## Telling, Showing and Knowing: A Unified Theory of Pedagogical Norms\*

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ABSTRACT — Pedagogy is a pillar of human culture and society. Telling each other information and showing each other how to do things comes naturally to us. A strong case has been made that declarative knowledge is the norm of assertion, which is our primary way of telling others information. This paper presents an analogous case for the hypothesis that procedural knowledge is the norm of instructional demonstration, which is a primary way of showing others how to do things. Knowledge is the norm of telling and showing. It is the prime pedagogical principle.

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Humans teach each other many things. We provide each other with information. Our main vehicle for transmitting information is assertion. As we leave the forest, we tell our friend headed into the forest that there is a jaguar nearby. We also teach each other skills and crafts. We show our friend how to get a jaguar to reveal its location so that he can avoid becoming its next meal. Transmitting skills is typically more intensive than transmitting information. But we are often willing to devote time and resources to doing so. This is the basis of all advanced forms of human culture and civilization (Richerson & Boyd 2005; Tomasello 2009; Sterelny 2011; Gintis 2011).

Philosophers have built a very strong case that knowledge is the norm of assertion (Moore 1959, 1962; Unger 1975; Williamson 2000; Reynolds 2002; Turri 2010; Turri 2011; Benton 2011; Buckwalter and Turri, under review). According to this view, if you don't know that something is true, then you shouldn't tell someone that it is true. The best evidence that knowledge is the norm of assertion is a cumulative explanatory argument from patterns surrounding the give, take and evaluation of assertions.

Four observations loom large in this explanatory argument. First, questions about what you know typically function as indirect requests to make assertions. For example, one way to prompt an assertion is to ask, 'What time is it?', but an equally effective, and practically interchangeable, prompt is to ask, 'Do you know what time it is?'. Second, professed ignorance is a legitimate reason to avoid answering questions. When you're asked a question, even if the question has nothing to do with you or what you know, it is normally appropriate to respond by saying, 'Sorry, I don't know the answer to that question.' Third, questions and remarks about knowledge are appropriate in light of assertions. If someone makes an assertion, it is normally appropriate to ask, 'How do you know that?'. Moreover, more aggressive than asking 'How do you know that?' are 'Do you know that?' and 'You don't know that!'. Fourth, certain assertions strike us as inconsistent. For example, assertions of the form 'Q, but I don't know that/whether Q' are very odd, as are assertions of the form 'I don't know that/whether Q, but I can tell you that Q'. If knowledge is the norm of assertion, we can explain all these observations in a simple, elegant, and unified way.

The significance of these and other observations has been extensively discussed and defended elsewhere (e.g. Turri 2013a; Turri 2013b). It's not our intention to further discuss or defend such matters here. Rather, our goal is to highlight a related set of observations which motivate a cognate hypothesis about the other main form of human ped-

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agogy, namely, skill transmission. Just as knowing that is the norm of information transmission, knowing how is the norm of skill transmission. In brief, just as knowing is the norm of telling, so too knowing is the norm of showing.

Four observations are relevant to the cognate hypothesis. First, asking whether someone knows how to do something can serve as an indirect request for instruction or a demonstration on how to do it. (Note: we don't say that it must or always do so, but only that it naturally can and often does.) One way to prompt instruction is to ask, 'How is this done?', but another way is to ask, 'Do you know how this is done?'. For example, suppose someone asks you, 'Do you know how to make a campfire?'. It would be perfectly natural to respond by saying, 'Yes, I'll show you how.' But why would that be? If knowing is the norm of showing, then the question 'Do you know how this is done?' enables you to infer that the questioner wants you to show her and, thus, can function as an indirect request for a demonstration. This is similar to the way one's question to a bureaucrat, 'Are you authorized to make an exception in this case?', can serve as an indirect request for the bureaucrat to show mercy and make an exception. Notice, furthermore, that in the case of both the campfire and the bureaucrat, it is not incompetent to respond by saying 'Yes I do know how, but I will not show you' or 'Yes I am authorized, but I will not make an exception in your case.' Such responses might be rude but they wouldn't exhibit misunderstanding of what such questions imply.

Second, professed inability is a legitimate reason to avoid instructing. When you're asked to provide instruction on a task, even if what you know is irrelevant to the task, it is normally appropriate to respond by saying, 'Sorry, I don't know how that's done/how to do that.' Suppose you're asked, 'How is a shoelace tied?', and you respond, 'Sorry, I don't know how to tie a shoelace.' Normally your response would be judged perfectly acceptable. But you are irrelevant to the content of the question, so why is that response any more acceptable than, say, 'Sorry, I get depressed when shoelaces are tied'? If knowing is the norm of showing, then by saying 'I don't know how', you're informing the questioner that you lack the appropriate normative standing to show her, which is

surely relevant in the context.

Third, questions and remarks about knowledge are appropriate in light of offers to instruct or attempted demonstrations. If someone offers instruction or demonstration, it is appropriate to respond, 'How do you know [or: Where did you learn] how to do that?'. For example, suppose that there is a group of young children, the eldest of whom is a very responsible and likeable eight-year old. The eight-year old holds up a shoe and says to the others, 'Today you're going to learn how to tie a shoelace.' The other children could sensibly respond by saying, 'You know how to tie shoelaces?'. Similarly, an adult overhearing the eight-year old's pronouncement could reasonably infer, 'He knows how to tie shoelaces.' Why are such responses and inferences sensible? If knowing is the norm of showing, then by offering instruction on a certain task, the eight-year old represents himself as satisfying the norm, namely, as knowing how to tie shoelaces.

More aggressive than 'How do you know how to do that?' are 'Do you really know how to do that?' and, especially, 'You don't know how to do that!'. When the eight-year old holds up the shoe and says, 'Today you're going to learn how to tie a shoelace', the other children could also legitimately respond by asking, 'Do you know how to tie shoelaces?' or, if they're feeling particularly aggressive, 'But you don't know how to tie shoelaces!'. What explains this range of aggressiveness? If knowing is the norm of showing, we can explain it as follows. 'How do you know how to do that?' implicitly challenges one's authority to provide instruction by asking how one came by the relevant know-how; 'Do you know how to do that?' explicitly challenges one's authority to provide instruction by questioning whether one has it; and 'You don't know how to do that!' explicitly rejects one's authority. Explicitly questioning someone's authority is more aggressive than implicitly questioning it, and explicitly rejecting someone's authority is more aggressive than explicitly questioning it.

Fourth, certain offers strike us as inconsistent. For example, when explicitly attempting to instruct you in the acquisition of a certain skill, it would be very odd for someone to say, 'I don't know how to do this, but [watch me now:] this is how it's done',

or 'I don't know how this is done, but let me show you how to do it.' Why do such offers seem defective? If knowing is the norm of showing, then by making the offer you represent yourself as knowing how. But then you proceed to claim that you don't know how, which explicitly contradicts the way you just represented yourself, which explains the inconsistency.

The oddity here is not unlike that associated with someone (apparently sincerely) saying 'I do not know how to throw a football' while throwing a perfect spiral that hits a target thirty yards downfield. Notice also that one can qualify an offer to show by saying, 'I don't know how to throw a football, but I think it's done something like this' or 'but it might be done this way.' This seems analogous to the way that hedging an assertion eliminates absurdity: even though 'I don't know that Q, but Q' can seem absurd, 'I don't know that Q, but I think that Q' does not.<sup>2</sup>

If knowing is the norm of showing, we can explain each of these observations in a simple, elegant, and unified way. This is strong initial evidence favoring the hypothesis that knowing is the norm of showing. The hypothesis is further supported by its relationship to the hypothesis that knowledge is the norm of assertion. Putting the two hypotheses together, we get a unified theory of instructional norms: knowledge is the norm of instruction. Or, to use different terminology, knowledge is the prime pedagogical principle. The relevant form of knowledge, declarative versus procedural, depends on whether we're transmitting information or skills.

Gilbert Ryle (1949) famously argued that knowing how is importantly independent of propositional knowledge, whereas others have instead argued that knowing how is just a special sort of propositional knowledge (e.g. Stanley 2011). It's worth explicitly noting that our discussion retains value independently of resolving this disagreement. For if Ryle is correct that knowing how differs from propositional knowledge, then our discussion provides new evidence that knowing is the norm of showing. By contrast, if it turns out that knowing how is a special sort of propositional knowledge, then even if propositional knowledge is the norm

of assertion, it does *not* follow that knowing is the norm of showing. For *showing* is not a form of assertion, and further argumentation would be needed to establish that one shouldn't show unless one knows, which is precisely what we have provided here.

In one respect the case for the knowledge norm is *stronger* for showing than it is for telling. There are at least some plausible alternative candidates for the norm of assertion, which philosophers have proposed and taken seriously, such as a truth norm (Weiner 2005), a belief norm (Bach & Harnish 1979; Bach 2008) or a justification norm (Douven 2006; Lackey 2007). But we see no hope for straightforward analogous alternatives when it comes to the norm of instructional demonstration. Truth and justification do not straightforwardly pertain to procedural knowledge. If there is a standard common to both main forms of human pedagogy — telling and showing — then it is knowledge.<sup>3</sup>

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