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SETI (Search for Extraterrestrial Intelligence) and the Consequences:

Futurological Reflections on the Confrontation of Mankind with an Extraterrestrial Civilization

by

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In March 2003 the SETI@home-Project [Link1] which had become known worldwide not least because of its innovative use of the internet, entered into its second phase: For two days researchers could use the largest radio telescope in the world in Arecibo (Puerto Rico) to further investigate 150 radio sources which had shown "anomalies" during the evaluation of data of the last four years. But even the participating researchers consider it highly unlikely to discover in this way a signal of unmistakably intelligent origin. And it is good that way. Because SETI-research is, from the viewpoint of socio-psychology, High-Risk-Research. However, nobody has realized it yet – not even the participating scientists. This essay investigates with futurological methods the possible consequences of contact with an extraterrestrial civilization for the culture on earth.

In the four decades of SETI-research committed debates were held concerning promising search strategies, suitable listening techniques and possible communication codes (current: Lesch/Müller 2004). However, the following question was almost always cut out: What would be the social consequences in case a SETI-project would actually be successful or mankind would be confronted in another way with the existence of an extraterrestrial civilization? Until today this question has hardly been systematically investigated – apart from the works of the American psychologist Albert A. Harrison. For this abstinence of the SETI-researchers and the scientific community there are at first glance a number of good reasons: Refraining from the apparent wastefulness of scientific resources by concerning oneself with hypothetical questions, a lack of interest in such questions by

governmental sponsors and the unsettled competences between natural science and social science concerning problems at the intersection between mankind and cosmos.

But there is another reason for this apparent disinterest: The fear to really contemplate the terrestrial consequences of a confrontation with extraterrestrials. What should be of concern is especially the question where we will meet the aliens if indeed the ‘day x’ has arrived sometime. Until now the vast majority of SETI-researchers has attempted to ban the aliens, at least intellectually, into as far a distance as possible, almost into a fictitious quarantine, out of which they may communicate with us. ”It is further assumed that the ETIs are located **in or near their own solar system, at immense distances form Earth...**” (Billingham 2002: 668 – emphasis by M. Sch). That the aliens will stay where they come from (i.e. in their own solar system) is less a scientifically founded assumption than wishful thinking which is also fed by the fear of the possibility that everything could also happen very differently.

Until today researchers vehemently attempt to give the impression that the ‘first contact’ is only **conceivable** as a **long-distance**-contact with the help of radio waves or laser light. The possibility of a direct meeting however is **categorically dismissed** by almost all involved. The central argument that is proposed for this pre-assumption is the extremely long travel time resulting from the great distances between planetary systems (here one speaks of centuries if not millennia). However, this only makes sense on the basis of several **anthropocentric pre-assumptions**: a travel technology and temporality of the traveler similar to those of mankind, subject-oriented travel planning and the ‘biological quality’ of the potential visitors. No doubt all this is assumed in the debates about the contact with extraterrestrial civilizations. In view of the lack of any knowledge regarding the forms of extraterrestrial life, such pre-assumptions are indeed everything but self-evident. Aliens **could** have a life expectancy a hundredfold higher than that of humans, they **could** use generations space ships, they **could** send highly developed robots, they **could** use completely different travel technologies etc. We simply don’t know that. And thus we also can’t say anything about whether the first contact, if it should happen at all, would indeed be established through a radio signal.

In spite of all exobiological play of thoughts (Fuchs 1972; Heidmann 1995; Clark 2000) prior to the actual contact we simply don’t know anything about the physical outfitting, the technological possibilities or the motives of the strangers. Thus it hardly makes any sense to include their hypothetical qualities in the reflections on the consequences of such a contact. Nevertheless, we can think about such questions on the basis of our knowledge of the circumstances on earth itself, such

as the psychic constitution of mankind and its forms of social organizations. If we take the pre-assumptions of the SETI-research about the existence of an enormous number of extraterrestrial civilizations seriously, there would be four factors, **completely independent of the hypothetical qualities of the aliens**, which will determine the reaction of mankind to a first contact: (1) the kind of contact, (2) the place where it occurs, (3) our collective psychological projections as well as (4) the possibility to keep the event secret.

(1) The kind of contact

The hopes of almost all SETI-researchers today concentrate on a **long-distance**-contact through radio waves – perhaps also because that would have quite likely less far-reaching consequences for mankind than a close contact. The further away we know the aliens to be, the less threatening their existence appears to be. If, based on the already mentioned anthropocentric basic assumptions, we wouldn't have to be prepared for a physical visit of extraterrestrials, the dramatic variant of another contact scenario would also lose its probability: the idea of a physical colonization by a superior civilization of extraterrestrials (as can be found in movies such as "Independence Day"). A distance of several thousand light years would – regrettably for terrestrial scientists – de facto exclude a short term communication, however within the mentioned framework of prior assumptions it would also largely render superfluous the fear of a real meeting.

Something similar would apply regarding the question of temporal distance, if we consider the case of a 'contact' with the help of a technological artifact (cf. Brookings-Report 1960: 42, 182; Harrison/Johnson 2002: 113; Zaun 2004). In contrast to initiating contact with the help of electromagnetic waves, where the spatial distance automatically determines the temporal distance as well, in this case we deal with a temporal difference between sending and receiving of a message which is independent of the spatial distance between the civilizations. As a classical fictitious case one can consider the novel / movie "2001 – A Space Odyssey": While exploring the moon, humans discover the artifact of a foreign civilization which was left there several millions of years ago apparently for establishing contact in the future (cf. Hurst 2004).

(2) The Space of Contact

Compared to such a long-distance-contact, every kind of immediate contact, whether with aliens themselves or with representatives they created, would have extremely **dramatic** cultural impacts.

It is my thesis that in this case too the spatial distances are of great importance: the closer to earth such a physical contact occurs, the more negative will be the psychological and social consequences. One can substantiate this thesis first with our sociological and psychological knowledge about the short-term consequences of unexpected meetings with strangers and secondly with the historical experiences of long-term consequences of symmetrical cultural contacts here on earth.

Let's begin with the short-term consequences. As sociological research shows, the felt notion of a threat amongst humans increases the closer to one's own social habitat the meeting with a potentially dangerous opponent occurs. Reports of crimes in ones own town are more disturbing than those in other cities, violence in ones own part of town induces more fear than that in other parts of the town etc. By far the strongest worry however is felt by humans if that which is felt as threatening appears in 'ones own four walls'.

We can conclude from this that the eruption of mass panics is most likely when the contact occurs on earth itself, in the 'living room' of mankind so to speak. Here again the **geographical** distance will play an important role. If contact occurs at a singular place (in the sense of classical science-fiction scenarios through the landing of a single flying object), the fierceness of the reaction of individuals depends on the felt distance of one's own life center from the place of the event. For his kind of reaction we even have a direct empirical proof: the reaction of the population to the broadcast of the radio play "The War of the Worlds" according to the novel of H. G. Wells in 1938 (cf. Harrison/Elms 1990; Harrison/Johnson 2002; Bartholomew/Evans 2004: 40-55). Erroneously many people considered the landing of 'Martians' as real and tens of thousands tried in great panic to bring as far a distance between them and the assumed place of the event as possible. In view of this one can barely contemplate the possibility of several landings at the same time at various places. Individually and collectively this would be considered an 'invasion of extraterrestrials' and would almost certainly lead to a global panic reaction.

Slightly less dramatic would be an initiation of contact in earth orbit. From the point of managing a catastrophe this would also have the advantage that panic escape reactions (including the collapse of local traffic, mass accidents etc.) would largely fail to occur simply because changing one's place would not make any sense in this case. The other side of that picture however would be that panic reactions could not find their physical expression in a collective move to escape and thus could not get discharged. (As we know from panic research, the impossibility of a spatial escape from a perceived threat can lead to a psychological-emotional 'escape' into lethargy or denial of reality.)

The further from earth the first contact would occur, the more marginal would be the **visible** reactions of the people. A meeting beyond the orbit of earth would probably visibly diminish the intensity of the immediate emotional reactions as compared to the two scenarios above. But what about medium-term consequences? Based on our experiences with contacts between **human** cultures in the past centuries, a contact on earth itself or in earth orbit would hardly make any difference. During contacts between different human cultures in the past it didn't matter whether the 'discoverers' met the 'discovered' close inshore or on land. In both cases the roles mentioned were the same. For the 'discoverers' the discovery far from their home proved their superiority, correspondingly for the 'discovered' the fact, to be confronted with strangers on their own territory, proved their inferiority. In all historic cases the discrepancy regarding the technical level of transport was interpreted **by both sides** as a sign of superiority and inferiority respectively.

The systematic investigation (Bitterli 1986, 1991) into such **asymmetric cultural contacts** on earth shows that they not only threaten the cultural survival of the inferior people but invariably also their physical existence. And this was the case not only when the 'intruder' (like the Spanish in America) from the very beginning behaved as conquerors but also when the first contacts were primarily marked by mutual curiosity (cf. Rausch 1922: 19). In all these cases the destruction of the culture which **considered itself inferior** was not the result of a real military or technological superiority of the 'conquerors' but a consequence of mass psychological effects to 'being discovered' (cf. Rausch 1902, Michaud 1999: 272). Thus many nations of America and Oceania suffered a **collective existential shock** after the arrival of the whites. It led to the collapse of their religious and cultural belief systems which resulted in a medium-term disintegration of the economical and social systems. In some cases moreover it led to a collective suicide of an entire population (cf. Müller 2004: 196).

In summary one can say that at the first contact between **human** cultures the one **on the territory of which the contact occurred** was regularly existentially endangered. Translated into a contact with an extraterrestrial civilization this means: at least earth itself and the technically used earth orbit form - in mass psychological respect - the territory of mankind. Any meeting in this region would mean: we are the 'discovered' and the others the 'discoverers'. All experiences we made on earth with such asymmetric cultural contacts speak **against** the 'millennium scenario' which all scientists implore again and again (Ashkenaszi et al 1992; Michaud 1999) which promises mankind through an encounter with extraterrestrials an immense scientific, ethical or spiritual developmental thrust. Much more probable would be a global existential shock which would lead to the collapse of many

social, religious and political institutions on earth. And this is independent of the motives, goals and technological capabilities of the extraterrestrials.

(3) Collective Projections

In any case, the 'sure knowledge' of the others would remain extremely limited even after the contact. At the reception of a radio signal there would be only very few – but in the context of the above considerations absolutely consequential – 'hard' facts: Source coordinates of the broadcast, distance and relative speed of the sender, technical potential of the sender (cf. Harrison 1997: 199-200. Harrison/Johnson 2002: 100). What kind of information can be extract from such a broadcast over and above such technical data is controversial within the SETI-research (cf. the overview at Schmitz 1997). In such debates however it is regularly overlooked, that understanding strangers even amongst people is already dependant on quite a number of pre-assumptions. Mutual understanding between cultural strangers on earth is based on **anthropocentric constants**, which enable us to insinuate that the opposite person has similar physical needs, sensory possibilities, modes of perceiving the world, motivations etc. All these are preconditions which are not given at a contact with extraterrestrials. They rather face us as maximal strangers where even the most general pre-assumptions have to remain uncertain (Schetsche 2004; cf. Bach 2004).

In case of the radio-contact-scenario we have no possibility to come to know anything about the physical constitution let alone the psycho-social, ethical or spiritual disposition of the other. Thus it seems to me doubtful whether the optimism that is being displayed by the SETI-researchers (e.g. McConnell 2001) regarding a **meaningful** interpretation of extraterrestrial messages is indeed appropriate. (A comprehensive critique of the pre-assumptions of this research can be found at Schmitz 1997).

But even if we were standing directly across from the extraterrestrials, the situation wouldn't be much different. Whatever 'look' the other may have, we will observe their outer appearance (if it is visible for humans at all) in a way that enables us a comparison with human life, however far fetched it may be. And this will not only necessarily lead to assigning them (pre-consciously) corresponding stereotypical behavior, but this could also quite likely trigger atavistic escape- and fight-reflexes. In this respect one could (following a formulation of the German social scientist Heinrich Popitz) speak of a "pre-emptive effect of not knowing": The less we know about the physical form of the

extraterrestrial the less visual stereotypes or inherited schemata of behavior will influence what we do. Knowledge about the ‘look’ of the aliens will therefore not lead us to understanding them better but merely to **misunderstanding** them faster.

Thus Albert A. Harrison rightly assumes that our impressions of the extraterrestrials will be based less on their ‘objective qualities’ than on our own pre-assumptions, prejudice and stereotype allocations (Harrison 1997: 198; Harrison/Johnson 2002: 103-104). This means that we interpret the observed actions of extraterrestrials completely independent of their motives and interests according to **our assignment** of motives and interests. Thus the strangers will be **humanized** to a large degree (cf. Michaud 1999: 266-267). While attempting to understand the aliens, we will transform them into grotesque parodies of ourselves – with all the consequences as far as our reactions to their **alleged** motives are concerned.

(4) Possibilities of secrecy

Collective psychological projections are also very significant because most people will not hear anything **from** the aliens but only **about** them (Harrison 1997: 199, 206; Harrison/Johnson 2002: 101-102). Even if a space ship would land on earth, only very few people would be able to directly observe it. All others would be dependant on the **reports in the media**, which would be necessarily problematic already because of the typical mode of operation of the mass media – preparation of information under time pressure, mixture of facts and fiction, strategies of dramatization and scandalization etc. The **decisive** factor for the comprehensive social impact of a first contact would ultimately be the **information** which the population would receive.

It has been discussed again and again whether, when and in which form such a contact should be made public at all. A few years ago a ”Declaration of Principles Concerning Activities Following the Detection of Extraterrestrial Intelligence” [Link2] was agreed upon amongst scientific societies. According to this, once the reception of signals by an extraterrestrial civilization was technologically and scientifically verified, first the general secretary of the United Nations and various international organizations would be informed. Following this, the public should be informed ”immediately, openly and comprehensively”. Since quite a few research institutions and a number of individuals will be involved in the required process of verifying the data, it certainly seems questionable how realistic the course of events suggested in the declaration really is (cf. Harrison 1997: 207). It is uncontroversial that such a signal or even a direct contact will belong to the most serious discoveries in the entire human history (cf. Heidmann 1995: 195). The ‘news value’ of such information would

be correspondingly high. Therefore one should ask how much time the discoverers have for verification until the first information reaches the public. I think, not too much.

However, this is valid only in case that the ‘discoverers’ or contact persons are scientists at all who feel bound by such points. It looks totally different if an artifact, the reception of a signal or a close contact is under governmental control especially under the authority of the military or the secret service. In case of restraining corresponding information by governmental offices, one can theoretically distinguish two motivations. First, the attempts of the ‘welfare state’ to protect the citizens and social institutions from the negative effects of such an announcement and secondly, the efforts of the ‘power state’ to secure the exclusive access to certain information and thereby gain a political and/or military advantage over other nations (for the last cf. Harrison 1997: 202).

In practice both motivations are hardly separable because actions based on the second motive – at least in democratic states – go along with legitimate justifications in accordance with the first motive. And as various examples of the 20th century show (for example the ‘Manhattan Project’ in the fortieth), it is quite possible to preserve serious state secrets over many years.

In contrast to the declaration of intention of many SETI-researchers it is thus quite possible that the public - for a shorter or longer time - will not at all be informed of a first contact. And ultimately that may even be a good thing. For in spite of all the skepticism regarding a success by the SETI-researchers themselves, their projects are, at least if one considers the potential social consequences, nothing but an extreme example of high-risk-research.

Conclusion

For dealing with the above drafted risks, I see three alternative scenarios:

1. **Protective isolationism:** Ending or at least concealing all SETI-research and developing techniques which could avoid an accidental discovery of our civilization by extraterrestrials.
2. **Concerted global preparations:** Systematic research into the expected psychological and social, religious and economical effects, development of global and governmental emergency plans as well as a massive education of the public regarding what they could be facing.
3. **Enlargement of the ‘coastal strip’:** A massive push to develop further the manned and unmanned space travel with the goal to be permanently present even far beyond the earth orbit so

that a physical contact with another civilization loses as much of its asymmetry as possible – at least in view of a mass psychologically important first impression.

Since at the present state of the public and scientific discourse (let alone the political situation of the world) none of the above alternatives will have any significant chance for realization in the coming years and decades, we are left, depending on our nature, with **hoping or praying**, that the event of a ‘first contact’, which is being longed for by some truly fearless ones, may be as slow as possible in coming.

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Hyperlinks

[1] <http://setiathome.ssl.berkeley.edu/>

[2] http://www.seti-inst.edu/seti/seti_science/social/principles.html

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