

Janforum

A fuzzy week for Nurse Der

ROLFIAN PREDILECTIONS?

A recent paper in this journal by the philosopher Peter Cave (1998) attempted a close textual reading (what one critic has called ‘textual harassment’) of my paper ‘Science, abduction and the fuzzy nurse: an exploration of expertise’ (Rolfe 1997). The resulting analysis highlighted what Cave referred to variously in his abstract as mistakes, misconceptions and misleadings, and he concluded with the hope that his own paper might show ‘how some accuracy may be well leading’ (Cave 1998 p. 274). No doubt mindful of the great philosopher who claimed that the proof of the pudding is in the eating, Cave attempted to demonstrate the dire nursing consequences of my mistakes, misconceptions and misleadings if adopted by Staff Nurse Rea Der, ‘a careful but gullible reader of Rolfe’ (Cave 1998 p. 274). Cave went on to explain that ‘The study covers just five days, and Rea makes a mistake each day because of Rolfian predilections’.

I intend to demonstrate in this reply to Cave that the mistakes made by the aptly named Nurse Der are not the result of her ‘Rolfian predilections’, but of some basic logical errors made by Cave himself. I will begin by revisiting Nurse Der’s rather stressful week and suggest some alternative reasons for her mistakes.

NURSE DER’S STRESSFUL WEEK

Monday

Nurse Der is asked to reason through ward needs with her managers. Remembering Rolfe’s (1997 p. 1071) assertion that ‘The syllogism is an analytic statement’, she decides (rather strangely, given the circumstances) not to put forward a reasoned argument, but merely states the ward needs. Cave highlights, quite correctly, the fact that Rolfe used the word ‘statement’ when, of course, he meant ‘argument’ and encourages Nurse Der to take this misuse to its logical conclusions. Thus, Nurse Der reasons:

I have been asked to reason through ward needs
Some reasoning is merely a matter of stating things
Therefore I will merely state the ward needs

Or, in abstract form:

A
Some A is B
Therefore B

Cave uses this example to demonstrate how a false premise (some reasoning is merely a matter of stating

things) can lead to a false conclusion (I need only state the ward needs). However, he makes a serious logical howler by providing an invalid argument. The false conclusion arrived at by Nurse Der is less a consequence of a false premise than of faulty reasoning, and could lead to far more dangerous consequences than an under-resourced ward. Thus, employing Cave’s reasoning, she might argue that:

A: I have been asked to perform cardio-pulmonary resuscitation
Some A is B: Cardio-pulmonary resuscitation is ineffective on some occasions

Therefore B: I won’t bother

The premises might be true, but the conclusion is definitely suspect. As Cave (1998 p.279) points out, ‘if mistakes and misleading claims occur over here, one cannot help but wonder whether or not they also occur over there — in the rest of an article...’. As we shall see, this early mistake does indeed prefigure some similar howlers in the rest of his paper.

Tuesday

After a restless night spent worrying about why her invalid deduction led to an ill-advised conclusion, Nurse Der attends a lecture on evidence-based medicine. Unfortunately, hearing the word ‘deduction’ mentioned at an early stage, she stops listening and, remembering from her reading of Rolfe that deductions provide no new knowledge, eventually falls asleep. She is later surprised that, having slept through most of the lecture, ‘she does not know what the others seem to know as a result of the lecture’ (Cave 1998 p. 275). Part of the problem, as Cave again rightly notes, is the unfortunate use of the word ‘knowledge’ (with its subjective Popperian World 2 overtones) when the (objective World 3) word ‘information’ would have been more accurate (Popper 1979). However, despite that, even the limited intellect of Nurse Der should have grasped the basic point Rolfe was making that nothing can be reasoned from a deductive argument that was not, in some sense, in the premises. Or, as Salmon (1975 p. 14) put it, ‘All of the information or factual content in the conclusion was already contained, at least implicitly, in the premises’. The reason that Nurse Der did not know what the other nurses knew was not, as Cave implies, because she dozed off before the conclusion was reached (implying that the conclusion contained new factual content), but because she slept through some of the premises. Had she taken in *all* the premises *and* proceeded to deduce logically, she would not have come to the wrong conclusion.

Wednesday

Following another restless night 'trying to work out what... she already knows' (Cave 1998 p. 275) (and believing erroneously that she can know it even if she sleeps through most of the lecture) she attempts to do some reading for her degree. She comes across an argument with a false premise, and 'because of her Rolfian reading she believes that if false premises are involved in an argument any conclusions drawn will not follow — so she skips that page' (Cave 1998 p. 275). In fact, this is not what Rolfe said at all. What he said was that in a syllogism of the 'all men are mortal' type, then if the premises are true, the conclusion must necessarily follow. Nowhere does he refer to *false* premises. Regardless of the semantic accuracy of Rolfe's argument, what Nurse Der (and, by implication, Cave) has done is to make yet another logical howler, known as the fallacy of denying the antecedent (Salmon 1975 p. 27). From Rolfe's argument that:

If the premises are true
Then the conclusion will follow

Nurse Der has assumed that:

If the premises are *not* true
Then the conclusion will *not* follow

As Cave (1998 p. 276) rightly points out, 'An argument's logical validity has nothing to do with the actuality of the truth or falsity of its premises and conclusion'. Why, then, does he attempt to demonstrate the consequences of a false premise by employing what is clearly yet another invalid argument?

Thursday

Another bad night! The following day, Nurse Der makes a logical deduction (this patient should be given information about his operation) based on a single piece of research-based evidence (pre-operative information-giving promotes healing) and wonders why her colleague Nurse Aha disagrees with her conclusion. Had she *carefully* read Rolfe's paper in the way that Cave claimed she had, she would have little difficulty in seeing why. Whereas Nurse Der is practising at novice level, that is, solely according to the research evidence, her colleague is an expert nurse who is also employing her personal knowledge about the patient in order to arrive at an informed clinical judgement. In this case, Nurse Aha also takes into account the comfort needs of the individual patient, and decides that these needs over-ride the healing benefits of providing pre-operative information. And like most novice nurses, Nurse Der is genuinely surprised when an expert colleague arrives at a decision which goes against the research-based evidence.

Friday

So to the end of a stressful week, where Nurse Der (rightly) begins to doubt her expert status. At this point, Cave rehearses Benner's (1984) argument that experts may not be able to cite the rules underpinning their behaviour, and accuses Rolfe of making the mistake known as the *post hoc* causal fallacy (Salmon 1975 p. 74) of thinking that just because behaviour *can* be explained by certain rules, that this implies that those rules *are*, in fact, being followed.

Expert behaviour can be accounted for by certain rules
Therefore expert behaviour is a result of those rules

However, this assumption of a mistake on Rolfe's part results from a misunderstanding of Rolfe's claims. He was not, as Cave seems to believe, offering a set of rules to account for expert practice, but rather suggesting a logical mechanism to structure and facilitate the uncovering of unconscious (we might almost say, tacit) rules by the practitioner herself. This can be seen clearly from Rolfe's (1997 p. 1074) conclusion that:

By examining expertise from the perspective of fuzzy logic and abductivism, however, it should be possible to help the expert practitioner to articulate how she arrives at her expert decisions, and even to begin to assign a weighting to each of the fuzzy rules she employs. And as we come to understand the logical processes involved, we might reach the point where expertise can not only be verbalised, but passed on from teacher to pupil.

Not only does Cave misrepresent Rolfe's aims and attribute to him a mistake which he did not make, but Cave actually makes another logical mistake of his own. In fact, he makes the converse of the mistake he accused Rolfe of making by assuming that just because the expert practitioner cannot account for her practice in terms or rules, that she is therefore not employing any.

Expert behaviour cannot be accounted for by rules
Therefore expert behaviour is not a result of those rules

Thus, Cave (1998 p.279) claims, 'her expertise is manifested in her nursing skills and actual practice rather than... in the presence of and obedience to such rules and weightings'.

The bottom line, of course, is that Nurse Der is clearly not an expert practitioner, as her behaviour during the week demonstrates. Perhaps if she had read Rolfe's paper more closely, she would not feel so disappointed that she does not feel like one (even though her boyfriend does).

Conclusion

So where has Nurse Der's ineptitude, driven by her mentor's suspect reasoning, left her? On Monday, through the use of an invalid argument, she denied her ward some

much needed resources. Furthermore, if she applies similarly suspect reasoning in her clinical decisions, she is in grave danger of putting patient's lives at risk, as well as prematurely terminating her own career. On Tuesday, through sleeping through a lecture, she not only missed out on some useful information, the lack of which might again put lives at risk, but she was genuinely puzzled why the students who didn't fall asleep knew more than she did. On Wednesday, because of yet more invalid reasoning, she skips a vital part of her degree studies (how on earth did she manage to get this far?). On Thursday, she upsets Nurse Aha by attempting to assert her own novice evidence-based decision over her colleague's expert clinical judgement, and on Friday, she becomes upset when she eventually realises (despite yet more invalid argument) the awful truth that her own practice is sadly lacking.

Cave stated in his abstract that his paper intended to show how some accuracy may be 'well leading'. Perhaps so, but his own paper appears to have added to the inaccuracies of my original rather than clearing them up (he wrote of mistakes being contagious — perhaps his own close reading of Rolfe was a little too close, and he caught something nasty). Given Wittgenstein's (1958) observation that the aim of philosophy is not to *solve* problems but to

dissolve them, perhaps the time has come to question the contribution that a close philosophical reading can make to papers which are essentially concerned with the *practice* of nursing.

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