

52nd IAA SYMPOSIUM ON THE SEARCH FOR EXTRATERRESTRIAL INTELLIGENCE (SETI) –
The Next Steps (A4)
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WHAT IS INTELLIGENCE – AND WOULD WE RECOGNIZE IT IF WE ENCOUNTER IT?

Abstract

Within SETI one monitors the skies for electromagnetic signals from another intelligent alien civilization. In a pragmatic sense “intelligence” could in that context be understood merely as “the ability to transmit electromagnetic waves.” This is of course not what we mean when we recognize something as “intelligent” in our ordinary, daily lives. Nor is it sufficient to help us to understand what such an “extraterrestrial intelligence” might be, how it could have emerged elsewhere in universe, and how we could recognize it as something intelligent. In order to detect content-rich and meaningful signals from an extraterrestrial civilization, it is not sufficient to rest on the belief that the “intelligent” being is able to construct advanced devices; a creature that constructs meaningful messages should also be able and willing to communicate, i.e., to share experiences through a medium.

The definition of intelligence has commonly been connected to problem solving. As such, intelligence is understood as the ability to solve problems, to make rational choices, to reason logically, to handle the constraints and limitations of time, space and materials. However, if we want to explain the development of advanced technology, defining intelligence as a mere problem solving is insufficient. An important part of what it is to be intelligent is to have emotional skills, a capacity to emotionally appraise the relevant environment with attraction, disgust, etc., and to respond to socializing, bounding, coupling, etc., in a social group. Intelligence is an efficient strategy to cope with, not only the physical, but also – which is important – the social environment.

There are two features (among many other possible ones) of an “intelligent” life form that are particularly important. First, it can imagine things not existing, i.e., things, events, etc., not present in time or space right in front of the thinking subject. Second, an intelligent being is also able to engage in intersubjective interactions, understand other minds, imagine and envision what they will do, what they feel and how they reason. If the extraterrestrial being that we encounter is lacking these two abilities, it would probably not have complex communication and advanced technology, and we would not be able to communicate with it. Without the ability of imagining non-existing things, it would not be able to construct abstract concepts, anticipate future needs, and invent new technology. Without intersubjective skills it would not be able to collaborate for achieving shared goals.