### **RATIONALITY AND ITS LIMITATIONS**

I. Grattan-Guinness, MA, MSc, PhD

DILLON'S BOOKSHOP in London keeps its stock of UFO books in the section for the history and philosophy of science. It seems to me an admirable place for them, for the problem of UFOs appears to have not only an extensive history but also an exceptional range of philosophical features. It is with these latter aspects that the notes below are concerned.

\*\*\*\*\*

1. It is widely thought among scientists and nonscientists alike that the purpose of scientific theories is to explain the unknown in terms of the known. We know certain things already; now we must use our wits and our observations to learn about the things

of which we are at present ignorant.

This may be an accurate description of the chronology of our discoveries, but it is a false analysis of the knowledge that we obtain. For scientific theories, as theories, explain the known in terms of the unknown. We "know" our observations; and we explain them with theories whose basic components are "unknown". For example, Newton's law of gravitation explained the motion of physical bodies on the earth, and of the planets of the solar system, in terms of forces obeying a certain law of attraction. Now it is these forces which are unknown, not the motions they explain.

One of the chief hopes of students of UFOs is to obtain an explanation of the phenomena in which they are interested. It must be realised that the explanation will be in terms of "unknowns" in the sense of the above discussion, and that therefore the explanation might be more strange than the sightings

which inspired it, not more familiar.

2. The relationship between knowns and unknowns is an important aspect of the logic of explanation, and its frequent misrepresentation is a correspondingly significant feature of the conception people have of rationality. For when a "rational" explanation of UFO phenomena is sought, rationality is conceived as the process of passing from unknowns to knowns, from ignorance to knowledge, from error to certainty. But the argument above exposes a sense in which this conception of rationality is wrong. Let us call this view of rationality "dogmatic," meaning not that it affirms any particular dogma but rather that it shares with all dogmas a belief in the infallibility of its principles and the certainty of its deductions. By contrast, the vision of rationality as a means of discovering new unknowns may be called "critical," emphasising its motivating spirit in the search for errors and unexpected effects. Critical rationality views rationality as a collection of current habitual expectations which may require revision when next used. Dogmatic rationality sees rationality as a system of established criteria whose standards all problems must meet.

3. Dogmatic rationality appears prominently in

Dr. Grattan-Guinness is Principle Lecturer in Mathematics at a College of Technology in Middlesex. He is also an Historian of Mathematics and Mathematical Logic, and his two books The Development of the Foundations of Mathematical Analysis from Euler to Riemann, and Joseph Fourier, 1768-1830, were published by Massachusetts Institute of Technology (M.I.T.), Cambridge, Mass., U.S.A.

the rejection of UFO sightings. The alleged phenomena are "physically impossible" (that is, they lie outside the range of our established experiences). Hence UFOs do not exist. Of course the conclusion may be true; but this kind of argument is insufficient, because it relies on the correctness of dogmatic rationality, which in fact has sometimes been refuted by ordinary physical phenomena. The mistaken character of dogmatic rationality is not widely recognised, least of all by ordinary people whose belief in it motivates their hostility to alleged UFO reports.

4. Critical rationality may lend a few insights to our relationship with possible higher species. Relative to us they must seem to be *super-rational*, of orders of technical knowledge beyond our current capacities. Hence the apparent impossibility of their actions is only to be expected. Furthermore, if several different species are observed here, some may be at a different level of super-rationality from others. It would be important to hear of cases where apparently different species were observed simultaneously.

Mention of the possibility of different levels of super-rationality emphasises the fact that *super-rationality is not omniscience*. The higher species may surpass us, they may even have been our gods in times long past, but they are not God. Indeed, their super-rationality will be critical in the same way as our rationality, subject to revision and adaptation.

5. We need to admit the superiority of higher species only with respect to their physics and technology (and by implication, perhaps, to their mathematical and linguistic powers). It is a mistake to infer that they must have higher ethical, moral and judicial codes also. There is no necessary correlation between science and ethics; packs of wolves do not

have to have Watergate hearings.

This last point is one of several reasons why I dislike comparisons between humans and animals to be used in discussions about higher species. Such comparisons are bound to be weak because they have to be extended in order to apply to comparisons of ourselves with higher species, and in the process may well bring in factors which previously were irrelevant. Critical rationality is an important example; it must play a far more limited role in animal life than it does in ours or would in any more advanced culture, since it requires among other things considerable linguistic capacity.

6. One of the most unfortunate features of twentieth century science has been the grossly

# IVAN T. SANDERSON: AN APPRECIATION

# John A. Keel

ONE of Ivan T. Sanderson's myriad hobbies was collecting other Ivan Sandersons. Over the years he claimed to have located and corresponded with at least 17 others, all unrelated, bearing the same name. But there was only one Ivan T. Sanderson and he was a very special man, indeed. A "child of the sun", as he liked to think of himself, who was something of a biological oddity because he should have been born twins and possessed some double organs, including a double brain. The latter served him well in his final days when a vicious cancer attacked. His fine mind continued to function until the very last even though half his brain was being savagely eaten away. (He, himself, discussed this grim business freely on radio programmes.)

Most men are measured finally by their achievements; by what they manage to leave behind. Ivan, who died on February 19, 1973, did leave us over twenty books and it is still too soon to judge their ultimate worth and impact. The one thing he could not leave us was that superb instrument, that storehouse of dazzling knowledge acquired in a lifetime of study and adventure, his fantastic double brain. He knew - really knew - more about history, science and philosophy than any man I have ever met. And this

knowledge poured from him in an unending torrent. He wrote on a typewriter he designed on a continuous roll of paper so he wouldn't have to stop and change sheets. Books and articles flowed from that machine in a great stream despite the chaos and distractions

that reigned around him.

Ivan's isolated farm in the mountains of New Jersey failed to provide him with the seclusion necessary for a contemplative life. He was bombarded with visitors ranging from famous scientists, authors

and researchers, to adoring fans. Often people who came to spend a day or two would end up staying for a month or longer. Then, too, there were the animals. At different times he was caring for everything from leopards, goats, geese and donkeys to elephants. For years he was familiar to American television viewers as a leading animal authority. But, as he often carefully pointed out, he was not an "animal lover". He knew and understood animals as some men understand machines. However, his last act was to call his two beloved dogs to his bedside.

One of Ivan's many talents was his remarkable ability as an artist. He was one of the very few animal artists in the world (it requires an expert knowledge of animal anatomy to draw them accurately), and many of his books were illustrated with superb drawings executed by his own skilled hand. His eye was so keen and his hand was so sure that he probably could have earned a comfortable living as an

artist

Ivan's talents were too varied, and his inquisitive mind was too restless, to allow him to settle for a single career. He literally led several lives...all at one time. He began as a zoologist, trained in England (one of his fellow students at Cambridge was the late Ian Fleming, author of the James Bond Stories),\* and his first book, Animal Treasure (1937) catapulted him to fame and literary success while he was still in his twenties. But writing was merely a mode of communication to Ivan, and he was an expert in every form of communication. On the speaker's platform

#### (continued from page 22)

exaggerated claims for psychological theories. Their capacity for universal explanation is hailed as a triumph; but in fact it is a defect, for if five different theories explain the same phenomena then at least four are wrong, and their irrefutability prevents us from finding out which ones they are.

Further, psychology is sometimes involved in the UFO problem for the wrong reasons. Let us suppose that someone reports a sighting which dogmatic rationality decrees to be impossible. Therefore something is wrong with him, and his psychological background needs exploring in order to discover his (alleged -- "unknown", in our earlier sense) flaws. Now even if such flaws are convincingly found, it seems to me that sometimes they might be better interpreted in terms of a whole class of human capabilities which in our dogmatic way we call "supernatural" -- telepathy, extra-sensory perception, parapsychology, and so on. There seems no doubt that some people have gifts in these directions, although at present neither they nor anyone else knows how

or why. These gifts form a range of data with which UFO phenomena seem sometimes to be involved, and the discovery of a new set of unknowns in whose terms they can be explained is a vital though baffling problem. They are perhaps hints towards our own super-rational powers; certainly they constitute a formidable affront to the expectations of critical rationality.

7. What we cannot talk about is what talking should be all about.

#### Bibliographical remark

These notes implicitly involve a number of methodological issues, of which many have been discussed explicitly in the writings of K.R. Popper. The most relevant of his books is *Conjectures and Refutations* (1963, London; and later editions), while a brilliant popularisation of his ideas may be found in B. Magee, *Popper* (1973, London).

<sup>\* [</sup>Another contemporary of Ivan's at Cambridge was our own Gordon Creighton-EDITOR].

he was often electrifying. A handsome, imposinglooking man, he had the rare gift for being able to "speak on his feet" and turn the most obscure scientific fact or theory into fascinating material. He could face the most hostile audience and turn them spellbound. He was able to discuss almost any subject...from termites to astonomy...lucidly and in minute detail on the spur of the moment. Above all, his cultured British accent gave him an air of authority which, when coupled with his great natural poise, made him a formidable opponent in almost any debate. In fact, several self-styled authorities learned that engaging Ivan in a public debate was a kind of intellectual suicide. He could - and often did - cut such opponents into tiny pieces...usually because he was better versed in their discipline than they were!

Shortly after he came to the United States, Ivan attended a very rare event...a lecture delivered by Charles Fort shortly before he died. Fort stirred Ivan's insatiable curiosity and he became a devout Fortean. By the time of his own death, Ivan was

indisputably the world's greatest Fortean.

Following World War II, during which Ivan served as a British Intelligence agent in the Carribbean, he moved automatically into the public limelight as a radio and television personality. He earned a great deal of money in the 1940s and 50s, wisely investing some of it in his farm outside Blairstown, N.J., but he continued to maintain an apartment in New York City until shortly before his death. For the last decade he was almost entirely dependent on his writings and, like most writers, he went through some difficult lean periods. His problems were undoubtedly compounded by his selfless willingness to help so many others. He edited - for free - many manuscripts by many scientists, and he read and wrote splendid introductions for the books of many of his friends. He gave a free and willing hand to such Fortean authors as Vincent Gaddis and Brad Steiger. One of the last manuscripts to cross his desk was The Dragon & The Disc by F.W. Holiday. His only payment was in the high stack of books by many authors, all formally dedicated to Ivan Sanderson. He maintained a mountainous correspondence and spent many hours digging into his huge files for information requested by others. In the mid-1960s close friends urged him to found a society to formalize somewhat all these extracurricular activities. The Society for the Investigation of the Unknown (SITU) came into being.†

In 1966, Ivan and I agreed to collaborate upon a book about unidentified flying objects. Our mutual agent, Oliver Swan (both Ollie and I were also on the board of directors of SITU) located a publisher for the venture. Ivan immediately buried me in long, detailed outlines, and I soon realized, uncomfortably, that our individual approaches to the subject were radically different. I finally withdrew from the partnership. Ivan went on to produce *Uninvited Visitors* (1967), which still stands as one of the best

works on the subject.

Privately Ivan, like myself, came to suspect that UFOs were inexorably related to psychic phenomena. He even had misgivings about his favourite subject...

the Abominable Snowman. (His masterful book, The Abominable Snowman: Legend Come to Life, was published in 1960.) We had one long discussion in 1968 in which he expressed the belief that many of the hairy humanoid sightings in the U.S. were

probably psychic in origin.

One popular complaint among armchair ufologists is: "Why don't the 'Men in Black,' and all such things, happen to the writers and scientists who investigate UFOs?" The truth is: these things do happen, but the investigators wisely refrain from writing about them. I know for an absolute fact that such American luminaries as Otto Binder, Brad Steiger, Jerome Clark, Frank Edwards and Ivan T. Sanderson have all experienced remarkable problems in this area. I was often present on Ivan's farm when unusual things happened to his telephone and mails. I installed a magnetic UFO detector in Ivan's attic and it often sounded an alarm bell in 1967-68. Strange aerial objects, and even mysterious black Cadillacs, were frequent visitors to the remote back road on which Ivan's farm is located. At one point in 1968, Ivan was extremely nervous about the things that had been happening (and these included a wide variety of poltergeistic manifestations). He referred to the culprits as "OINTS"...Other Intelligencies. Later he did outline some of his conclusions in his book Invisible Residents (1970), and he related some of the more amusing incidents in Investigating the Unexplained (1972).

Tragedy stalked the Sanderson farm in recent years. One young man serving as Ivan's assistant suffered a nervous breakdown. Alma, his wife for thirty years, died of cancer in January 1972. Shortly before his own death he married Marion Fawcett, a Fortean who is now dedicated to preserving and

carrying on his work.

It can truthfully be said that Ivan influenced every person whose life he touched. He was Forteana's greatest spokesman in the United States and, singlehanded he converted thousands of sceptics into believers with his irrefutable logic, grace and wit.

My last real conversation with Ivan took place in the fall of 1970 when we had dinner together in a little Lebanese restaurant in New York after participating in a symposium. He was then facing his sixtieth birthday and he talked rather grimly about approaching death. I jokingly, and not very originally, told him that he would probably outlive us all.

He probably will.

YOUR CLIPPINGS of newspaper items are very welcome. We apologise here for being generally unable to acknowledge these items as the pressure of work on our tiny staff and on our postage resources is too great. However, please do not be deterred by this seeming lack of courtesy. We really do appreciate anything you care to send.

<sup>†</sup> The Society for the Investigation of the Unexplained; RD 1; Columbia, N.J. 07832. Membership is \$10.00 per year and includes a subscription to Pursuit, the Society's quarterly journal.