



## Serendipity versus the superorganism

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## EDITORIAL

# Serendipity versus the superorganism

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What, we might well ask, is this individual issue of the *Journal of Mental Health* for? It is roughly the same size as a small paperback book, but in a book one would expect successive chapters to have some connection with each other. This journal issue, by contrast, is aimed at readers with a range of interests in the broad general field of mental disorders, their treatment and their alleviation, but the successive papers do not interconnect. There is no particular reason why someone with a strong interest in the economic costs of supporting self-poisoning adolescents should want to know anything about the attitudes of their own personnel to routine outcome measurement. Furthermore the *Journal of Mental Health* is by no means the only journal publishing mental health-related papers. There are a hundred other journals which could equally well have published papers on any of the topics covered in this issue. Journals vary widely in status. A highly specialized title does not mean that a journal has a high status within its chosen field. A geomorphologist may report his more boring routine research in *Plate Tectonics* but if he (nearly always “he” in that field) discovers something really interesting and important he will submit it to *Nature*. To cope with this problem, information practitioners like my successors are coming up with increasingly sophisticated systems for delivering to our customers exactly what they say that they want to read. A high and rapidly increasing proportion of all scientific and medical reading is now done on screen, or by end-user printing on demand. There are many medical libraries which now only subscribe to a handful of printed journals but have on-line access to packages of hundreds. To browse through all of these would be extremely time-consuming, but, fortunately for the hard-pressed researcher, it is extremely easy to set up search strategies. A reader interested in, say, self-poisoning adolescents can be set up with a service which delivers to his or her desktop (marginally more likely to be her in this particular case) copies of all the relevant papers from the journals her library subscribes to, and lists of relevant papers from journals her library doesn't subscribe to. The latter group can be rapidly supplied, again direct to her desktop, as individual papers without any added clutter, for a fairly modest fee. Many heavy users of the Institute of Psychiatry library service never physically enter the library's premises at all.

Thus far, so good. The customer is getting exactly what it is that she says that she wants. If she is getting papers she isn't interested in, or seems to be missing papers that she is interested in, a good information practitioner should be able to fine-tune the system so as to focus even more narrowly on her expressed needs. What is lacking here however is the element of serendipity. She may not be interested in adult attachment and early experience of care-giving in people with psychotic disorders, but there is always a possibility that a glance through a paper on such a topic might trigger off some new idea on ways of approaching her own para-suicidal research. A scholar who only reads exactly what a computer-based indexing system thinks is what is relevant to her work is at serious risk of not being exposed to new ideas, and will never get an overall grasp of her broad subject field.

When I started off as librarian of the Institute of Psychiatry, somewhat over quarter of a century ago, it was our custom to put all the printed journals received each day out on a display table. There were a considerable number of academics who would make a point of coming up to the library once a day, for half an hour or so, in order to browse through the whole lot. Bernard Donovan, the professor of neuroendocrinology, would noticeably pick up the *Psychoanalytic Quarterly* between finger and thumb and give a very cursory glance at its contents page but paid close attention to the contents of the *Journal of Neuroscience*, while Hans Eysenck would perhaps spend more time looking at *Behavior Therapy* than he would at *Psychopharmacology*, but both of them would normally at least flick through everything that the library received. Finding out what had been published in journals we didn't take was a very much more laborious task than it is today, but if readers requested papers on inter-library loan we would normally get them a complete double-page photocopy which would include the last page of the preceding paper and the first page of the next paper in that issue. Surprisingly frequently customers would come back to us with these, saying "this looks interesting, can you get me the rest of it please?" It has to be said that the system was awfully clumsy and time-consuming. Modern computer-based information systems are far more efficient. I would not want to go back to doing without them. There is, however, serious matter for concern in the loss of serendipity. Serendipitous thinking is a core aspect of humanity.

These thoughts were triggered off by reading *The Superorganism: The Beauty, Elegance and Strangeness of Insect Societies* (Holldobler & Wilson, 2008), picked up in true serendipitous fashion off a friend's kitchen table. Holldobler and Wilson drew up "functional parallels" between organisms, such as humans, and superorganisms like ant colonies. Ants function, in some ways, like the individual cells of an organism. In some species anything up to 10% of the individual units dies each day, but the nest can survive indefinitely. The ant colony can be enormous. Holldobler and Wilson estimated that one South American leafcutter nest they investigated contained some 40 tons of material, with getting on for ten million individual ants. Considered as a single organism this makes it much larger than a blue whale. In fact one super-superorganism may be an interconnected colony of fire ants which currently covers parts of Alabama, Texas, Louisiana, Mississippi and Arkansas. They were originally separate nests but have very recently evolved so that, according to Holldobler and Wilson, "local populations now coalesce into a single sheet of intercompatible ants spread across the inhabited landscape". This thing is bigger than Google!

Flannery (2009) has suggested that the invention of the Internet may lead to a similar social evolution of the human race. Just at the moment it seems to me more likely that the human race will destroy itself first, and leave the earth with an environment that even Texan fire ants will have difficulty in coping with. If we can overcome this problem however, then the creation of an internet-linked human superorganism seems a likely end result. Morton Wheeler, who invented the term "superorganism" to describe his beloved ants (Wheeler,

1911) wrote about the organization of scientific research nearly 90 years ago (Wheeler, 1921), at a time when privacy could be taken for granted. People do still hanker after privacy. Concern over access to recorded information can still hamper mental health research, for example (Callard & Wykes, 2008). Information about each other is of enormous importance to social apes, but is of absolutely no interest to social insects. Such information is a very important part of human wellbeing (Hannabuss, 2008). We are, to change the animal metaphor for a moment, going to have to get used to living in the goldfish bowl (Guha, 2008). Far more information about all of us is available to all of us than ever before. If members of the British parliament cannot keep their own expenses claims secret, how much chance is there of national ID card data remaining confidential? The difference between colonies of ants and tribes of anthropoids such as ourselves however, is that ant colonies do not have individual brains. They do have astonishingly complex and rapid internal communication systems, based mainly on pheromones, but have no central controlling intelligence. They have “created civilizations without the use of reason” (Lowell, quoted in Parker, 1938). It seems to me, speaking as a reasoning but emotional primate, that it would be very sad for “civilization without reasoning” to be the future of the human race.

It is, perhaps, a large step from pondering on the function of an individual issue of the *Journal of Mental Health* to worrying about a future human superorganism. Nevertheless, this journal issue is a collection of unrelated papers in the broad field of mental health. Browsing through it may trawl up nothing useful at all except the emotionally important fact that other people are working in the same general field as you, but, on the other hand, an apparently irrelevant paper in it just might serendipitously trigger off some new idea: a way of thinking that distinguishes a human from an ants nest.

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