UFO UpDates Mailing List

1/2 - The Scientific Context of the UFO/Abduction

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Subject: 1/2 - The Scientific Context of the UFO/Abduction

THE SCIENTIFIC CONTEXT OF
THE UFO/ABDUCTION
PHENOMENON

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The purpose of this essay is to explain how to clarify the evidence for or against the reality of UFO abductions. Many workers in this field have modified the conventional meaning of both the word "reality" and the word "abduction." I do not accept these modifications. A UFO abduction, if it occurs, is a physical event. A person is taken aboard an extraterrestrial spacecraft and interacts with its crew. If this event is imagined, then it is not a physical event, it is an imaginary one. If the event happened before and it is being relived in the present, then it is a re-experiencing, not an abduction. There is nothing wrong with either imagining or memory as a description of human experience. A re-experiencing is clearly evidence for an earlier abduction, if it can be separated from an imagining, which is based on the incorporation of other people's experience (through conversation, books, or films) into one's own experience. But in no case is an imagining evidence of an abduction. By misusing the descriptive categories of language, and calling imaginings and re-experiencing "abduction reports," confusion is produced which can only bring the substantial evidence for the physical reality of UFO abductions into doubt.

THE ABDUCTION REPORT

What is the UFO abduction phenomenon? To abduct means to "carry off or lead away (a person) illegally and in secret or by force, esp. to kidnap."(1) Anyone who reports that he or she has been carried away by force is reporting an abduction. Since we are obviously only concerned with abductions by nonhuman extraterrestrials, the carrying-away must be reported as done by nonhuman extraterrestrials. Evidence for the non-humanness of the abductors comes from the appearance of the

abductors, the tools they use, including the methods of enforcing the abduction, the things they do, and the locations to which the abductee is taken. If none of these are nonhuman, then we are talking about an abduction experience, but one which can be explained as caused by humans. "Abduction phenomenon" in this essay means the abduction of humans by nonhuman extraterrestrials as described here.

False, imagined, and real experiences. The second problem in discussing the abduction phenomenon is to evaluate the source of the reports. I am perfectly capable of reporting an abduction experience on the basis of my accumulated knowledge. I know enough background material to report an experience which would match very closely other reports made by reliable witnesses. Why wouldn't my report be valid? Because, of course, it was fabricated out of my indirect experience, as communicated to me by conversations, books, films, and television, and not my direct experience; that is, through my own senses without the intermediary of other humans' spoken, written, or visually portrayed experience. Anyone can report an abduction experience. Our problem is to learn whether these reports are reports of direct personal experience or whether the reports are mediated by the experience of others. If they are mediated by the experience of others, they are worthless as evidence of the existence of UFO abductions. They are simply repetitions of other people's stories, however convincing either to the listener or (as is often the case) to the teller.

There is no a priori reason why the reporter of an abduction experience which is entirely mediated by other people's experiences may not also report that he or she believes that the experience was direct and un-mediated. It is very well established that people reporting experiences do not always accurately attribute the source of those experiences.(2) Spoken or written language, as well as the visual media, are efficient ways of conveying information which may be incorporated indiscriminately into what the reporter thinks is his or her own direct sensory experience. The human mind is efficient at generating and storing images or representations of experience, and inefficient at retaining and classifying the sources of those same images or representations. Suggestible human beings often mistake the sources of their information, and they are demonstrably capable of reporting as personal experience events and experiences which have been suggested to them by others.

The properly skeptical public. In ordinary conversation, in the give-and-take on a sunny afternoon by the lake, or of a dinner party with good wine flowing, we do not always - or even often - critically examine the sources of our ideas, or of our conversational bons mots. Why should we expect something more critical, more detached, from the investigators and reporters of abductions? Simply because so much more is at stake. Our real audience is not the lake-side or dinner-table conversationalists. If the purveyors of ideas about UFO abductions want to be treated as entertaining lake-side conversationalists, or as slightly outre dinner-table companions, then we can all go on as before. Some of what we say will be based on what we know are the reports of reliable witnesses, corroborated by circumstances: missing time, physical traces, concurrent UFO sightings. Other reports, whether in the National Enquirer or in our own publications, will be ambiguous and lend themselves to alternative interpretations.

The greater public will get some of both kinds of reports, and will be, as always, puzzled about what to believe. The scientific public will say to itself: "X has written two books full of interesting information about abductions and UFOs. X writes with obvious integrity, and the phenomenon sounds plausible. But Y includes as abductions reports from people who sit in a trance and stare at the ceiling, and then describe the same kind of things X is describing. Isn't the obvious explanation to assume that both X and Y's reports have the same epistemological status - the same grounding in reality - and that Y's are the more representative, because they require the least deviation from present knowledge? Witness Z is obviously imagining things, and abduction investigator Y reports Z's imaginings as abductions. Therefore, abduction investigators are reporting what people imagine, not what actually happens to them."

The leaps of reason in my imaginary quote above are not logically convincing, but they are psychologically very convincing. Just because one abduction report (A) is imaginary (i) does not mean that all A's are (i). But if you are predisposed to reject more complicated explanations, and are predisposed not to change your world-view on the basis of what the UFO research community is claiming, than your reasoning process is: Some A's are certainly i. I cannot look into all of the A cases, and if I have found one i case among them, I can say that because I have shown that at least one A is i, most-or all-of them might he. And with this

very big "might be," I escape the need to change my world-view, because I can subsume my simpler world-view under the "might be" of the imaginary abduction report. Therefore I will defer judgment, or, more conservatively, not change my world-view in the absence of a more convincing reason to do so.

I think it helps to make this problem specific because it explains what the UFO and abduction community is up against when it seeks to persuade the rest of the world - our lake-side and dinner-party neighbors and companions, as well as the even more skeptical scientific public - that what we have to say should be taken seriously. We have to decide what we are trying to convince people of. We know, and they know, that people report abduction experiences. If in the interest of accommodating every abduction reporter we decide to treat all reports equally, whether or not there is corroborative evidence that there was a physical abduction by extraterrestrials, then our public will nod politely and discount virtually everything we have to say. They will, quite reasonably, consider a11 abduction reports as evidence of, at most, an interesting psychological aberration or phenomenon.

What are we to think of an abduction case in which the alleged abductee is observed to be present during the entire time she experiences an abduction? The evidence in this case is unambiguous. The investigators who reported the case were present during the time the woman had the experience, and she didn't budge. There was no missing time, and there were no abduction corollaries - UFO sightings or physical aftereffects. The answer least in need of supplementary explanation is that the woman wasn't abducted. There is no reason to think that she may not have been reexperiencing a past abduction - the most generous of hypotheses - but by any objective criterion she was not experiencing a physical abduction and the report of her experience made by the investigators was the report of a psychological experience, not a physical one. In my already-expressed opinion, this case should not have been presented as an abduction report.(3)

Abduction researchers should screen abduction reports into those which are probably based on direct sensory experience, and those which are probably based on experience mediated by human language or media. It is clear from the proceedings of the 1992 Abduction Conference at M.I.T. that not a11 abduction researchers want to do that. And it's a free world: there is nothing to stop them from using whatever inclusive categories they choose to use in defining abductions. My point is simply that this inclusiveness mitigates against anyone with common sense and no access to the original data from taking the abduction phenomenon seriously. Those of us who are better informed can sort the bad cases out for ourselves; but our friends and colleagues in the general and scientific public can't. We should be doing it for them. If we don't, we suffer the inevitable diminishing of our credibility.

SCIENCE AND THE UFO/ABDUCTION PHENOMENON

There is a great reluctance on the part of some investigators to stick to a scientific approach to the abduction phenomenon. The argument runs something like this. Our systematic understanding of nature is severely limited; science doesn't even explain many things about inanimate nature, other animals, or the human mind. Not only that, but the technical or scientific approach to the mastery and understanding of nature has led mankind into grievous errors which threaten to destroy the species if not the planet. Therefore, we should abandon science in dealing with this new phenomenon, particularly since it is so far beyond our comprehension as to make the idea of a scientific theory to explain UFOs or abductions meaningless. We can't really decide whether the phenomenon is mental or physical; even calling it physical is meaningless because the mental and the physical are so completely intermixed that separating them, in this instance, is almost impossible.

Much of this argument rests on a very generalized incomprehension of what science means, and an even greater incomprehension about the science of psychology. First of all, science is a method as much as it is a collection of facts and theories. It is also a very complex social process. Boiled down to its essence, the scientific method is a prescription that evidence about nature must be presented in a form that explains how it was obtained, makes it possible for other people to review and criticize the methods used for gathering the evidence, and to repeat those methods and obtain the same evidence, so far as is practical. It is a social agreement to be honest and transparent in presenting data, and to engage in a mutual (sometimes highly competitive) effort to cross-check, criticize, and ultimately verify the information on which we base our advances in understanding nature.

The scientific enterprise. Our technological world is built from complex, true stories that describe the natural world. How do we know that the stories are true? The natural world works the same way for a Russian engineer as it does for an American scientist. Bridges designed in France will stand in China; airplanes made in America will also fly over Brazil or over Australia. There is a consensus about our nature stories, at least so far as we can carry them. The civilized machinery of scientific education, scientific research, and scientific communication shapes a community of knowledge whose products are everywhere and whose methods are universal.

Unfortunately, many of the scientific nature stories are unintelligible to the lay person, who hasn't learned the mathematical methods and doesn't have the knowledge or the vocabulary to understand them. Because science is also divided into very narrow specialties, many scientific nature stories are equally unintelligible to scientists in other specialties. Most scientists aren't as successfully gregarious as the physicist Ernest Rutherford, who is supposed to have said, "If you can't explain it to the barmaid in the Eagle Pub, it isn't good science." Even nature stories which fall into the category of "classical" science, like the time-travel paradoxes of Einstein's theory of special relativity, seriously challenge both the lay and the scientific imagination. The sheer volume of detailed knowledge in every scientific specialty makes it practically impossible for a lay person or a scientist in another field to evaluate the latest development in an area to which he or she is a technical stranger.

Scientific specialization. The scientific community which generates and uses accurate stories about nature is specialized and divided. Adam Smith praised the benefits of specialization in his famous l8th- century example of pin manufacture: A single craftsman, manufacturing entire pins, makes not more than twenty per day, while a team of ten men, employed in a small manufactory, could produce "upwards of forty-eight thousand pins in a day." Men "educated to the trade," each specializing in one part of the manufacture, turn out on the average 4,800 per day. Thus specialization amplifies the output of a pin manufacturer many fold - a lesson which has not been lost on scientists and scientific funding agencies.(4)

The "industrial system" is thoroughly established in science, with the same satisfying results. Collegial teamwork of surprising sophistication and complexity exists across the entire world. The system consists of multiple independent but cooperating research centers which regularly exchange information and personnel. Ever since the Middle Ages, academicians and researchers have been cooperative and mobile. Their greatest pleasure is to visit each other's universities and laboratories, and to congregate in large numbers at attractive places (Venice, Prague, Paris, Honolulu) to discuss, argue, and criticize each others' work. This is their life's blood. The results are poured into the research journals which are circulated and read internationally.

The international scientific community is organized in much the same fashion as the modern communication tool which grew directly out of applied science: the Internet. The Internet is a system which exists as a collection of independent cooperating centers or nodes, each of which is administered locally. On the basis of a strictly voluntary cooperative organization, each node is configured so as to be able to pass messages through the entire complex system to any other node, and each node can also act as an intermediary for the transmission of messages from one node to another.

But like the users of the Internet, the scientific community is really a collection of sub-communities which for the most part recognize each other's legitimacy, within the specialized domains of knowledge they claim for their own. And, as with the special interest groups on the Internet, it is rare that ongoing work within one scientific sub-community is commented on or participated in by workers in another sub-community. Scientific guilds. The independent sub-communities of science have another trait in common with those honored and medieval social organizations, the guilds, which were in some sense the progenitors of the very universities that now support many of the scientists. The guilds were professionally exclusive and jealous of their privileges. In the Middle Ages, work produced by non-guild members was proscribed and rejected. In the modern world, a relevant scientific advance which is reported from outside the research sub-community is likely to suffer the same fate. In the Middle Ages, there were political wars between the guilds and non-guild craftsmen, whose products were driven outside the towns where the guilds held power, into the countryside, where a non-guild worker could sell unlicensed products to customers who might later smuggle them back into the town.

Scientists who produce work outside their specialties, or in areas of research that are not recognized as legitimate by their own sub-community, risk having their work proscribed or rejected by scientific guild members. The modern form of proscription is simply the refusal of scientific journals to publish the results. Occasionally the examples of guild behavior are egregious and informative. John Garcia, a researcher who specialized in radiological research, discovered in 1955 that rats could be taught in one trial to avoid the novel taste of a food which gave them a delayed, but very severe, stomachache (the food contained a nonlethal dose of poison which made them very sick). Garcia's work was technically exemplary, but because his findings directly challenged two cornerstones of the current theoretical position on learning -(1) that a11 learning was incremental, and (2) that delay of consequences reduced the effectiveness of learning - his work was kept out of major psychological journals for years.(5) While Garcia's findings, and Garcia himself, are now completely accepted some forty years after his initial work, the hostility and rejection he experienced are object lessons in the resistance of scientific sub-communities to outsiders who trespass on their intellectual territory.

Fear of scientific failure. Scientists are afraid of mistakes. The public-inquiry structure of science, which proceeds by public replication or refutation of previously published findings, is the usual antidote to the persistence of unsubstantiated empirical claims and unverifiable theories. But it seems that unsubstantiated claims arise in every generation, and persist long enough to be an embarrassment to science as a whole. N-rays in the 19th century, polywater in the 1960s, and cold fusion in the 1980s are examples of scientific discoveries which generated a bad press for science because they persisted long enough to raise the public's expectations before those expectations were doused by the necessary skepticism. They were in fact examples of the successful application of the public-inquiry structure of science. Since each of these empirical errors was refuted, they represent successes, not failures, of this system.

But the cost, both to individual reputations and to the public's image of science, of these forays into unsuccessful empiricism is very damaging. When you combine scientists' real and justified fear of embarrassment over mistakes with the traditional hostility and conservatism of scientific sub-communities to new ideas introduced from outside the specialty, you begin to understand why the entire panorama of UFO and abduction evidence presented by part-time scientific amateurs like historians, painters, psychiatrists, and social workers, not to mention even less scientifically qualified white- and blue-collar contributors (military and commercial pilots, policemen, air traffic controllers, and just plain folks) is simply ignored by scientists when it is not being actively derided by them.

Almost all scientists accept the judgment of publicly recognized experts in fields of work to which they are strangers. As a part of both the specialized character of science and the guild mentality of scientists, each scientist respects only the authority of the recognized experts in his or her field. This raises some important questions: What qualifications fit someone to pass judgment on evidence concerning UFOs and related phenomena? Whose judgment can be trusted to evaluate the evidence? What is the evidence? And what conclusions can be drawn from it?

Practicing scientists often assume that all science is about work on problems whose boundaries are well-prescribed and on which there exists a consensus about method and goals. This is true of the massive efforts of institutional science to advance knowledge in areas where it is clear that more knowledge, or better techniques, may lead to impressive gains in control of nature. I am thinking particularly of molecular biology, solid-state physics, and nuclear physics, where advances in understanding the construction and maintenance of organisms, the organization of communication and information, and the release of power are important, immediate goals.

But this assumption about the scope of science is not entirely correct. People who work on even harder problems like the nature of abductions, or the existence of extraterrestrial life, can also be perfectly respectable scientists, whatever their background or training: history, sculpture, psychiatry, social work, sociology, atomic physics, clinical psychology or experimental psychology, to name the occupations of just a few practitioners in the field. The important thing is that they respect the rules of scientific communication. They may not gain immediate respect from other scientists for doing so, but if they do respect the rules of scientific inquiry - if they do make clear how they have defined their terms, how they have gathered their data, what precautions they have taken to avoid error in the data, and how they have

interpreted the data - then, eventually, what they report will be respected by other practitioners of science. And if it is ultimately respected by the other practitioners of science, then the larger public will come to respect it as well.

When will science pay attention? The answer to this question is important, because when science pays attention, both the influential public (legislators, newspaper columnists, TV commentators) and the ordinary person in the street will also pay attention. Thomas Kuhn, the famous contemporary philosopher of science, pointed out that scientific revolutions seldom succeed by convincing their older opponents; instead, the younger generation is usually instantly converted, while the older generation, which cannot deal with the innovations as flexibly, simply dies off and the resistance ceases as they leave the field.(7) Abraham Pais, Albert Einstein's intellectual biographer, points out the same thing with respect to the acceptance of special relativity by older scientists of stature when Einstein proposed his theory in 1905.(8) Pais also points out that Einstein himself, who was one of the founders of quantum theory, himself never accepted quantum theory as it was developed by his own contemporaries. Einstein preferred classical certainty because he believed until the end of his life that "God does not play dice with the universe."

Does this mean that regardless of what the UFO community does, as long as strong and convincing data about UFOs and abductions accumulate, the public will eventually accept that these phenomena represent the activities of extraterrestrial intelligence? Certainly not - if within the community, there is disagreement about what standards should be used to study it. The younger generation of intellectuals, scientists, and political leaders, which is supposed to be converted while the elders die off, is too sophisticated to be converted to a world-view which cannot or will not differentiate between psychological aberration and extraterrestrial visitation.

I cannot say what the "core phenomenon" of ET abductions is, and it really doesn't matter that much. There is always, even in so-called normal science, a halo of less-clear phenomena and less-accepted findings which represents the cutting edge of investigation into the controversial issues. The existence of these controversial questions is not itself a fundamental problem - so long as the methods of science provide an ultimate means for their resolution. Typical issues of this kind in the abduction field are: what are the "Nordics?" What is the meaning of the "staging"? Are there missing fetuses? These issues are amenable to investigation and to ultimate resolution. It seems to me to be important that there be a consensus in the UFO and abduction field that controversial problems must be resolvable - and resolvable using those refinements of ordinary common sense investigation which go by the name of scientific method.

SCIENTIFIC ASPECTS OF THE ABDUCTION PHENOMENON

Obstacles to acceptance. The "general UFO hypothesis" which encompasses the existence of extraterrestrial spaceships and the abduction of people into them has to overcome a series of barriers to credibility. Each barrier is actually the threshold of acceptance among technically educated people for a series of isolated ideas which cannot be easily assimilated into the current coherent picture of the world. The unassimilated picture presented by the UFO hypothesis is much too rich for the average scientist's taste. It includes telepathy, movement through solids, craft maneuvering at what are for us unattainable and dangerous g-forces, and propulsion with no apparent reaction against the atmosphere.

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Thanks, take care.
John.

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