The Value-Free Ideal in Science Communication

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In order for democracy to function effectively, publics must be well informed. In our increasingly technoscientific world, science communication becomes an integral part in making sure publics are scientifically literate. Despite acknowledging the importance of public understanding of science, science literacy levels remain relatively low. I argue that part of the reason science communication has failed to improve public understanding of science is because, like science itself, it has been operating under the value-free ideal (VFI). The value-free ideal (VFI), the idea that non-epistemic values should not play a role in the evaluation of evidence (Douglas, 2009), misrepresents science for several reasons. First, it suggests that by only using epistemic values during the evaluation of evidence, we will produce ‘good’ science. However, feminist scholars have shown that science under the VFI can still produce gaping oversights because of scientists’ inevitable reliance on background assumptions. Second, it is not clear which values should be considered epistemic, and if the distinction cannot be made, then the VFI fails. Third, a challenge to the ideal qua ideal, is that there may be cases where it is desirable for non-epistemic values to play a role, especially when considering inductive risk. Thus, the VFI in advocating for only epistemic values, ends up masking the important and sometimes desirable role, that non-epistemic values can play in science. In contribution to the discourse, I argue that the adoption of the VFI in science has lead to encouraging models of communication that make science appear to be ‘value-free’. Overall I am critical of these models on practical and normative grounds because they are misrepresentative of science and ineffective for public uptake of science. The practical and normative challenges to value-free communication extend directly from challenges to the VFI. Practically, from the descriptive challenge to the VFI, the ubiquitousness of values in science makes value-free communication seem unattainable. From the normative VFI challenge, value-free communication is troublesome because in many situations we might want to include nonepistemic values to ensure communication is produced in the best interests of publics. Lastly in terms of instrumental efficacy, given the evidence that contextualized information is more readily retained, I argue that the positive aspects to using value-free communication (e.g. assessment speed) come at the expense of science uptake - making it self-defeating. As an alternative, I suggest that science communicators need to convey the value-laden processes, practices and products of science. As a result of using models of science communication that include values, the actual practice of science can be more accurately represented, more readily apt for the uptake of science, and can include more epistemic diversity. In

turn, science communicators are in a better position to not only improve public understanding of science but strengthen democracy by providing publics the information needed for personal and civic decision-making.