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 The Next Steps (A4)  
 SETI 2: SETI and Society (2)

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SETI AND POST-DETECTION: TOWARDS A NEW RESEARCH ROADMAP

**Abstract**

Since SETI began, there has been consistent multidisciplinary interest in “post-detection” matters, including approaches to analyzing the evidence (engineering or message) of an extraterrestrial intelligence, the potential societal impacts of a detection, plans for evaluating the significance of and communicating about a discovery, and practice guidelines for involved scientists. A considerable literature exists, spanning decades and many domains of research. However, profound changes in and around SETI/technosignatures work – including the science itself, funding environments, and information/media landscapes – demand our attention. Recent efforts at revising the Rio Scale and proposing a strategy for revising the Protocols have sparked a renewed multidisciplinary conversation, which this present effort intends to extend and expand.

There is an urgent need for effective interdisciplinary collaboration which brings SETI scientists, social scientists, humanists, legal experts, science policymakers, and risk management experts, etc., into a sustained and sustainable conversation about SETI in society as the world changes. This multi-authored, multi-disciplinary discussion (not necessarily consensus) paper is an effort in that direction. Researchers in many disciplines can and do chip away at various elements of the problems, but there needs to be a coordinating post-detection research framework (e.g., in the tradition of the Astrobiology Roadmaps) which can focus research on urgent priorities. There is a funding lacuna which is now critical: SETI/technosignature searches are increasing in scope and intensity, but, as noted in the NASA Technosignatures Workshop Report (2018), there is no obvious institutional center or government funding program which supports collaborative “SETI in society” work to a significant, sustained extent.

The present paper brings social scientists, policy experts, and SETI/technosignatures researchers together in a conversation to ask: what basic research needs to be done, now, to fill in our knowledge and

guide policy about crucial post-detection matters? We will: review prior rationales for post-detection protocols and consider their current status in today's very different geopolitical, scientific, and media environment; clearly identify some current concerns of practicing SETI scientists concerning post-detection; flag imminently pressing concerns for which revised best practices should be developed as an urgent priority, e.g. responsibilities and risks for individual scientists, and the use of both social and traditional media. Finally, we will sketch a preliminary research roadmap which carefully rethinks the catch-all notion of "post-detection" and describes avenues for future work.