

## Comments on ‘Black Box Arguments’

Marcin Lewiński

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I consider Sally Jackson’s analysis of “black box arguments,” on the most abstract level, as a valuable contribution to an ongoing discussion on a very important issue: how to find a rational and critical way between the two extremes of, on the one hand, uncompromising dogmatism and, on the other, endless scepticism in our deliberations. Philosophers of science and argumentation theorists alike have persistently been trying to properly diagnose and solve this difficulty central to their disciplines. Latour (1987), in his endeavour to find a solution to this problem, proposed the concept of a black box: Science cannot be constantly ‘in the making,’ for it has to move forward and produce results. Therefore, those of the tentative conclusions of an open, transparent box of ‘science in action’ which are based on reliable methods and compelling evidence cease to be controversial and become widely accepted through a consensus of a community of scientists. In this way, a contested hypothesis turns into an accepted result, which serves as a black box device—its inner workings are no longer open to scrutiny, and the only thing we can do is to ‘input’ questions and obtain authoritative ‘output’ answers.

Jackson employs Latour’s concept in a different institutionalised context of argumentation than a purely scientific dispute, namely, in a ‘policy discussion in which scientific evidence plays a leading role.’ It is this very context that clearly reveals a dilemma of authority dependence discussed by Willard (1990, p. 18): on the one hand, ‘deference to authority is presumptively rational’ since it is simply impossible for policy-makers to check everything on their own; on the other hand, ‘to invoke authority is to abort debate’ since a free and open argumentation is supplanted by an overpowering black box. As Jackson rightly emphasises, arguers in the context of a policy discussion are limited in their deliberations in many respects. Not only do they lack the necessary expertise to thoroughly examine some

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M. Lewiński (✉)

Department of Speech Communication, Argumentation Theory and Rhetoric,  
University of Amsterdam, Spuistraat 134, 1012 VB Amsterdam, The Netherlands  
e-mail: M.Lewinski@uva.nl

specialised issues, but also their decisions, such as the allocation of public funds, must be timely and concrete. Meticulous consideration of all theoretical possibilities is a practical impossibility. This is why they cannot dispense with external devices, such as scientists' "black box" judgments. Still, this limitation does not mean that rational agreements on policy issues cannot be reached.

This may not be the case, however, with the example presented in Jackson's paper. The whole complex controversy over the abstinence only sex education—visualised by Jackson in a concept map—is analysed at 'the most relevant level of disagreement' as a dispute between protagonists of two opposing standpoints (the Bush administration: 'federal funds should be used to invent, develop, and implement sex education programs that effectively promote sexual abstinence' *versus* health sciences community standpoint: 'federal funds should be used to invent, develop, and implement sex education programs that effectively promote recognised public health outcomes'). Such a dispute shapes a disagreement space that may effectively preclude a rational resolution. These standpoints, while both embedded in a public policy discussion, address different 'spheres of argument' (Goodnight 1982): the public and the technical one, respectively. In consequence, the two adversaries resort to very different types of arguments.

The Bush administration advances deductive argumentation starting from basic moral principles, such as the value of personal chastity and monogamy; the primary concern is the inherent good of the means employed—their effects are secondary. Health scientists, by contrast, use pragmatic argumentation from consequences, such as the technical efficacy of the means employed; their primary concern is the health outcome that the means bring about—the inherent nature of these means is only of secondary, if any, importance. In result, the parties seem to argue at cross-purposes: one side will relentlessly defend ethical values, the other scientific utility. No doubt, both sides to the controversy would love to see a scientifically effective morality, but when it comes to the incompatibility between the two, each of them will go its own way. This would suggest analyses of the dispute in terms of the problems in the higher-order conditions of critical discussion, deep disagreements, ideological divisions, or 'predicaments of politicization,' all of them undertaken by Jackson in various contexts before (cf. for example van Eemeren et al. 1993, Chap. 7; Jackson 2007). Clearly, the present paper has a different purpose—'to reflect on the nature of these [black box] devices'—but still, two questions are especially pertinent here: First, can we really treat this controversy as a 'policy discussion in which scientific evidence plays a *leading* role?' One may wonder if this very formulation of the context is not the bone of contention here—health scientists, supported by the results of the studies such as Underhill et al., call for a 'leading role' of their 'black boxes' while the Bush administration dismisses such a role, looking instead to other grounds for decisions.<sup>1</sup> This leads to a second

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<sup>1</sup> This point is explicitly recognised by Jackson: 'Note that the controversy is not really over the effectiveness of abstinence-only sex education in achieving a certain set of public health outcomes. The Bush Administration has sometimes emphasised that abstinence is the most effective way (for a person) to avoid unwanted pregnancy and sexually transmitted disease, but this is different from saying that programs designed to promote abstinence are the most effective way to promote overall public health outcomes. The core disagreement is over what use should be made of federal funds for sex education.'

problem: what is the relation of *scientific* 'black box arguments' to other, apparently similar, *non-scientific* devices of which we 'must either accept the output' or 'reject the device outright,' such as the prescriptions of the *Bible* or *Koran*? Are they not equally inscrutable and incontestable to some arguers in many contexts of policy discussions?

Clearly, then, the use of black box arguments differs in various institutionalised contexts of argumentation. To account for these differences an argumentation critic would have to describe how black boxes are used and prescribe when they are reasonable. The latter is a very important problem of normative criteria: when should a black box argument be seen as sound and when as fallacious? In pragma-dialectics, an appeal to external authority is a sound strategic manoeuvre only if arguers agree, either in advance or in retrospect, i.e., after a sub-discussion, that this authority is acceptable and properly invoked in a given context—otherwise it is a fallacious *argumentum ad verecundiam* (van Eemeren and Houtlosser 2003). Such an agreement through an 'intersubjective testing procedure' concerning individual argumentation schemes or more complex 'argumentation templates' (Jackson and Brashers 2003) allows for a critical discussion to progress rationally, but does not guarantee an epistemological adequacy of the authority, or black box, consulted in a particular instance. In other words, it solves the problem of the rationality of a delegation of an argument to an external device, but not the problem of the rationality of the device itself.<sup>2</sup>

These intricate and weighty issues, rather conspicuously absent from the analyses of the paper, are all briefly addressed in its concluding 'theoretical observations.'

First, the necessity to recourse to the black box arguments in policy discussions is based on the very impossibility of the public arguers to see through and evaluate the inner arguments of black boxes themselves. Such lay arguers are, thus, by definition reliant on 'a faith-based decision' as to the use of black boxes. This raises the question of openness in argumentation: rational means open, but not endless and anarchic; constrained, but not dogmatic and tyrannised. Jackson observes the immensity of the problem and cautiously shies away from providing any magic formula for steering a middle course between the two pitfalls. One would want to add, however, that this observation alone may lead to interesting conclusions—in the conditions of the lack of clear criteria, the advocates in the public sphere may easily manoeuvre to pursue their interests while upholding the appearances of rationality. They may manoeuvre to present a given box as closed and sealed forever, whereas stimulating doubts and counterclaims can and should still be expressed. Conversely, they may also be 'fooling the public by obscuring the certainty of a closed argument' (Latour 2004, p. 227). These possibilities have not attracted much attention in Jackson's study.

Secondly, such suspicious strategic manoeuvring with scientific black boxes should not affect scientists themselves, for they are bound to specific methodological standards, clearly outlined by Jackson. Indeed, basic requirements for a

<sup>2</sup> This is not to say that these two are unrelated. In the end: 'letting the [statistical] test function as an unquestioned black box is as reasonable as the theory backing the test' (Jackson and Brashers 2003: 549).

reasonable argument from authority, stipulated by Walton (1989, p. 60), when applied to specialised and institutionalised sciences may be reduced to just one—a consensus between experts in a specialised field. However, Willard (1990, p. 16) remarks that in face of thousands of relevant published works to be considered ‘the state of consensus in a field may not be an outcome of a single conversation, or a fully coherent one, and thus cannot be reliably assessed.’ Maybe this is why Latour’s prototypical black boxes are only long established results, on the basis of which large bodies of further research have grown, such as the double helix structures of DNA. And maybe this is why the case of the Underhill et al. method of meta-analysis, ‘the use and reliability of [which] is by no means as stabilised in social science practice as is the use of randomised experimental testing or statistical inference,’ cannot be easily qualified as a black box proper, at least among scientists.

Despite this observed lack of consensus and stability within and across disciplines, Jackson perceives science as a collection of black boxes within black boxes and therefore suggests that we can ‘see [...] modern discipline-based methods for resolving disagreements as device-like.’ Further, she extrapolates this observation to ‘logical constructs (like *modus ponens*).’ Now, does this mean that each conventional, rule-bound method of argument, including logical constructs and norms of public deliberation, is a black box for arguers just like the scientific method is for laymen? Would that not lead to a concept of argumentation as an obscure, esoteric device that provides us with ready-made results?

Or, maybe, as the third conclusion of the paper suggests, some privileged, discipline-independent modes of argumentation—such as a critical discussion—can help us in re-opening and thus critically assessing the black boxes that surround us. I would like to argue that such a task, based on the assumption that ‘inner workings can be abstracted from context and evaluated for problem-solving validity,’ may be difficult to realise for two reasons: First, even the field-independent, argumentative view of scientific method cannot fully dispense with *substantive* knowledge of the field—if our antagonists do not employ highly specialised, plausible counter-arguments, e.g., alternative explanations, the method will not produce fruitful results. This point has been illustrated in Latour’s (1987) story of the DNA structure development and quite convincingly argued for by Jackson (1989, p. 5) herself, who emphasised the role of ‘*substantive* rival views’ and ‘substantive arguments’ in her argumentative approach to method. Second, abstracting from context is a highly sensitive issue, not only in sciences (the Duhem-Quine thesis), but also in policy discussions: some critics attribute failures in successful applications of scientific knowledge in public discourse exactly to de- or re-contextualization of, on the one hand, public needs by experts, and, on the other, scientific results by policy-makers (Aakhus 1999). Such an abstraction from context may result in a radical separation of facts from values—a danger in Aakhus’ analyses, but a promise in Jackson’s final ‘theoretical observation.’

Altogether, the paper presents an interesting problem of argumentation in an institutionalised context, a problem that will certainly stimulate further discussion. Therefore, I conclude by noticing that the results presented by Sally Jackson in her study of black box arguments are probably not black boxes themselves.

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