

STRANGE PEOPLE – RARE EVENTS

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ABSTRACT

A number of extremely small groups within the population that are in the possession of distinct ‘gifts’ or ‘abilities’ such as absolute pitch, synesthesia, and mental calculations skills, are identified and placed in a parallel with the likewise small group of ‘sensitives’ and ‘mediums’ in parapsychology. The widely discussed question whether ‘psi’ is ‘democratically’ distributed is touched upon as it appears that these other abilities are definitely not equally distributed. (This is a touchy subject in our society: whether or not all humans are in a certain sense equal or whether there are some differences.) Some parallels (and differentiations, too) between the two groups – absolute pitch, synesthesia, and mental calculation skills on one hand and ‘sensitives’ and ‘mediums’ on the other – are examined, e. g. the fact that these properties can hardly be trained – either they are present or they are not. Absolute pitch and mental calculations are ‘composite’ functions, in both cases the ability to memorize plays an important role. The question raises whether ‘psi’ is perhaps also a cluster of different abilities, apart from the problem that the entire notion of ‘psi’ as an ‘ability’ is highly questionable. Another question is the consistency of performance, be it the performance of one individual at different times (intrasubjective) or be it within several individuals (intersubjective) as in the case of comparative studies of sensitives and mediums. The emphasis of the paper, however, is on the fact that mainstream psychology and physiology carry out research into the particular abilities of very special persons who are clearly different from the vast majority and who form an extremely tiny minority of the population (in the case of the Mathematical Wizards just a handful individuals all over the world at any one time). From the point of philosophy of science this research may serve as a precedent for the legitimacy of research into the likewise rare ‘gifted’ people called sensitives or mediums. Thus their small sample size cannot be used as an argument against this kind of research. The lesser the number of individuals on one hand, the more outstanding and unique their performance on the other investigations will progressively shift of from the ‘nomothetic’ to the ‘idiographic’ pole.

Besides these ‘strange’ people the situation of rare or even unique events is discussed. Here again the idiographic and the nomothetic approach are balanced against one another, viewing upon the ‘rare events’ once more from the point of philosophy of science. Thus, without going into details of methodological issues it is argued that research into these fields, too, has some precedence in mainstream science. Not only is such research legitimate, moreover, any challenges to it (both from the skeptics’ camp and from inside the parapsychological community) based on the sole ground of the rareness of cases must be rejected with reference to the outlined precedents in mainstream science.

INTRODUCTION

The shift to the ‘Rhinean paradigm’ bears a double importance: a theoretical one for deeper understanding of psi and a ‘practical’ one for the academic integration of parapsychology. It appears that ‘strange’ people with ostensibly ‘strange’ gifts and that ‘rare’ events like the ones the pre-Rhinean school of parapsychology was dealing with do not conform with the framework of scientific thinking shaped to the Galilean model of the (ideal) experiment that can be replicated at any place and any time irrespective of the persons involved. Thus the Rhinean approach was eagerly embraced for two reasons, (1) ‘psi’ was understood as a ‘democratically’ distributed ability^{1, 2}, and (2) Rhine’s methodology came close to the ideal of an arbitrarily replicable experiment.

¹ From the point of history of science, it is worthwhile to consider these developments embedded in general history, i. e. the notion of democracy during various eras. Prior to World War I, most of the leading European powers were monarchies. Though at least the British, the Austro-Hungarian, and the German Empire were constitutional ones still aristocracy played a major role. Some time after the downfall of the Central Powers, fascism came into fashion almost all over Europe (Italy, Germany, Austria, Spain, Portugal, and Finland) doing away with democracy in favor of ideas of leadership and strength. (Mulacz, 2001) These are necessarily elitist and not egalitarian ideas. Eventually, when democratic regimes were installed in these countries, this shift in political ideas went parallel

Yet – is that really so? How shall we – from the point of philosophy of science – deal with people who claim to be specifically gifted, way beyond the average person? How shall we deal with rare events? Do they necessarily drop out of the framework of science?

Could it be that the Rhinean approach, successful though it has been, brought along the side effect that we narrowed our vision and thereby lost the view on the more promising field of specific psychic abilities?

However, things have swung back since. The extensive work in the field of Remote Viewing (Puthoff, 1996; Targ, 1996; May, 1996, etc.) has been carried out with particularly gifted subjects. Apparently, it is not so difficult to find such (Utts, 1996). Nonetheless this approach meets strong resistance from mainstream science. So it is worthwhile to look into that very mainstream science in order to see whether there are any areas in which particularly gifted persons are the subjects. If there are indeed such areas they may serve as a precedent that an approach based on rare particular abilities of only few individuals is not *per se* out of the scope of scientific thinking.

A somehow related question is how to deal with rare events (or even unique cases) from the point of philosophy of science.

STRANGE PEOPLE

Fields studying particularly gifted individuals

In my opinion there are – at least – four well established fields of that type³:

- Absolute pitch
- Synesthesia
- Mathematical Wizards
- Extraordinary Creativity

I will dwell only on the first three of them as it is difficult to find a measure for creativity just by the achievements – who was greater a genius, Michelangelo or Mozart? Clearly this would rather point in the direction of an idiographic than a nomothetic approach (idiographic = individualizing investigations such as clinical studies, case studies, historical investigations, as opposed to nomothetic research intending to find or establish ‘natural laws’).

Even in an experimental setting, the outcome would not likely be easy to judge (kind of parallel to free response tests in ESP research).

In the three other ones of the above fields there are some impressive results both in field studies and in experiments that merit a closer look.

Absolute Pitch

Since the pioneering days of German psychologist-physiologist Stumpf (Stumpf, 1883) experimental research on the phenomenon of absolute pitch is carried out. Until this day there are some 400 publications on this topic with every year half a dozen new ones being added. Tests mostly follow a pattern of perception of a certain sound, identification i.e. correlation to an acoustic memory, and announcement of that

with shifting from a parapsychology based on experiences with sensitives and mediums to the new style in parapsychology based on Rhine’s work. Of course there have been good reasons for this ready acceptance, e.g. methodological issues, yet the question remains whether the apparent parallel with ideological changes was just by coincidence or perhaps deeper-rooted, of course subconsciously and Zeitgeist-related. I should add that my remark refers to just one aspect of the reception of Rhine’s work particularly in post-war Europe, not to Rhine’s own starting point.

² The issue of the distribution of psi as such has a history of long and partly controversial discussions in parapsychology. A relevant overview of the state of affairs is provided by Jürgen Keil’s survey (Keil 1979).

³ I am referring only to those fields where performances like the ones mentioned in this chapter are being accomplished by otherwise ‘normal’ people (regardless how to define ‘normal’), thus their achievements come additionally (a surplus), as opposed to such persons where super-achievements in one field are balanced against serious shortcomings in others like in the well known cases of ‘idiot savants’.

assignment. The point is the 'internal reference' or the long-term storage in the memory whereas the vast majority of people (including the majority of musicians) avail only of a short-term acoustic memory (relative pitch, which in its essence is the mere identification of intervals, whereby the memory would last only for seconds rather than minutes). The term 'absolute pitch' is used provided the identification rate is high (close to 100%) and its accomplishment is robust. Though the hit rate is higher with musicians than with average people yet there is a clear distinction between what can be achieved by even musical people and by those with absolute pitch. Depending on the level of the test, a sample of average people including the subset of musicians would score some 10–40%, whereas the absolute pitch endowed individuals would score 70–100% (with hardly someone in between these two groups) being able to process more than double the amount of information.

Whether this ability is inherited or acquired cannot be decided upon for sure. Also the question remains open whether the absolute pitch is the result of a number of several variables (as it is the fact with most cognitive abilities) or one single ability on its own. Efforts of training this 'ability' did not show significant results. Experiments focused on 'disturbing' that internal reference by other stimuli did not work either.

Estimates on the size of the group of persons with absolute pitch in the population vary, however, generally accepted is a value in the range of the fraction of one percent of the population.

Hence we encounter there a certain minority of people – a distinct group of persons – who appear to possess an 'ability' the vast majority of the population is lacking, an ability that appears not to be Gaussian or 'democratically' distributed. Individuals with this rare and strange ability are being scientifically studied since some 120 years. This may well serve as a precedent supporting the legitimacy of the study of equally rare specifically gifted persons (sensitives, mediums) in parapsychology.

Synesthesia

Synesthesia is an involuntary experience⁴ of a cross-modal association which means the 'blending of senses', i. e., when one quality is being stimulated like smelling or hearing, another quality is simultaneously perceived like seeing colors or geometrical shapes. The most frequent one is "coloured hearing" ("audition coloree") whereby typically sound, music, voices and characters/figures that are read aloud lead to the perception of moving colors and shapes that are being projected either into the outer world or into the interior of the head. On a kind of 'internal video screen' without sharp spatial delineation colored structures appear frequently, spheres or longish 3-dimensional entities with characteristic surfaces, e. g. velvety or glittering or glass-like or metallic. With 'genuine synesthetes', the character of these surfaces correlates directly to the perceived acoustic stimuli. Synesthesia appears to be more frequent with females and with non-right-handers, and it is a family trait. Yet some famous synesthetes are male: Russian composer Alexander Scriabin (1872-1915) and painter Vassily Kandinsky (1866-1944) who both wrote about their experiences. Some text portions of Isaac Newton and of Johann Wolfgang Goethe indicate that such experiences were not unfamiliar to them. Some artists and other creative people utilize their synesthetic experience in their productions.

Estimates of the percentage of synesthetes within the population vary a lot, between 1 in 2 000 und 1 in 1 000 000. A generally accepted average is 0.04 ‰ (Cytowic, 1989, 1993).

Again we encounter a small fraction of the population (much smaller than the formerly discussed people bestowed with absolute pitch) in the possession a well-described "ability" peculiar to them and not present with the majority. Synesthetes are clearly different from the average people, however, other than the people with absolute pitch who have a better memory and a wider information processing bandwidth it is not quite clear whether synesthesia is a plus, an advantage, over others, or just a deviation. Yet for our purpose – looking for parallels to studying particularly gifted subjects in mainstream psychology/ physiology – it will do

⁴ This of course leads to philosophical questions such a 'What is real?', 'Real – to whom? To the experiencer or to everyone?' 'Do we all live in the same reality', and, ultimately, uttered in a provocative way, 'What is really real?'. (From a psychological viewpoint rather than from the philosophical one Watzlawick tackles the same question in a book the programmatic title of which reads 'How Real is Real?'.)

to note that the phenomenon of synesthesia falls into this category and that the percentage of people concerned is extremely small.

Mathematical Wizards

There are plenty of reports on mathematical prodigies in the literature – it seems every period has their own ones. Some twenty years ago I had the opportunity to attend a demonstration Willem (Wim) Klein gave in the Institute of Physics at the University of Vienna. Klein, a Dutchman who at the time of this demonstration was already retired used to be employed by CERN (the European Nuclear Research Center) in Geneva, Switzerland, to serve as a “human computer”.



Fig. 1 Wim Klein cartoon

The demonstration of his calculation skills was absolutely fascinating. Not only did he carry out various mathematical operations (multiplication, division, root extraction, squaring, cubing, and even higher powers) with very large figures, he also gave explanations how he did it. The precondition, of course, is the ability to memorize those multi-digit figures, an ability exceeding the possibilities of the average person by several orders of magnitude. There is nothing paranormal or mystical or intuitive in his computing, as he emphasized, he simply calculates mentally in a similar way one might do with pencil and paper, he looks whether a figure would be a prime number, also, by which divisor that figure could be divided, he fractionizes large figures into smaller ones, carries out calculations with those and adds them up mentally, etc. By doing so he needs to keep a number of different partial results in his memory at any time without mixing them up with one another. He was able to determine the number of digits of a large figure just by looking at it, without counting them – amazing. Unfortunately Willem Klein was killed in a car accident in his native Netherlands not too long after this demonstration.

A search on the web reveals that there are number of contemporary mathematical wizards who are well known – primarily Gert Mittring from Germany. A few examples of his achievements:

- Memorizing of 22 decimal figures within in 4 seconds as well as 30 binary figures within 3 seconds
- Extraction of the der square root of a six-digit figure within 44.7 seconds by mental arithmetic
- Extraction of the 13th root of a 100-digit figure within 39.0 seconds by mental arithmetic

- Calendar-Memory (error-free identification of the days of the week at 20 randomized days of the century) within 38.2 seconds as well as to 20 dates of the years 1600-2100 within one minute



Fig. 2 Dr. Gert Mittring (photo taken from the web)

These mathematical prodigies even carry out their own international competitions, like Olympics. Find below a few examples of their results indicating the time needed to fulfill the task and the date and place of the competition. Currently, Gert Mittring holds 14 world championships in mental calculation⁵ and enjoys several entries in the ‘Guinness Book of Records’. Root extraction is his ‘specialty’. He has published a book ‘What happens in us when we calculate?’ (German language only) based not only on his introspection into his experiences but also on questioning others.

Mental calculation of the square root of a 6-digit figure:

- 64 seconds M. Hari Prasad (India) 10/30/1999, Bangalore
- 52 seconds Gert Mittring (Germany) 2000, Linz
- 45 seconds Gert Mittring (Germany) 07/07/2000, Flensburg

Mental calculation of the 13th root of a 100-digit figure

(whereby the 100-digit figure is chosen that way that it is x to the power of 13):

- 322 seconds Willem Klein (Netherlands) 09/19/1975, Amsterdam
- 231 seconds Willem Klein (Netherlands) 11/08/1978, Stockholm
- 129 seconds Willem Klein (Netherlands) 05/06/1980, London
- 116 seconds Willem Klein (Netherlands) 11/13/1980
- 89 seconds Willem Klein (Netherlands) 04/07/1981, Tsukuba
- 39 seconds Gert Mittring (Germany)

⁵ Funnily enough he was not a good student in mathematics during his years in school.

Mental calculation of the 23rd root of a 200-digit figure

(whereby the 200-digit figure is chosen that way that it is x to the power of 23):

- 50 seconds Shakuntala Devi (India) 1977

Mental calculation of the 73rd root of a 500-digit figure

(whereby the 500-digit figure is chosen that way that it is x to the power of 73):

- 2:43 minutes Willem Klein (Netherlands) 08/27/1976, Geneva
- 2:09 minutes Willem Klein (Netherlands)
- 1:43 minutes Willem Klein (Netherlands) 11/22/1983, Hamburg

As mentioned before, the precondition for the performance of such amazing mental calculation skills is the ability to memorize the large figures involved. Regardless whether we split the overall ability of mental arithmetic into two (memory and calculation) or consider it as whole, in any case we encounter an extremely small but well-defined group of individuals within the population. This group (at least the winners and those coming in second) consists of just a handful of individuals in Europe or even world-wide. These few individuals avail of an ability (or of a set of abilities) proprietary to them and alien to the population at large. They show consistent results in their performances, i. e. their performance is replicable. Moreover, not only is it replicable within themselves (what I call intra-subjectively, e. g. at different points in time), it also replicable amongst them (inter-subjectively, e. g. all of them achieve somehow similar results). By virtue of this intersubjective replicability it is justified to state they form a certain group of specifically gifted people, a (small) subset of the population that is different from the majority. Likewise the fact that they are considered as a group (and not as individuals) corresponds to the nomothetic approach as opposed to an idiographic one if focusing on one individual only.

Summary

So far, we have considered three different groups of people with very rare and specific abilities the vast majority of the population does not avail of ~ in other words, abilities that are apparently not ‘democratically’ distributed and that show no distinct gradient, i. e. the ability is either present (which refers to the individuals within these groups) or not (which refers to the population at large). The size of these groups is in any case very small, yet there are huge differences size wise between the groups:

- Absolute Pitch a fraction of a percent of the general population
- Synesthetes between 0.5‰ and 0.001‰ of the general population (estimate of 0.04‰)
- Mathematical Wizards a mere handful of individuals world-wide

Individuals belonging to each of these groups are the subjects of scientific investigations and research.

This type of research into small and smallest groups tagged as particularly gifted ones is a precedent for the (comparative) investigation of gifted persons within parapsychology, i. e. sensitives and mediums. From the point of philosophy of science these two lines of research are running perfectly parallel, the research in the above three groups (absolute pitch, synesthetes, and mathematical wizards) and the research in sensitives and mediums are equally justifiable. Research in the particular abilities of e. g. Wim Klein and Gert Mittring is a parallel to the research in the particular abilities of e. g. Stephan Ossowiecki and Gerard Croiset.

Having emphasized these parallels from the point of philosophy of science, I should mention the differences between the group of persons with Absolute Pitch, Synesthetes and Wizards on one hand and the group of mediums and sensitives in parapsychology on the other. There might be two problem areas, on is a rather formal one (the question of definition – we all know what mediums and sensitives are, but supplying a generally accepted definition, drawing a generally accepted dividing line between the “normal” and what is beyond the normal is much more difficult than in the case of Synesthetes and Wizards). The other one is a methodological one. It appears that the first group (Absolute Pitch, Synesthetes, and Wizards) are a much more homogenous group than the other, the mediums and sensitives, thus it is much easier to research and describe their abilities and compare it to the average person. The mediums and sensitives are

no coherent group and many of them would deserve individual studies, i. e. the nomothetic approach (as opposed to a standardized test such as a hearing test). When going slightly more into detail, we could perhaps distinguish between such mediums and sensitives who might be grouped and compared to one another, e. g. Maria Reyes de Z., Gerard Croiset, and Arthur Orlop in one group, or the contemporary RVer in another, or some “physical mediums” such as D. D. Home, Eusapia Paladino and the Schneider brothers. Nonetheless the achievements of mediums within one of these groups are much more at variance than the achievements of Synesthetes or Wizards. On the other hand, the “better” (and sometimes even more bizarre) the performance of a medium, the more he or she goes beyond the “normal” and the “average”, the lesser the importance of the question of a proper definition. Gerd Mittring’s mental calculation skills are far beyond the “normal” or the “average”, and so is Rudi Schneider’s ability of moving objects in his vicinity without using “normal” motor means.

Another parallel between the ‘gifted people’ under review and the mediums/sensitives (and perhaps another difference, too) need to be considered. For persons with Absolute Pitch, we learned that efforts of training this ‘ability’ did not show significant results which will remind parapsychologists about the situation with sensitives and RVer. Also, we learned that (as the experts in the field say) the question remains open whether the absolute pitch is the result of a number of several variables (as it is the fact with most cognitive abilities) or one single ability on its own – yet there is a strong impression that there are at least two variables involved, namely hearing and memorizing. Memory is also a variable – rather *the* variable – in the case of the Mathematical Wizards. Thus it might be justifiable to say that in the various cases of ‘gifted people’ the results of their amazing productions are based on a cluster of different abilities. How is this in the case of sensitives and mediums? It might perhaps be that we encounter a difference between the ‘psi’ ability of sensitives/mediums and ‘ordinary psi’ as measured in small deviations from chance in mass experiments that is similar to the difference between the hearing ability of people with absolute pitch and ‘ordinary’ people or the mental calculations of Mathematical Wizards vs. the ones of others.

Do we know enough about the nature of ‘psi’ to decide this question? Moreover, is it correct to talk in the context of mediums and sensitives about an ‘ability’? Usually the notion of an ability goes together with the possibility of using that ability at will. If Gert Mittring decides to take part in a mental calculation competition he simply does so, and the outcome is (talking about orders of magnitude) predictable. This is generally not the case with mediums and sensitives. Often they must be in a certain mood. At times the observer gets the impression things ‘happen’ to the medium, not the medium is ‘doing’ something. It is difficult to find a conceptual framework encompassing the properties of all the known cases, even if splitting them into different groups (such as psi-gamma, psi-kappa). Anyway, this goes into details of parapsychology⁶ whereas I had intended to content myself with viewing upon this issue only from the epistemological point of view or from philosophy of science.

Let me conclude this chapter by summarizing that within the population at large there are several very small groups identified that are in possession (or claiming to be so) of abilities the majority of the population does not avail of. Some of this groups are being well researched, some are less (e. g. the mediums and sensitives, for various reasons). They do not only have the same right to be investigated with all scientific scrutiny, no argument can be raised against this on the sole ground that this is an extremely small group or even a few isolated individuals. Such argument needs to be rejected, whether it originates in the camps of the skeptics or within the parapsychological community⁷ itself, and reference to the ample research in the fields described above is a good criterion on which this refutation may be based.

⁶ I was encouraged to add a few thoughts in this direction by my (anonymous) referees to whom I feel indebted.

⁷ It might be recalled that John Beloff distinguishes between two camps, the ‘maximalists’ and the ‘minimalists’. Pursuing that matter, relevant though it is, would lead even further away from my main points.

RARE EVENTS

General

A related yet different topic is how to deal with rare (or even unique) events. As an example of such within parapsychology we might think either of various spontaneous cases or of experiments that found no (or only very limited) replication, e. g. Zöllner's experiments with Henry Slade in 1878 achieving knots being knotted into 'continuous' cords or leather stripes. There were several instances of this experiment that can be viewed upon as different stages within the process of improvement and refinement of the one basic experiment. Certainly they show Slade's consistent ability to achieve basically the same results, i. e. a certain amount of replicability, however, this (conceptual) replicability was achieved by the same persons (experimenter and psychic alike) under partly unchanged conditions and during a short timeframe. Thus it appears justified to consider this series of experiments as a whole, like one event. Later replication attempts did not bear fruit, at least those under controlled conditions (e. g. the wooden rings with 'Margery' = Mrs. Crandon). Thus it would appear safe to put Zöllner's experiments with Slade into the category of 'rare events'.

Again in order to answer the question how to deal scientifically with such rare events (to take them into serious consideration despite their rareness or simply to dismiss them at all due to their rareness) I am looking for precedents of 'rare events' in mainstream science.

Supernovae

Back in 1572, famous Danish astronomer Tycho de Brahe made an observation of a supernova in Cassiopeia (literally: novus, -a, -um = new, sc. star, i. e. "new star").

In 1604, both Kepler and Galileo (as well as Chinese and Korean astronomers) observed and recorded a "new star" in Serpens (another supernova), in 1610 Galileo published his "Sidereus Nuncius" (Starry Messenger) in Venice.

Though the interpretation has changed since (supernovae are by no means "new stars") the mere facts of these observations have not been rejected, neither at their time nor ever since. The second case has luckily been observed by more than one individual simultaneously which adds to its credibility but also Tycho's sole observation had been accepted in its own right.

Coelacanth

Near the end of 1938, the first living Coelacanth (an archaic fish later named 'Latimeria chalumnae Smith') was discovered off the Eastern coast of South Africa. The prominent ichthyologist J. L. B. Smith remarked he could not have been more surprised about this 'living fossil' as if he had encountered a living dinosaur in the street.

This first Coelacanth caught in 1938 led to the discovery of an entire population, between the mainland of Africa and Madagascar. For decades to come this was presumed to be the only Coelacanth population surviving to this day.

However, in 1998, another Coelacanth population was discovered off the island of Sulawesi, Indonesia, located some 10,000 km distant from the area of the population that has been discovered firstly.

So we have three steps: one individual animal, one isolated population, and, ultimately, more than one single population. Yet the credibility of the basic discovery has not been called into doubt even before these entire populations were found.

Summary

Comparing those two instances of 'rare events' there are aspects they have in common and others that are different. What is common to both is – besides their rareness by definition – that the very first observations in these cases came spontaneously and by surprise. What is different is the number of repetitions. In the case of supernovae, the repetitions are comparatively rare, whereas in the Coelacanth case entire populations have been discovered. When comparing those to case studies in parapsychology we find the same spectrum from unique, isolated cases to such that found later repetitions, either with the same individual or with others (intra-subjectively vs. inter-subjectively). As it has been the case with those 'strange people' discussed above, there is – from the viewpoint of philosophy of science – no difference in principle between the situation in mainstream science and in parapsychology, and the 'rare' cases in mainstream science may serve as precedents for the treatment of 'rare' parapsychological cases. Thus rare occurrences in parapsychology, provided they are well documented, ought not to be rejected on the sole ground of their rareness.

DISCUSSION

The link between the 'strange people' and the 'rare events' is the notion of rareness as such as those 'strange people' are rarely found within the population. This very rareness is frequently viewed upon as being opposed to one basic aspect of science, the repeatability. Repeatability, however, makes a number of tacit assumptions, foremost that one that there are no variables undergoing a change between an initial and a replicated experiment unless the experimenter introduces such changes deliberately. In particular this means that variables are independent from the point in time the experiment or its replication is performed. Without entering the difficult question "what is time" a simple consideration of the 'time arrow' shows that no two moments are really the same, in other words, the notion of repeatability or replicability as such is highly questionable. Thus an element of the idiographic approach (i. e. honoring individual cases) inevitably enters the field of nomothetic (general law-related) science as well. From this viewpoint it is only a small step forward to extend the field around the idiographic pole.

Ever since the days of Ludwik Fleck and Thomas S. Kuhn philosophy of science looks into the history of science, too, in order to establish or rather identify guiding principles that have proven to be valid across considerable time spans. Thus it seems reasonable to look into the 'past practice' in fields well established in mainstream science for precedences applicable on parapsychology.

Many scientific studies into the particular abilities of individuals endowed with absolute pitch, synesthesia, or calculation skills have been carried out in the past. They may serve as precedents for studies of equally rare particularly 'gifted' individuals within parapsychology. In other words, charging parapsychology on the ground that the field is studying 'strange people' with 'rare' abilities is unfounded and clearly illegitimate. Luckily such kind of resistance and refutation is waning.

The astronomical and biological cases of the 'rare' events as described above have been accepted whereas equally 'rare' events in the field of parapsychology were met with fierce resistance, even from inside the field. The only reason for such different treatments may be the fact that the rare events in 'normal' science are viewed upon as being easier to accommodate within the framework of scientific knowledge. It is highly questionable whether this is really the case. The 'rare events' in the field of parapsychology can mostly be accommodated within the known framework of parapsychology itself however there are two requirements to do so: knowledge is needed as older cases should not be buried in oblivion but taken into account for comparison purposes, and, admittedly, a certain amount of courageousness is needed as well.

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