

Mainstream Sciences vs. Parasciences: Toward an Old Dualism?

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Abstract— The Observatory for New Spiritual Movements has been operating at the Technical University of Munich since 1980. It is concerned with the study of cults, New Age ideologies and with the parasciences from anthropology to cryptozoology. The parasciences are being analyzed by the science of sciences, i.e., by the philosophy of science, psychology and sociology of science, as well as by the history of science.

The following ten hypotheses, characteristics and questions are discussed:

- (1) Mainstream sciences may make neither monopolistic nor absolutistic claims.
- (2) The six main criteria of the academic sciences are compared to the six main criteria of the parasciences.
- (3) The two types of science also differ in their value orientations.
- (4) Social processes and structures are characteristics of both.
- (5) What are the characteristic motivations of parascientists?
- (6) What is the historical background of the mainstream sciences?
- (7) What are the difference between the metaparadigms of mainstream science and those of the parasciences?
- (8) What are the social functions of mainstream sciences and parasciences?
- (9) Do the functions of the parasciences transcend those of mainstream science?
- (10) What are the characteristic differences between practitioners of mainstream science and the parasciences?

Introduction

There are good reasons for the choice of this topic in the setting of our conference subject "the challenge of anomalistic observation". First of all, there is the fact that science is the particular field for academic researchers being its own object of critical investigation.

This is taking place in the context of the new disciplines "philosophy and sociology of science" which will be discussed later in more detail. The discussion about the so-called parasciences has been carried on for some years by our "Observatory for New Spiritual Movements", founded in 1980. This observation post in the Institute for Social Sciences of the Technical University Munich that has been able to operate independently of commissions, especially of

ideological institutions, was primarily concerned with "cults", on which there were at that time hardly any German-language publications.' For this purpose, original documents and publications on the new religious movements were gathered and analyzed; this was also done for students preparing to teach at vocational schools, in order to give them material for use in class discussions.

Toward the end of the 1980's the fashionable "New Age" phenomenon caught the attention of the public and of researchers. All the media reported on it, some of them up to the present day; a variety of products and publications offering supposed or actual "Heilswissen" (salvation knowledge) were available commercially, and were consumed by an eager and heterogeneous public. Lectures and newspaper articles resulted from the observatory's attention to "cults", and the sociological study of "New Age", with a two-year research project at the Institute for Social Sciences leading to the first German empirical research report which enjoyed and still is enjoying a surprisingly widely circulated response.'

Also since the end of the 1980's, the "Observatory for New Spiritual Movements" has been more intensely occupied with parasciences, resulting in, among other things, the first German-language reader with a comparison of mainstream and parasciences.³ In recent years a veritable inflation of parasciences could be observed in Europe, of which a selection can be named in comparison with mainstream sciences.

Following anthropology, Germans having a higher education have again become interested in anthroposophy, "gnostic anthropology" and other spiritual concepts of man; instead of archeology and prehistory, millions of Germans are reading books on atlantology, bermudology, "paleovisitory" and E. Daniken's "pre-astronautics".⁴ Both the last-named disciplines maintain that extraterrestrial beings have made space voyages and visited our planet in pre-historic times, and we pursue their traces in "magic history". In Hessen at least, there are state-certified astrologers; if the experts may be believed, there are more practising astrologists than clerics in Germany.

While the reader may have only an amused smile for ethnological investigations of cargo cults in the South Seas that are supposed, by way of symbolically laid out airports, to force down the white man's cornucopia, analogous to his military and freight airports, over the impoverished islands — the above-mentioned observatory noticed that aromas, gems and many other objects, as well as spells, supposedly have extraphysical effects on members of our highly modernized society. While the discoveries and research results of geology and geography have led only to an excellent popular science magazine, conferences and publications on geomancy (so-called "magic geography") have an eager audience.' Magic powers and lines of lost cults and cultures are supposedly rediscovered in crop circles, dolmens, menhirs and sacred monuments throughout the world. At our Technical University, institutes for air and space travel are doing research and teaching; scientists and engineers from widely varying fields are working on ufology with so-called lay researchers.⁶ Nu-

merology, i.e. interpretation of destiny based on secret numbers, is studied in place of mathematics.

Conventional medicine—for the most part allopathic—is confronted by unconventional procedures such as acupuncture, spiritual healing, homeopathy, iris-diagnosis etc., which are by no means employed only by “paramedics”.⁷ Philosophy is being overrun by esoteric metaphysical approaches and mystical systems, while increasing numbers of physicists have for decades been attending parapsychological-parapsychological conventions and recently have been more deeply interested in dowsing.⁸

There is a more or less credulous audience for prophecy as opposed to prognosis.⁹ Anti- or parapsychiatry (e.g. the Scientology Church's psychotechniques, the goal of which is to become “clear”, or Catholic exorcism) is struggling against mainstream psychiatry. And parapsychology, along with older mainstream sciences such as graphology (now known as “psychology of handwriting”), is attracting not only people interested in psychology, but also increasingly those spiritualistically inclined.” Recent polls of teachers and counseling services in Germany show an unsettling, rapidly growing interest in experimentation in occult practices on the part of school children.”

In Europe, parasociology (H. Niezing), i.e. explicitly ideologically defined social sciences, is encroaching more and more on sociology. In Germany, there are not only university chairs for Marxist, but also for Christian social science and philosophy of life. Also, there is increasing interest in sociobiology, the theory of “egoistic genes”, the latest fad in social science. Along with publications on statics, there has been an increasing number of “harmonical” publications, e.g. pyramidology, that attempt to prove universal harmonics by way of sacred numbers. Finally, there is cryptozoology, which for thousands of interested readers means “Nessie”, “Yeti” or “Bigfoot” research.

It may be considered as scientifically proven mainstream knowledge that “Bildungsaberglaube” (W. Hellpach) (superstition of intellectuals)¹² such as alchemy, astrology¹³, graphology, phrenology (i.e. 19th century character-reading based on the shape of the skull) and other parasciences have definitely foundered, since they have no empirical foundation. As the above-mentioned list shows, however, geomancy, psychoanalysis (dogmatic Freudianism is meant here), sociobiology and ufology have taken their place alongside methodologically disproven disciplines such as astrology and graphology.

This comparison inevitably brings up the question: What is mainstream science, and in what way does it differ from the parasciences? First of all, I would like to differentiate between the idea of critical science and scientific ideology(-ies). Tolerant interpretation of academic disciplines will view this as one approach to knowledge; in contrast, scientific ideology regards science as the sole valid approach. It is perfectly clear to the critical scientist that scientific cognition is value-conscious to the extent that the independent researcher can and wants to define his personal values.¹⁴ In contrast, scientific science insists on value-free cognition or even believes it can proceed without premises.

A glance at their objectives also shows their diversity. The purpose of critical scientific cognition is always enlightenment regarding man and the world, whereas scientism, unthinkingly naive, mostly considers itself as the instrument of mastery over nature, the world and man. In a word: critical science is "only" objective-scientific science on the other hand claims for itself absolute validity and certainty.

My reflections follow from the methodical perspective of a science that is still young: namely interdisciplinary science of science.¹⁵ It embraces descriptive philosophy of science, i.e. the description of the foundations and prerequisite values, methods and theory formation in university and parasciences, and empirical sociology of science, i.e. the investigation of the social processes and structures of scientific communities, as well as psychology of science, which is concerned with the creative and discovery processes of researchers in their everyday work. These are all synchronic, thus cross-sectional viewpoints; but, in addition, there is the history of science as the diachronic dimension, which attempts to cover the change in theoretical as well as empirical research, whereby the researcher can ascertain only afterward what was "correct" research and teaching, once these have crystallized and achieved recognition.

Interdisciplinary philosophy and sociology of science is obviously a mainstream science, but can make no claim to "orthodoxy". It can thus never be completely sure of itself, it must continually change its subject, research techniques and viewpoints, and, in contrast to the philosophy and sociology of science and the history of science, is not in a position to make evaluations in the sense of "true" and "false" science. Its investigation of the parasciences is thus strictly descriptive, regarding them as "deviant" disciplines, but not pejoratively as "pseudosciences", which the normative philosopher of science can and indeed must.

The scientific researcher, on the other hand, may not assume that there is or may be only one concept, one model, one paradigm of science. Since Kuhn, this is understood to be the model of a scientific community and comprises model concepts, approaches, theories and solutions.¹⁶ Every discipline contains competing paradigms, current as well as historical ones. The disciples of old paradigms do not as a rule "convert" to new ones, but "die out". Strictly speaking, every discipline has dominant paradigm(s). However, as a generalization, the empiric-analytical paradigms of the sciences is meant here. Normally, it takes up no position regarding the preliminary metaphysical decision "What is reality?" or "How real is reality?"¹⁷

Discussion

Monopolistic and Absolutistic Claims

In spite of its universalistic character, mainstream science may lay claim neither to a monopoly nor to absolutism: It may consider itself neither the sole cognitive approach, nor assert the absolute truth of its insights. For the para-

sciences, on the other hand, a sense of conviction and involvement is a prerequisite; they assume the absolute certainty of their subject's existence, employ their own procedures and research approaches (horoscopes, swinging a pendulum, seances); they construct ad hoc explanations from case to case. An example is parapsychology, which attempts to explain supposed or actual extrasensory phenomena in a philosophically inadmissible way with a putative "Psi (ESP) function". In this way, the parasciences consciously deviate from mainstream sciences regarding subject, methodology and explanation to a greater or lesser degree.

Research Criteria

Mainstream sciences are based on other research criteria than are the parasciences. For the mainstream sciences these are: analysis of the whole based on a summing of parts; causalism, i.e. an ideally "hard", deterministic, or at least statistical connection between cause and effect; naturalism, admission solely of inherent explanations; scientism, scientific knowledge as an end in itself for basic research; methodism, namely the objectifying logic of science as a unique value; and technicalism, the application of highly differentiated research techniques as a basic prerequisite.

Therefore, the mainstream concept of man is, in a way, constructed elementarily; it inquires into causal connections, allows only naturalistic, i.e. empirical explanations, whereby scientific knowledge appears to be an end in itself.

In this concept of man, objectivizing methodology and social research techniques have an essential unique value as prerequisites for objective knowledge. Its goal is the "transparent man".

On the other hand, the parasciences present the following research criteria: holism, i.e. holistic context; analogics, i.e. resemblances in astrology, therefore the principle "wie oben, so unten" ("as above, so below"); esoterism as the quintessence of occult science and knowledge; metaphysical-mystical thought, especially in the speculative form; subjectivism, namely empathy and personal interpretation; finally, crypturgy, which is understood to be the workings of occult powers.¹⁸ The parascientists refer to mainstream scientists, who reject these criteria, as "rigid dogmatists".

The aim of the parascientific concept of man is the holistic essence of man, as yet not only unknown, but perceptible solely by way of empirical science. Only by analogical thinking and esoteric occult science, typically by speculative or even partly irrational thought, through interpretation and empathy, a concept of man is outlined, that is characterized by the asserted working of occult powers. The para-disciple is an "adept", who is "initiated" in occult knowledge.

Value Orientation

Parascientists do not differentiate between scientific and extra-scientific valuation. Mainstream scientists are able to objectify attributed values through

analysis of their prerequisites. Parascientists cannot and do not wish to do this. An example: Air- or space-travel researchers would only attempt to study physical characteristics and possible mechanisms of UFOs; in contrast, most Ufologists are primarily interested in the source of these puzzling, unidentified objects; they attempt to surmise about their supposed occupants, or even to declare with conviction that the "ufones" have a particular message for us, that they come as rescuers, even saviors of humanity and want to keep us from catastrophes of war or of the ecosphere. The supposed ufones are viewed not only as expert space travellers, but also as masters and agents of extraterrestrial initiation; they, and meetings with them, are to an extent advertised. The esoteric teacher thus is not only a competent specialist, but also master of a secret discipline. He is superior to others because he has at his disposal particular, profound insights and wisdom, and embodies them in his personal conduct as well.

Both paradigms, however, also share common values: maintaining and elaborating upon traditions in research; gaining new insights, i.e. achieving progress in research; and thus, ultimately, affecting a change of consciousness of researchers and their society.

Social Processes and Structures

The social processes and structures of the parasciences are comparable to those of the mainstream sciences: Both feature scientific communities, paradigms, congresses, publishing, etc. But there are important differences. In contrast to academic scientists, parascientists are mainly lay-researchers. While the former regard themselves as mere "communities of research", the latter strive to be "communities of creed".

Motivations

An important assumption of the philosophy and sociology of science regards the motivation of parascientists as analogous to that of adepts of the so-called "new cults": They are characterized by a desire to compensate for frustration, by escapism, and by opposition to scientific rationalization of the world. Consequently, parascientists would have to be considered as maintaining, rather than innovating, insights. This is consistent with their role as guardians of occult wisdom. According to psychologists, the existence of a so-called "believer in the occult" has been empirically demonstrated. Esoteric beliefs and modes of behavior can be deduced about this personality: it is comparatively unstable and experiences the world as hostile. Man is seen as being at the mercy of a supra-natural order, ill-fate being its manifestation. To be informed about its intentions, one resorts to oracles and divinations as means for predicting the future. Above the world of reality, one seeks refuge in a spiritual domain. Within its framework, being an occult ideology, all secrets become known. The inter-personal relationships are marked by a conflict between the need for closeness and the increasing fear of rejection, furthering isolation as well as tendencies toward withdrawing.¹⁹

Historical Background

There are noteworthy differences in the development of mainstream and parasciences. Whereas institutionalized disciplines were differentiated into specialized fields by the 20th century to which the humanities and empirical sciences had evolved from philosophy, the parasciences originate in the acceptance and superficial rationalization of systems of creeds and convictions, i.e. ideologies. Hermetic sciences, mythical and mystical mentality, the belief in salvation, etc., are parts of these ideologies. Accordingly, the parasciences are based on residues of previous knowledge. Anthroposophy can be traced back to theosophy; parapsychology to the occultism and spiritism of the 19th century; numerology to the system of magic numbers, which evolved from the Pythagorean philosophy of the secret qualities of numbers as building stones of the cosmos.

Metaparadigms

In mainstream sciences, metaphysical assumptions appear in their philosophical foundation, their meta-paradigm, only.²⁰ Idealistic, realistic, monistic, and dualistic preconceptions are of importance only on the lowest level of assumed presuppositions. In contrast, in the parasciences, metaphysical, axiomatic preconceptions enter the formation of hypotheses and theories.

For example, in the mainstream sciences the researcher's "personal metaphysics" play no decisive part in his work. The scientist's assumptions on the essence of matter, phenomena, man, cosmos, mind, etc. do not significantly influence the formation of theories and methods of research. Parascientists, however, share the conviction that secret spiritual powers underlie the phenomena; that the world is composed of mind and matter; or even, that it is animate (so-called pan-psyche idealism), culminating in the belief that a spiritual entity or spirit realm is immanent in, or guiding, the cosmos (i.e. objective idealism or spiritualism).

The parascientist does not regard his assumptions as presupposed systems of value, exchangeable and open to objective research; rather, they emerge in his hypotheses and theories and he seeks to directly prove them. From the point of view of sciences, this is impossible.

Social Functions of Mainstream Science

Mainstream and parasciences accomplish different cognitive and social objectives. Mainstream theories define concepts, inform about facts, recapitulate empirical regularities, explain and predict phenomena and laws. They convey enlightenment, thus shaping society and the world. Finally, they result in a rational view of the world and man, devoid of contradictions.

Social Functions of Parasciences

To a certain extent, parasciences operate in a similar fashion; in addition, however, their functions reach further. They offer a frame of reference for ori-

entation and understanding, and, finally, attempt to substitute for science, philosophy, and religion. Thereby, they compensate for social deficits, which may be actual or imagined effects of mainstream science. They provide a sense of "enclaves of meaning" (K. Weis) in the shape of alternative ideologies. Thus, the astrological, homeopathical, occult, "UFO-logical" view of man and redeeming wisdom are diametrically opposed to the scientific, positivistic, elitist point of view.

Practitioners

The production and consumption of mainstream sciences are largely determined by an elite of researchers. The parascientists are mainly supported by lower-echelon academic researchers and by lay-researchers outside of the scientific community. The parasciences address, and refer to, deviants: less educated, adhering to a magical-mythical consciousness, ideologists; finally, followers of anti-mainstream movements, which are critical of society and/or its culture (e.g. the Green Parties, anthroposophy, New Age movements).

Recapitulation

The mainstream sciences remain productive and creative by means of continuous and fundamental innovation; including, nowadays, the acceptance of "anomalistics", i.e. the dispassionate and unprejudiced research of the stumbling-blocks in the course of mainstream sciences.²¹

Parasciences, however, often being residues of previous knowledge, are now deviant, sometimes competing, thus alternative modes of knowledge. Despite deviating and being denounced as "pseudo-science", they complement the system of learning and knowledge of modernized societies.²² Based on ancient mentalities and narrative structures, such as epic tales, myths, revelations etc., parascientific propositions often cannot be proven wrong or right, scientifically. Rather, they are experienced as operating, and are believed in; thus, held as personal truths. This applies especially to the so-called methods of divination, e.g. astrology, I Ging, pendulum, Tarot etc.

Notes

1. One of many examples would be: G. Eberlein: "Angst vor der Konkurrenz? Die Jugendreligionen in der Kritik der Kirchen", in: *Evang. Kommentare*, 15. vol., 1982/4, pp. 187-190.
2. M. Schneider: *New Age: Empirische Studien zur New Age-Bewegung — Glaubensspielräume*, München u.d. (1991).
3. G. Eberlein, ed.: *Schulwissenschaft, Parawissenschaft, Pseudowissenschaft*, Stuttgart 1991.
4. Cf. Eberlein loc.cit., "Einleitung", esp. p. 7, note 5.

5. Cf. recently J.M. Moller: *Geomantie* in Mitteleuropa. *Kraftlinien* und *Energiezentren* in Süddeutschland, Freiburg 1988; see also for further references,
6. Eberlein loc.cit., note 6.
7. Eberlein loc.cit., pp. 11 ff. as well as section II.: Homöopathie.
8. As to the convergence of parapsychology and -physics see W.v. Lucadou: *Psyche und Chaos. Neue Ergebnisse* der Psychokineseforschung, Freiburg 1990; for dowsing see Eberlein loc.cit., pp. 10 f. and section I.
9. The only really compulsory monography of the last years was written by A. Gann: *Zukunft* des Abendlandes? Eine Untersuchung von *Prophezeiungen*, Salzburg 1986 (private publication by the author, Institute of Applied Parapsychology).
10. Eberlein loc.cit., pp. 13 ff. and section III.
11. See J. Mischo: "Okkultpraktiken bei Jugendlichen", in: *Zs. f. Parapsychologie u. Grenzgebiete d. Psychologie*, vol. 30 (1988/1-4), pp. 5-31.
12. To my knowledge, the term comes from one of the founders of German cultural psychology in the 20th century, W. Hellpach: *Grundriss der Religionspsychologie*, Stuttgart 1951, p. 96.
13. Cf. the important positive critique of astrology by H.J. Eysenck, D. Nias: *Astrology: Science or Superstition?* London 1982; refuting this, the most recent methodically based probation control of astrology comes from the astrologist, psychologist and psychotherapist P. Niehenke: *Kritische Astrologie. Zur erkenntnistheoretischen und empirisch-psychologischen Prüfung* ihres Anspruchs, Freiburg 1987. Referring to this, see Eberlein loc.cit., pp. 17 ff. and section IV.
14. For a philosophical-sociological analysis, see G. Eberlein: *Maximierung der Erkenntnisse ohne sozialen Sinn? Für eine wertbewußte Wissenschaft*, Zürich/Osnabrück 1987; for an English-language, easily available contribution, G. Eberlein, O.P. Obermeier: "Value-Free vs. Value-Conscious Social Sciences", in: *Theory and Decision: Essays in Honor of Werner Leinfellner*, G. Eberlein, H. Berghel, eds., Dordrecht 1988, pp. 107-136.
15. In my opinion, the still best interdisciplinary account of science of science is: *Science, Technology and Society: A Cross-Disciplinary Perspective*, I. Spiegel-Rosing, D. de Solla Price, eds., London/Beverly Hills 1977.
16. Term and first account of paradigms of natural sciences comes from T.S. Kuhn: *The Structure of Scientific Revolutions*, Chicago 1962. Since 1979 more than 20 meanings of "paradigms" have come into use (cf. *Criticism and the Growth of Knowledge*, I. Lakatos, A. Musgrave, eds., Cambridge 1970, esp. M. Masterman: "The Nature of a Paradigm", pp. 59-89), today the term "disciplinary matrix" is used.
17. For a generally comprehensible introduction into the problems of reality, based on social sciences rather than metaphysics, see the one by the communication researcher P. Watzlawick: *How Real is Real? Confusion, Disinformation, Communication*, Toronto et al. 1977.

18. For a comparison between mainstream vs. parasciences cf. G. Eberlein: "Wie wissenschaftlich sind Parawissenschaften?" in: *Epistemology and Philosophy of Science, Proc. of the 7th Int. Wittgenstein Symposium 22nd-29th August 1982, Kirchberg/W., Wien 1983*, pp. 288-292.
19. See J. Mischo: "Okkultismus und Seelsorge", in: *New Age—aus christlicher Sicht*, O. Bischofsberger et al., eds., Freiburg—CH/Zürich, 2. ed. 1987, pp. 127-165, esp. pp. 140 ff.
20. For the cognitive metaparadigm cf. note 17, furthermore G. Eberlein: "Wissenschaftstheorie oder Wissenschaftsforschung? Wider eine Dogmatisierung wissenschaftlichen Handelns", in: *Soziale Welt*, vol. 27 (1976/4), pp. 488-503. The term metaparadigm, though, may be used socioculturally as well—cf. Cc. Tart: *Transpersonal Psychologies*, New York 1975, 2. chapter.
21. "Anomalistics", used in German language often as "Paranormology" (A. Resch), explores alleged or real anomalies in natural and social sciences by means of exclusively discipline-related scientific methods. Moving force is the international "Society for Scientific Exploration", founded in 1982, with its *Journal of Scientific Exploration*.
22. The difference between mainstream and parasciences naturally is blurred when private universities are founded that are partially or exclusively devoted to an esoteric-parascientific education. This applies to the Maharishi International University as well as to the recently founded "Cosmology-University" in Switzerland (situated at Vaumarcus/NE). The latter promises not only a "Cosmologist with diploma (KOS. Acad.)", but also the prospect of promotion including doctor's degree and professor.