Book review

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Walton, D. (2016). *Argument Evaluation and Evidence*. Berlin: Springer.

1 Introduction

Walton's 'Argument Evaluation and Evidence' (2016) is an ambitious book. It explores the nature of explanation, expert opinion, knowledge and evidence. Walton makes the case that contemporary methods developed in argumentation theory can help us shed light on these difficult topics. This review summarizes the main themes of the book (Section 2) and offers some comments (Section 3).

2 Summary

Chapter 1 introduces concepts familiar to those in argumentation theory. An argument consists of a set of premises and a conclusion, and the premises can support the conclusion (pro arguments) or attack it (con arguments). Arguments can be convergent (i.e., different premises support the same conclusion), divergent (i.e., the same premise supports different conclusions) or serial (i.e., the conclusion of an arguments functions as the premise of another argument). One goal of argumentation theory is to develop methods for evaluating the arguments for and against tentative conclusions. To this end, in previous work, Walton investigated different types of arguments, for example, those based on witness testimony and those based on expert opinion. In this book, Walton intends to clarify the nature of another type of argument, the so-called inference to the best explanation (Chapters 2 and 3), and further develop his examination of arguments based on expert opinion (Chapters 4, 5 and partly 6). He also sets out to address more theoretical questions about the nature of knowledge (Chapter 7) and evidence (Chapter 8).

Chapter 2 discusses inference to the best explanation. Walton refers to an explanation 'as an account of some connected sequence of events or actions that helps to transfer understanding from one party to another through a process of communication' (p. 64). Sometimes such an explanatory account contains an anomaly, i.e.,—as made explicit in Chapter 3— 'something the explainee does not understand in an account, even though she understands the rest of the account' (p. 78). In such a situation, a process of inference to the best explanation is appropriate. Consider an anomalous fact, for example, the sudden death of a person. Competing explanations of this fact are possible, such as: the neighbor killed the victim; a stranger did; the death was natural; the death was accidental. An inference to the best explanation selects the explanation that outperforms its rivals, where each explanation takes the form of a story, i.e., a spatiotemporal sequence of events and actions. Walton distinguishes a backward argumentation scheme (p. 65). The premises of the scheme are a set of data and a series of explanatory accounts, some more successful than others, and the scheme's conclusion is the most successful explanation. The scheme comes with critical questions such as: How satisfactory is each account as an explanation? How much better is the best explanation compared to the others? Should the dialogue be continued before drawing a conclusion? What is needed, Walton argues, is a way to combine explanations with arguments in a dialogical system. This is the problem addressed in the next chapter.

Chapter 3 develops a dialogue-based framework to assess stories qua explanations. Suppose an interlocutor puts forward an explanation for a known fact, while the other interlocutor challenges it and formulates an alternative. The proposed explanation is successful and better than the alternative, Walton argues, provided it survives challenges. A potential problem here is subjectivity. How can we avoid making the success of an explanation too much dependent on those who challenge it? Walton's answer is that explanations must be supported by arguments. So, the "explanation game" shifts to an "examination game". In the explanation game, the conclusion at issue is the proposed explanation itself. The explanation should be supported by arguments, and the competing explanations, if they are to be excluded, should lack appropriate argumentative support.

Chapter 4 and 5 (and partly Chapter 6 on the distinction between correlation and causation) assess arguments based on expert opinion. A typical argument from expert opinion has the form "Expert A says X. Therefore X". The motivation for the chapter is that experts disagree and in many cases

have been proven wrong. We should therefore not trust them blindly, and argumentation theory offers us a method to orient ourselves. These chapters contain interesting case studies. In Chapters 4 and 5 most examples are from art history, in which art critics and scientists disagreed about the artwork's authenticity. Walton reconstructs the conflicting arguments by dissecting, charting and weighing them through critical questions, such as: How credible is the expert? Is the expert prepared in the field? Is the expert biased? Chapter 6 discusses arguments concerning public health issues, such as southern Pacific weather patterns and flu pandemics. The examples are discussed in the context of intelligent systems that can support the assessment of conflicting arguments and the weighing of pros and cons.

The two final chapters of the book are devoted to deep philosophical questions about the nature of knowledge and its relation to evidence and arguments.

Chapter 7 defends a process-based, fallible account of knowledge. On this account, knowledge is the result of a process of dialogical inquiry in which propositions are tested and scrutinized in light of the evidence and arguments available. If propositions survive testing and the supporting evidence is strong enough to meet the applicable standard of proof, they become knowledge. New evidence may later undermine propositions previously known. Knowledge is thus both fallible and revocable. Walton discusses the idea—common in epistemology—that knowledge implies truth. Knowledge is than true belief with an extra property, such as proper justification. Walton 's account departs from this idea of 'kowledge as true-belief-plus' and replaces it with defeasible veracity, that is, knowledge of P defeasibly implies the truth of P. This process-based, defeasible account of knowledge is informed by the theories of Pierce and Popper, and Walton complements these with recent developments in the formal and computational study of argumentation, for example, Carneades, ASPIC+ and DefLog. Some might object that items of basic knowledge such as "I have hands" are not arrived at by means of a process. Walton responds that even "I have hands" derives from a defeasible process of knowledge acquisition, of the form "the senses tell me that I have hands unless an exception holds (e.g., I am hallucinating), and since there is no evidence that an exception holds, it can be concluded, defeasibly, that I have hands". In this way, the proposition "I have hands" is not immediate and fits into a model of fallible, process-based knowledge. In his discussion, Walton continues from his earlier work in which he discussed a pragmatic conception of knowledge in which our everyday knowledge as stored in our

memory, our 'knowledge base', is incomplete and fallible (p. 212).

Chapter 8, the last in the book, discusses the relationship between arguments and evidence. Walton begins by noting an ambiguity in the use of the word 'evidence'. Broadly speaking, any argument that supports a certain conclusion provides evidence for that conclusion. More narrowly, only certain specific kinds of reasons count as evidence, for instance those based on observations statistics or other scientific results. He addresses the issue of distinguishing between argument and evidence, and at the end of the book discusses three factors (p. 276). First it matters whether the kinds of evidence used are right for the argumentation in a given case. Second the argument given should fit a recognized argumentation scheme. And third the argument should be 'found in the knowledge base representing the evidential findings in the case that have been accepted as factual'.

3 Comments

As in much of his work, Walton uses his well-developed perspective on argumentation and dialogue to investigate hard problems also investigated in other fields of investigation. Here he uses his extensive experience in applying the tools of argumentation theory—many of which he developed or has helped develop—to shed light on the complex themes of the relation between arguments and explanations; arguments and knowledge; and arguments and evidence. . Along the way he shows his extensive interests and grasp of relevant work, aiming to integrate scholarship from neighboring fields such as epistemology and philosophy of science, and to include relatively new developments such as the formal and computational study of argumentation (associated with the biennial COMMA conference series and the journal 'Argument and Computation). In these ways, Walton's book is a useful and interesting scholarly contribution.

As expected for a book on these hard themes, there is room for further exploration. A first area of further research is the development of a theory of (the best) explanation. In Walton's book, not much is said about the notion of explanation itself. A key part of the notion is that an explanation is meant to address an anomalous fact or that it should convey to an interlocutor an understanding of the fact to be explained. But it seems that there are explanations of facts that are not thought of as anomalous. We seek, for example, an explanation of why the sun rises every morning, which is hardly

an anomalous fact, or if it is, it would be anomalous in a different, more specific way to be made explicit. Further, while explaining might sometimes involve the act of conveying to an interlocutor a certain understanding of the fact to be explained, this is not always the case. Relativity theory, for example, explains a number of things in a way that most people do not understand. Presumably Walton's focus is mostly on a communicative theory of explanation or a common sense theory. It would be interesting to know more about the scope of the intuitions about explanation made explicit by Walton.

A second area of further work is how Walton's discussions relate to other work in philosophy, especially epistemology and philosophy of science. In particular, Walton begins by attacking the thesis that knowledge of P implies the truth P, and goes on to offer a fallibilist theory of knowledge. Many epistemologists in the analytic tradition have taken a similar perspective. On the one hand, it is true that most analytic epistemologists believe that knowledge implies truth. But, at the same time, most of them also believe that knowledge is fallible (contrary to what Walton seems to think). Many contemporary theories of knowledge in the analytic tradition, in fact, are fallibilist theories but also embrace the thesis that knowledge implies truth. THIS SEEMS PARADOXICAL BUT ¡SOME SPECIFICS¿. See, for example, the survey piece on the Stanford Encyclopedia of Philosophy "The Analysis of Knowledge". So, pace Walton, there need not be a conflict between the fallibility of knowledge and the thesis that knowledge implies truth. IS THE ABOVE TRUE? I SEE TRUE KNOWLEDGE AND FALLIBLE SENSES. THIS PARAGRAPH NEEDS SOME WORK.

Third, consider how Walton makes an argument of dubious cogency. On page 232, he mentions a well-known skeptical challenge. If I see a red lamp, how do I know that I am not hallucinating? Walton suggests that the lack of evidence that I am hallucinating supports the conclusion that I am not hallucinating, because if I were, there would be evidence that I was. So, Walton argues, given that there is no such evidence, it can be concluded, defeasibly, that the lamp is in fact red. This reasoning will appear preposterous to many epistemologists. The fact that I am hallucinating makes it impossible to recover any evidence that I am or am not hallucinating. The fact that there is no evidence that I am hallucinating is precisely what I would expect if I were hallucinating. This is why skepticism is so hard to dismiss. Arguably, Walton did not aim to answer the skeptical challenge, but rather, simply make explicit an ordinary (though somewhat dubious) pattern of reasoning

which could be applied in situations that do not involve radical skepticism. It is plausible to say that absence of evidence is evidence of absence, at least in some scenarios. Still, Walton should have told us what such scenarios are. I DON'T REALLY UNDERSTAND THE POINT OF THIS PARAGRAPH. MY IMPRESSION IS THAT THIS IS ABOUT TWO DISTINCT THEMES: what counts as knowledge for a knower (perhaps this is what you would call justified belief, justified-for-the-knower) and what count as knowledge for an evaluator of that knower. A hallucinating knower could then be justified in believing something, but an outside evaluator would understand that that is a false justified belief; hence no knowledge. END OF REMARK

Finally, consider how Walton fails to address a crucial epistemological problem. In Chapter 8, he gives a theory of evidence and how evidence is related to arguments. But he does not face the elephant in the room. This is the question, how can an infinite regress of justification be avoided? I THINK HE DOES BY USING A KNOWLEDGE BASE (INTERNAL TO THE KNOWER) AS A BASIS. For one, he suggests that evidence consists of propositions that cannot be further questioned, but also admits that such evidential propositions, in certain circumstances, can be questioned. But Walton does not specify what triggers the need of further questioning, nor when the further questioning is legitimate or inappropriate. Does the chain of justification stop at some point or does it regress back ad infinitum? Perhaps, this is not the sort of question we should be asking, but if not, Walton should tell us why. WHAT REMAINS OF THIS CHALLENGE AFTER THE KNOLWEDGE BASE REMARK? REPHRASE? REPHRASE AS A SUGGESTION HOW WALTON"'S WORK RELATES TO A KEY QUESTION IN EPIST?

There is a specific contribution Walton makes that distinguishes it especially from analytic philosophy. It is the process-based, or inquiry-based, approach to a theory of knowledge. Analytic philosophers seem to have been mostly concerned with the statics of knowledge – that is, with identifying conditions under which a certain evidential state, held by a group or by an individual, counts as knowledge. BUT WHAT ABOUT DYNAMIC EPISTEMIC LOGIC? en.wikipedia.org/wiki/Dynamic_epistemic_logic END OF REMARK Despite some recent work, analytic philosophers have not been much concerned with the dynamics of knowledge – that is, with the process by which knowledge is acquired and lost. The process-based perspective which Walton brings to the table is certainly interesting from a philosophical point of view.

4 Concluding remarks

All in all, this book offers a wealth of insights, ideas and interesting examples. It is written by one of the foremost experts in the field, and those interested in argumentation theory and its epistemological underpinnings will certainly profit a great deal from reading it.