Plausibility and Reasonable Doubt in the Simonshaven Case

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Abstract: I comment on two analyses of the Simonshaven case: one by Prakken (2019), based on arguments, and the other by van Koppen and Mackor (2019), based on scenarios (or stories, narratives). I argue that both analyses lack a clear account of proof beyond a reasonable doubt because they lack a clear account of the notion of plausibility. To illustrate this point, I focus on the defense argument during the appeal trial and show that both analyses face difficulties in modeling key features of this argument.

Keywords: Evidence; Conviction; Scenario; Argument; Story model; Explanation; Plausibility; Reasonable Doubt; Standard of Proof; Probability.

In the evening of August 11, 2011, Jenny Lourens and her husband Ed Lourens were in the woods near Simonshaven. At some point, Jenny was hit, kicked and strangled with a metallic object, possibly a gun. A firearm was discharged, but its role in the events is unclear. The police found Jenny's body in a pool of blood a few hours later. Ed was with Jenny when she was killed, but he denies having killed her. He claims a man coming from a side path suddenly attacked them. Ed fell unconscious, and when he woke up, his wife was lying on the ground.

The court did not believe him. Several pieces of evidence linked Ed to the crime. His clothes and shoes had stains of blood matching the victim. His hands had residue of gun powder matching the residue found on Jenny's body. His behavior after the crime was perplexing. A number of witnesses reported having heard a shot at about 8:15 pm. Ed did not seek help until forty minutes after and never called the emergency services. One witness saw Ed's car around a water pumping area, a place where one could dispose of a firearm because of the strong

current. Ed refused to answer more specific questions about what happened, and no other suspect could be identified. If not Ed, who could have killed Jenny?

Ed was convicted of manslaughter. He appealed. When the case was reopened, it turned out that another man, Perry Sultan, had attacked and killed other women in the same area. This gave credibility to Ed's story. Yet forensic analyses could not link Perry to the killing of Jenny Laurens, and Ed's description of the attacker did not quite match Perry. Nevertheless, the defense argued on appeal that Ed's story was still plausible enough to raise a reasonable doubt about his guilt. The appeal court was not persuaded and upheld the conviction.

In these remarks, I will comment on two analyses of the Simonshaven case: one by Prakken (2019), based on arguments, and the other by van Koppen and Mackor (2019), based on scenarios (or stories, narratives). In particular, I will examine whether these analyses are capable of adequately modeling the defense argument during the ap8peal trial.

In its final argument, the defense asked the court 'to assume the truthfulness of the statement of the client', and from this assumption, it argued that '[t]he statement of Lourens is plausible, or at least it cannot be ruled out' (Bex et al., 2018, 36). The defense noted that on the cartridges found at the crime scene there was genetic material belonging to an unknown individual, and that this indicated that another person could have been present. The defense also noted that the forensic findings, which the prosecution relied upon to incriminate Ed, could also fit with Ed's innocence. For example, the defense cited an expert report attesting that 'gunshot residue can end up on a shooter, but . . . can also end up on the hand of bystanders, who are standing about 1.5 meters from the shooter' (Bex et al., 2018, 39). It is plausible to conclude—the defense suggested —that when Ed was unconscious, gunshot residue ended up on him.

The defense here engaged in hypothesis-to-evidence reasoning. It assumed that what Ed said was true and examined whether it was compatible with the evidence. This argumentative move is common in criminal trials. The defense did not aim to establish the truth of Ed's story, not even that it was likely, but that it could plausibly be true. I found this argument to be a good example of how the seeming plausibility of a story can be utilized to create a reasonable doubt about guilt. I will argue, however, that both Prakken's argument-based theory and van Koppen and Mackor's scenario-based theory face difficulties in modeling the defense argument because they lack an account of plausibility.

This is not just an issue confined to modeling the defense argument. As we will see, there is a tight connection between the notion of plausibility and the standard 'proof beyond a reasonable doubt' in the sense that a satisfactory account of the latter depends on a satisfactory account of the former. Both analyses—I hold—lack a clear account of proof beyond a reasonable doubt insofar as they lack a clear account of plausibility.

In Prakken's analysis (see his Figure 4), the claim put forward by the defense is that Perry is a plausible alternative attacker. This is a promising way to model the defense argument. Without aiming to establish that Perry killed Jenny, the defense intended to create a reasonable doubt about Ed's guilt. Prakken captured this argumentative move with the formulation 'plausible alternative attacker'. This is interesting, but also muddles the waters. A claim such as '*plausibly* ϕ' contains within itself a standard for its acceptability. Yet shouldn't the standard for the acceptability of a claim be distinct from the claim itself? Ideally, while modeling a legal case, the evidential reasoning in the case — that is, an analysis of what the evidence is and what conclusions it purports to establish — should be distinguished from the standards of acceptability. This can allow the reuse of the case's evidential reasoning model in different contexts governed by different standards of acceptability (or different standards of proof).

A possible fix for Prakken's analysis is to replace the claim 'Perry is a plausible alternative attacker' with 'Perry is an alternative attacker'. The word 'plausible' would then become a qualifier of the support relation between premises and conclusion, without occurring in the conclusion itself. But this would pose the question of how to model the fact that a set of premises *plausibly support* a conclusion. The argumentation framework lacks a clear account of degrees of support, and the fact that Prakken used 'plausible' as part of the claim itself might have been a clever workaround.

Prakken's argumentation framework, however, does offer an account of the standard of proof, and this could be used to formulate an account of plausible support. To see how, a recapitulation of certain aspects of Prakken's analysis is needed. Prakken identifies a few crucial issues on which the contested claim that Perry is a plausible alternative attacker depends (Figure 6 and 7). One issue is whether Ed's testimony about a man attacking him and his wife is credible. Ed said he and Jenny went for one hour walk in the woods, but other witnesses said they saw them making love in the back of their car in the parking lot between 7:30 and 8 pm. Should we believe Ed or the witnesses? Another issue is whether the police conducted a proper investigation of the crime scene. No traces of Perry were found at the crime scene, but this might be the result of sloppy forensic work. We can be of different minds here. If we thought the investigation was sloppy and the witnesses unreliable, we could believe Ed's testimony and thus the argument for Ed's guilt would be defeated. In Prakken's terminology, this would be a *labeling* of the argumentative relations on which the argument for guilt is defeated (Figure 11). But we could also think the investigation was adequate and the witnesses reliable. This would be a labeling on which the argument for guilt is not defeated (Figure 10).

Should Ed be convicted or not? According to Prakken, if there is a labeling on which the argument for guilt is defeated, guilt is not established beyond a reasonable doubt. This account of 'proof beyond a reasonable doubt' can be used

to formulate an account of 'plausible support'. That is, a set of premises plausibly supports a conclusion if there is a labeling of the argumentative relations under which the conclusion is not defeated. The problem, however, is that this interpretation of 'proof beyond a reasonable doubt' might be too strict, and the corresponding interpretation of 'plausible support' might be too loose. After all, it is difficult to think of evidence so strong to rule out any possible labeling on which the argument for guilt is defeated.

Still, there might be room for some flexibility here. Prakken's account could be rephrased, as follows: guilt is proven beyond a reasonable doubt provided all *plausible labelings* of the relations of support and attack do not defeat the argument for guilt. This would solve one problem but create another. We would be left with a circular account of plausible support. That is, a premise plausibly supports a conclusion if there is a plausible labeling of the argumentative relations under which the conclusion is not defeated. Prakken's account could also be extended by assigning weights to different arguments (see, for example, Prakken and Sartor, 2011). But here the question would arise of what weight should be assigned to an argument that plausibly supports its conclusion.

Let me now turn to van Koppen and Mackor's analysis. A key idea here is that scenarios are supported by the evidence so long as they describe facts and events that causally explain the evidence. In addition, van Koppen and Mackor mention several coherence-based criteria that help to assess the credibility (or degree of support) of a scenario, such as its level of completeness, detail and specificity in describing what happened; its coherence with background knowledge and with particular facts known to be true; its ability to survive objections and make risky successful predictions. Once these assessment criteria are in place, the further question is, how should scenarios be chosen? The answer that van Koppen and Mackor favor is contrastive. That is, the scenario that fares better along the above coherence-based criteria should be preferred to the competing scenarios.

The main difficulty here is that this contrastive approach, albeit quite sensible overall, does not deliver a principled way to decide when a scenario should be believed beyond a reasonable doubt, and this is crucial in a criminal case. The difficulty can be illustrated by looking at the defense argument in the Simonshaven case. In comparative terms, the scenario put forward by the prosecution is superior to the one put forward by the defense. It is more detailed and better coheres with the evidence. Not even the defense would disagree here. Yet the crucial issue is whether there is a reasonable doubt about Perry's guilt—specifically, whether the scenario put forward by the defense is plausible enough to raise a reasonable doubt about the scenario put forward by the prosecution. The burden of proof requires the prosecution to establish its version of the facts in a way that explains, in a causally compelling way, the evidence available and that rules out all plausible alternative explanations. The burden of proof on the defense is not equally demanding. When the defense puts forward an alternative scenario, the defense should only show that the evidence plausibly supports it.

A lot hinges here on what it means for the defense to put forward a scenario that is plausible (or for the prosecution to rule out an alternative scenario as implausible). Perhaps, a scenario is plausible so long as its degree of coherence with background knowledge and particular facts, as well as its degree of completeness and specificity all meet a suitable threshold. Or perhaps a scenario should only meet a threshold for its completeness and specificity to count as plausible, leaving out considerations about its coherence with background knowledge and particular facts. All in all, the scenario-based theory offers little guidance on how to think about the notion of plausibility and the corresponding notion of reasonable doubt.

What the theory needs — ultimately — is a clearer account of degrees of evidential support, possibly understood in terms of degrees of explanatory coherence. This will allow the theory to capture the idea of a scenario being *plausibly supported* by the evidence. Without this, van Koppen and Mackor's

analysis fails to capture the argumentative move made by the defense in the Simonshaven case.

It is an open question whether the scenario-based theory has the resources to offer an account of degrees of evidential support that would capture the notion of plausibility. Without solely relying on concepts within the scenario-based theory, van Koppen and Mackor could combine scenarios with arguments, as Floris Bex (2011) has done. But, as seen earlier, the argumentation framework does not have a clear account of degrees of evidential support either. Another strategy would be to combine scenarios with probabilities and Bayesian networks, following Vlek et al. (2014) and Urbaniak (2018). Whether this is feasible is debatable (see, for example, Siebel, 2011). There is, however, a growing body of literature in philosophy connecting probability theory with key concepts underpinning the scenario-based theory, such as coherence and inference to the best explanation (see, among others, Bovens and Olsson, 2000; Fitelson, 2003; Bovens and Hartmann, 2003; Glass, 2007; Glymour, 2015). As last resort, van Koppen and Mackor could posit that plausibility is a primitive notion, not analyzable any further (on this, see Pardo and Allen, 2008).

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