that scientific proof had any validity or human minds any access to truth.

This question is a form of the old argument that without free will truth is unknowable. It reminds me of an occasion years ago when a scientist argued with me over lunch at the Athenaeum that there could be no free will, and of my subsequent regret that I had not been rude enough to ask him why I should waste my time arguing with an automaton.

To put it another way, one might ask whether scientists who assume that human reason can in certain circumstances arrive at truth, brain processes and their determination notwithstanding, are not by that very assumption thinking in terms of a dualism of mind and matter. Are there not some indications, that, whatever the ultimate truth, we have to think dualistically if we are to think at all, and that, whatever some say, all do?

ANTHONY WAGNER, Garter Principal King of Arms

London

MADAM,—In view of Dr Dingwall's surmises about Gilbert Murray's 'guessing' achievements perhaps I should report that a stay of six months with the Murrays on Boar's Hill brought home to me that Professor Murray was an exceedingly busy He also told me with emphasis later that he had wished man. to avoid a reputation for doing 'that sort of thing' since it might detract from any weight carried by his views on such vital matters as his work for the League of Nations. Here would seem a simpler explanation for Murray's failure to find time for telepathic experiments than the tortuous one that, subconsciously, he wanted telepathy to be a fact. To those who knew him it was typical of his extreme intellectual honesty that, not having thought of Dr Dingwall's ingenious alternatives, he was eventually driven to accept an unwanted telepathic explanation for his awareness of subjects that were thought of but not spoken aloud.

Dr Dingwall's paper illustrates how difficult it must be for investigators who lack personal experience of ESP to assess all the factors in situations when it occurs. Their position is much like that of a blind man asked to act as an art critic. One such difficulty emerges in his remark that Professor Murray's response of 'scene with Ann Boleyn' to an agent's words, 'Synge and Arran' indicates 'telepathy of a very odd kind.' 'I would have thought,' he adds, 'that faulty interpretation of sounds was a more likely explanation.' Why? Cannot there be faulty telepathic reception? Professor H. H. Price has commented that telepathy seems more

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like an infection than knowledge and Professor C. D. Broad has pointed out that although A's thought or experience may be the cause of B's, their experiences need not resemble each other at all closely, and also that B's experience can never be occasioned by A's alone, but always in part by his own past and present as well. If so, there seems no more reason for surprise at inaccuracies in telepathic than in physical auditory or visual perception. A well-known example is that of an automatist who mistook a filter in a dark corner of Mrs Verrall's dining-room, where the automatist had never been, for a bust. Her mistake was shared by a friend of the Verralls who *had* been in the room. When told of it he said, 'But there *is* a bust in the corner.'

I came on a similar pattern more recently. When a late member of the S.P.R. Council, Mrs Cyril Gay, was dying she lay most of the time remote and silent. I warned her nurse that, being something of a sensitive, these were good conditions in which to pick up information telepathically, and a day or two later she appeared to do just that, when an event it was hoped to keep from her was mentioned only in the kitchen at the far end of her large She spoke about this event to the nurse the next time she flat. entered her room. Auditory hyperaesthesia, it could be argued, but in an instance which occurred shortly afterwards, that explanation could be ruled out. Lady Clay, Mrs Gay's sister, managed her affairs, and the time had come for her to arrange one of the routine visits to the invalid by a government official which are required in such situations. Lady Clay lived at the top end of Tite Street, Mrs Gay on the other side at the river end, with the Royal Hospital Road in between. Her bedroom faced away from the street. To avoid disturbing Mrs Gay with knowledge of the visit, it was not mentioned in her flat, and one morning Lady Clay arranged from her own house, for it to take place the following day. The official agreed to pose as a new medical consultant, a Dr Cameron. When Lady Clay visited Mrs Gay that afternoon she was greeted with the remark, 'There's a new doctor coming to see me tomorrow. His name is Dr Campbell.'

Nor does the 'hearer' always appear to differentiate physical from telepathic hearing. When I was playing with my four-yearold granddaughter in our garden she cocked up her head as if listening to a physical voice and said, 'Grandpa's calling you.' My husband, not being well, was resting in his bedroom and I went to him at once and said, 'Viola says you called me.' 'No, I did not,' he replied, 'I wanted you and was about to do so, but then decided it would be kinder to wait until you came in.'

I do not quite understand on what grounds Dr Dingwall says

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that Professor Murray's complaint of an awful noise made by a milkcart in an adjoining road could hardly fail to indicate hyperacuity of hearing. Again, why? For one thing the Murrays' Oxford house, where I also stayed, was on the corner of crossroads, (Woodstock Road and St Margaret's Road) and the concentration of anyone with merely normal hearing could well have been disturbed by a milk cart of that period rattling along either of those 'closely adjoining' roads. Moreover, experients know that overreaction to outside impacts can be as acute whether a physical sense (not hearing only) or telepathy or some other variant of ESP is involved; moreover in certain cases there seems as yet no way of knowing when sensory or extra-sensory perception, or both may be functioning. If I may be forgiven a personal example: on one occasion I felt as if-repeat, as if-I was carried out of my body into different surroundings by some fine music. My husband, thinking I looked odd, touched me very gently. His touch felt like Mohammed Ali at his best. I do not know whether or not ESP was involved in this, to me, striking experience, but there was certainly a change of consciousness. On another occasion I was absorbed in an effort to pick up telepathically the unspoken thought, on which I knew a distant person who was alone at the time was concentrating. By good fortune I got the thought, but just afterwards I was very painfully brought back to 'normal' consciousness by a gentle tap on my door. It felt like the crash of a bomb.

A further question raised for experients by Dr Dingwall's paper is this: On what grounds can non-experients assume there to be an iron curtain between sensory and extra-sensory perception? (One ground, of course, may be that possibly unfortunate term itself.) Some experients would say that it is rather a question of refocusing attention, that sensory perception merges into 'extrasensory', that even, on occasion, the latter cannot be reached until the senses have been concentrated like a laser beam. Again, I must resort to a personal anecdote in illustration. As an escape from a surfeit of bridge at diplomatic dinner parties I used to amuse myself by reading characters (not fortunes) from hands, but I gave it up when the war came because I had been too successful and was afraid of what I might 'see.' Recently a stranger wrote from Italy asking to visit me. His letter, though very vague, was pleasant, and I said, Yes. Soon after arrival he pressed me to look at his hand, and, being totally out of practice, I refused. He was so insistent, however, that in the end I gave in. Sensory impressions suggested a retired Colonel, say, or a Consul, but as I concentrated my attention on his hand I became aware of him,

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quite, I thought, out of character, walking round a College quad. Very diffidently I said so. He laughed. 'I thought I would see if I could fool you,' he said, 'I am a Professor of Greek. I was a pupil of Professor Dodds.'

I do not think I should have got this symbolic image without the previous sensory concentration, and it was not, of course, the one-one reproduction demanded by investigators who lack experience of the delicate process of passing from analysis and inference to 'co-feeling', which feeling may be vague and distorted, or clear and accurate, according, presumably, to the skill of the sensitive, the personality of the 'agent' and conditions in general.

Naturally no amateur aspires to affect an opinion held by so eminent an authority as Dr Dingwall, and of course my uncorroborated anecdotal illustrations can be dismissed as due to faulty memory, etc, etc, or even to downright lying. Sir Cyril Burt, however, emphasized that psychical research is a branch of psychology; if this is so, for Dr Dingwall to ignore Professor Murray's own descriptions of his telepathic experience may be to ignore some vital data and so conduce to his rather indefinite conclusion after eighteen pages—'I prefer to think....'

The trouble is that this indefiniteness gives the impression that Dr Dingwall doubts Professor Murray's accuracy as is shown by the reaction to it in 'A Spectator's Notebook' of February 17, 1973. This ended 'Q.E.D. As far as I can see, Murray heard, was not telepathic and was a fraud.'

I am sure Dr Dingwall did not intend to convey such an impression but he does on occasion write very ambiguous sentences. Take the following: 'I think it very unlikely indeed that Murray was a conscious fraud when doing these tests, but then people thought it very unlikely that Wise was a forger and a thief, that Dawson was a fraud over the Piltdown skull and numerous other persons whom I could mention.' We ordinary readers find it hard to tell whether or not Dr Dingwall intends this sentence to justify the Spectator's conclusions.

ROSALIND HEYWOOD

London

MADAM,—An objection to Dr Dingwall's theory that hyperaesthesia may account for Murray's exhibitions is that a man of Murray's stamp would surely have said that he had *heard* the test that was about to be set for him. He apparently did not. It is unlikely that if he had actually heard the conversations, he

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would have attributed his knowledge to any other source, or left the explanation open.

HENRY MEULEN

London

MADAM,—In the Proceedings of January 1973, Dr Dingwall makes a strong case for regarding auditory hyperaesthesia as a possible explanation of Gilbert Murray's success in what were supposed to be tests of telepathy. He mentioned that Richet regarded unconscious auditory hyperaesthesia as a very curious phenomenon. It should be known that there is less reason now for regarding it as 'very curious.' Much experimental work in psychology has been done on reactions to visual stimuli not consciously perceived, and the possibility of such reactions is well The same principle may be applied to auditory established. stimulation. Richet's opinion that this would be very curious seems to rest on the assumption that any reaction to a stimulus must be caused by a conscious event resulting from the stimulus. This assumption would not appear necessary to a modern psycho-Unconscious auditory perception remains, therefore, a logist. possibility to be tested experimentally in any experimental situation in which it might occur. This, as Dingwall truly points out, was not done in the Gilbert Murray tests; their results may therefore have been due to telepathy, to auditory hyperaesthesia, or to both of these together. They cannot be claimed as evidence of the reality of telepathy.

ROBERT THOULESS

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MADAM,—In his paper stating the case for hyperaesthesia in the Murray experiments (*Proceedings of the Society for Psychical Research*, January 1973). Dr Dingwall quotes examples of reputed hearing at distances of several miles, although he suggests that these would be outside the *normal* limits of hyperaesthesia. Now, if these cases were genuine, surely they describe what we now call clairaudience, rather than hyperaesthesia? Where does one draw the line? Unless agent and percipient are separated by very great distances indeed, surely it will never be possible to eliminate hyperaesthesia as a possible explanation of a telepathy experiment (agents are known to subvocalise)? Many classic experiments would have to be reassessed. Hyperaesthesia may or may not account for Murray's successes; but it seems that, if hearing can

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be as sensitive as Dr Dingwall seems to believe, future experiments in telepathy will have to be very well-controlled indeed.

B. D. COOPER

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MADAM,—Dr. Dingwall rightly calls attention to the need for further investigation of the limits of the ear's sensitivity—normal or abnormal—before the Gilbert Murray phenomena can be counted, or discounted, as strong supporting evidence for telepathy. Nobody can read the records without sadness at the lack of experimental thoroughness—including precise description; or without regretting that so little seems to be known about the limits of unusually acute hearing. The most telling—though by no means conclusive—evidence against an explanation by sound waves is the number of cases where Murray apparently first sensed a general affective atmosphere—this is horrible, this is bizarre—which gradually solidified, so to speak. My object is not, however, to argue the case for telepathy but to suggest possibilities of theoretical clarification and experimental investigation of the alternatives.

To oversimplify a little, an explanation by sound waves could be on any one or more of three levels: fully conscious hearing; unnoticed hearing outside the focus of attention but sufficient to start a train of thought; and a process in which there is an abnormal additional stage between the nervous impulses from the ear and the emergence of anything in consciousness. In the last case the word 'hearing' can only be used for brevity and should be kept in inverted commas. Also for brevity I shall call the additional stage the subliminal, used as a neutral term meaning whatever is below the threshold of consciousness, whether subconscious mind or electro-chemical events (if distinguishable), which does not enter into the first two levels as a direct link. It is because the subliminal is notoriously adept at transformations that Murray's atmospheric cases are not conclusive.

There is general agreement that fully conscious hearing need not be considered as an explanation of the Murray phenomena. Peripheral, unnoticed hearing is more difficult and I will come back to it briefly. I am concerned first with what seems to me the rather untidy notion of hyperaesthesia. It is not only that the empirical evidence is unsubstantial (Dingwall, p. 23: "... little or no systematic attempt to inquire into the phenomena or to print any account of them which could be satisfactorily appraised

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by the reader ") but that so far it is not evidence. We are not apparently dealing with cases of consistently precise reproduction of the speaker's words by a normal hearer; if this were so we would have no occasion to suppose anything but unusually keen ears working on the first or second level. We are dealing with cases of somnambulism, hypnotism, automatism in which words appear to be delivered into consciousness from the subliminal, i.e. at the most with cases of 'hearing' rather than hearing. But I do not see how the evidence of any of these past cases could establish that the auricular mechanisms played any part at all. They might all in fact have been cases of telepathy. Even if some cases appeared, subjectively, to be of conscious hearing, the subliminal is perfectly capable of passing on its message in this form whatever its origin may have been. 'Hearing voices' is common enough.

If a claimant to the faculty of auditory hyperaesthesia could be found whose performance was reasonably consistent and robust enough to stand experimental conditions, a series of tests could be made to see whether the performance varied when on some occasions, unknown to the subject, effective soundproofing intervened. The prospect of finding such a faculty immune to stage fright in experimental conditions may not be very rosy.

Until so rare a gift be found some progress might be made. There is in principle a possibility that the physiologists, having explained the exact processes by which a composite wave form reaching the ear is broken down to discriminate individual tunes or speakers in hubbub, may advance to ascertain the limits of the ear's capacity for this selective analysis and-remembering the distortion which the sound of a voice several rooms away or the other end of a crowded railcar must undergo-reconstruction. (Ear in this includes relevant brain). The communications engineers have now a great deal of knowledge about the recovery of swamped or distorted speech from mush, and a great deal of refined apparatus. If the physiologists can determine the limits of the capacity of the ear/brain (as a mechanism, never mind the mind) it should become possible, in future cases of alleged hyperaesthesia, to reproduce the conditions, mechanically record the sound waves at the reception point and determine whether the aural mechanisms could or could not sift out and refurbish a recognisable speech pattern ('recognisable' in a mechanical sense). The hyperaesthete would not need to be subjected to experimental conditions.

If the answer were 'yes they could,' hyperaesthesia would be

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theoretically possible; it would not however be very strongly confirmed as a probability—the explanation could still be telepathy. And the case for telepathy—already supported by some plausible independent evidence—would be strengthened if the answer were 'no they could not.'

It goes without saying that the range of the claimed hyperaesthesia would need to be markedly above the possible range of What this may be is perhaps also in need of normal hearing. experimental enquiry. It is to be hoped that means might be found-as successfully managed in the partly analogous field of seeing-to deal experimentally with hearing on the second level, the difficult middle level of what I have called unnoticed hearing outside the focus of attention but sufficient to start a train of If there is any parallel between hearing and sight in thought. this matter, a complication of my three levels may seem to arise. With sight a distinction seems necessary between things 'seen out of the corner of the eye' not consciously registered at the time but 'remembered' when a later event causes retrospection; and things shown too briefly for conscious vision which nevertheless leave impressions that experiment can inferentially elicit. With hearing, there is the familiar noticing the clock's ticking only when it has stopped—what might be called retroaudition. I do not know if experiments have been made to determine whether sounds too low for conscious hearing can leave impressions that can be inferred from detectable effects (not to be confused with experiments in 'sleep-learning' where the sounds would be audible to a conscious person). If not they are needed.

Although such an occurrence might seem to belong more to the third level than the second there would be nothing 'hyper' about it; it would occur in normal people in normal states. That is to say that there would be no need or reason to suppose the intervention of the additional stage required in the third level. It would be as though the normal process had stopped short of directly affecting consciousness but had gone far enough for experimental techniques to provide evidence for its earlier stages. Such evidence, if obtainable, would presumably take the form of the subject's being affected behaviourally and, inferentially, emotionally or cognitively in some relevant way. If there were positive evidence with clear sounds of low amplitude, the experiments could be extended to increasingly blurred sounds.

This programme calls for a lot of work and as regards the physiology of hearing may not yet be practicable; but something like it seems necessary if doubts are to be reduced, including the

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doubt of whether the use of the term hyperaesthesia can be justified.

J. R. HILTON

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MADAM,—The long drawn out controversy in regard to the possible telepathic content of Professor Gilbert Murray's experiments still seems far from reaching any definite solution and this will continue until it is recognised that almost certainly, both normal and paranormal factors were simultaneously operative and that the former sometimes engendered the latter. Both Prof. E. R. Dodds' and Dr E. J. Dingwall's interesting papers (*Proceedings* of the S.P.R., July 1972 and January 1973) provide a great deal of information but there are still some other important points to be considered. These can be summarised as follows.

(1) It is well known that in any such experiments, the linear distance between the agent and percipient is not in itself a decisive factor in normal hearing. The loudness and frequency spectrum of the agent's speech; the intervening walls, floors and doors that absorb or transmit vibrations at selective sonic frequencies: the connecting rooms or long passageways that resonate and 'channel' sound waves by reflection; the prevailing noise level that continuously or intermittently masks the percipient's normal hearing; all are from moment to moment contributory in permitting, limiting or preventing the normal transmission of verbal information via sound between the agent and percipient. As both the above papers point out, the various extant accounts do not give adequate information about the conditions under which the experiments were made at different times. Nevertheless, even if more details had been given, we could hardly expect that accurate technical data about the acoustic transmission characteristics could have been determined on each occasion during such 'parlour games' and made available to us now. In the early days 'decibels' had hardly been thought of. The outcome is that it is quite impossible to assess the extent to which normal hearing accounted for Murray's successes.

(2) Commentators who discuss the possibility of paranormal communication of target material seem to regard any kind of psi capacity shown by the percipient as a permanent or continuous factor. His reputed telepathic powers on occasions other than his drawing-room exhibitions are even cited in support of this proposition. It seems more probable and much more in accord with K. J. Batcheldor's theory of the psychological factors in the induction of paranormality, that the psi factor was always wildly

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fluctuating in response to the ever-changing balance between favourable and unfavourable physical and psychological conditions, real or imagined by the percipient. If his normal hearing of target material was so fitful that only occasional isolated words or parts of words or rhythms of sentences were recognised, so too his psi capacity would also be fitful in its endeavour to acquire at least some outline of the target theme on which his wide knowledge and memory could build.

(3) We tend to think of ESP as an additional and isolated sixthsense, but it is much more logical to regard it as the non-spatial mind-entity's basic awareness which a long evolutionary process has channelled into our five highly specialised normal senses. The latter are usually sufficient for everyday life but on the rare occasions when information-seeking is highly purposive (as in telepathy experiments), and when the conditions preclude the possibility of complete normality (as with unspoken thoughts and unseen actions), then mind-entity fleetingly resorts to its basic awareness capacity to augment or replace the normal senses. On this basis, hyperaesthesia is to be equated with augmentation and telepathy with replacement. The paranormally acquired information reaches consciousness as a visual, auditory, olfactory or gustatory sensation or in a more generalised 'atmosphere' or Furthermore, paranormal awareness is so 'jangled feeling.' rarely employed or needed that it is extremely sensitive to doubt and to other adverse mental attitudes such as ownership resistance which regards personal involvement with repugnance, but these are rendered less inhibitory to the induction when the subject thinks he is only employing his normal senses or attributes successes to the presence of other persons or agents. However, such beliefs or illusions favourable to the induction of psi must not be stretched to the limit of plausibility, i.e. to obviously impossible conditions. There must appear to be a loophole in Numerous examples illustrate these the control conditions. contentions in the two papers cited.

(4) We can be sure that the percipient was always subjected to at least some noise when waiting in another room. This could have been favourable to the induction of psi provided that its level was not markedly intermittent and therefore irritating as it sometimes was, nor of half-recognised words or perhaps tunes that produced false associations. Miscellaneous domestic and environment noises of unidentifiable provenance usually occur in any large occupied household. Such relatively subdued noise would not only lull his attention and restrict his discursive thinking, but it could also stimulate psi by suggesting words or

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parts of words and even short sentences from sound patterns that by chance seemed significant (see Prof. Dodds' paper p. 400). This principle of paranormality superimposed on random normality in a belief and expectancy-favourable situation has been emphasised by K. J. Batcheldor in his theory of the function of artefacts during the induction of psi. It seems to operate under a variety of circumstances, e.g., 'voices' on magnetic tape; 'visions' in the fire; 'apparitions' at dusk; a medium's incessant 'waffle'; and in spontaneous and experimental PK. Unfortunately, the extent to which psi could have been stimulated by background noise on different occasions in the Murray experiments while he was waiting outside the room cannot now be assessed, but the noise element as a whole should not be regarded as something that only rendered normal hearing difficult. It could have been a potent factor inducing 'instant' psi.

(5) That Murray on entering the room usually held the agent's hand should not be taken to mean that muscle-reading was or could have been the sole factor favouring the communication of target material by this procedure. Hand contact with the agent would provide not only particularisation—a focusing of attention on the agent to the exclusion of other persons present—but also the psycho-physical linkage usually called a token-object (or K-object). How this linkage comes about is not certainly known, but the fact that direct personal contact or indirect contact via an intermediate object can somehow and sometimes aid ESP seems incontrovertible, so we ought not to dismiss the possibility of this paranormal factor in Murray's experiments.

The above notes are not an attempt to bias the controversy towards the adoption of either a normal or paranormal explanation of Murray's successes or failures. It seems to me that there is no longer any possibility of extracting overwhelmingly convincing evidence or of constructing compulsive arguments either way from the literature, but all those experiments and the labours of those who so painstakingly collated and commented on the results ought to stimulate not only our interest but our activities as well. We are not doing our duty as researchers if we let all this valuable material slide into oblivion. So these notes are intended to draw attention not only to some psychological variables rarely discussed in the relevant literature, but also to the urgent necessity for new researches, not necessarily to repeat Gilbert Murray's controversial experiments in a modern setting, but to illuminate our woeful ignorance of the operative paranormal factors. We must contrive to obtain more data about the psi induction process; also about the important transitional phases where normality and paranormality JUNE 1973]

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are evidently mixed together; also about the function of artefacts as triggers and the specific action of token-objects. I do not doubt that if we did so, we could make a substantial advance in our understanding of *all* parapsychological phenomena. COLIN BROOKES-SMITH