shift the burden of proof to the interlocutor; however, the shift a presumption effects is only the shift of the evidential burden, or the burden of completing the incomplete knowledge from which the conclusion was drawn. The burden of persuasion remains on the proponent of the presumption. On the contrary, reasoning from definition in law is a conclusive proof, and shifts to the other party the burden to prove the contrary. This crucial difference can be applied to everyday argumentation: natural arguments can be divided into dialectical and presumptive arguments, leading to conclusions materially different in strength.

