On the origins of human nature

Chris Lerwill digs into the archives, 200 years after Darwin's birth and 150 after the publication of *On the Origin of Species*

Charles Darwin's various private jottings, never intended for publication but now online at www.darwin-online.org.uk, indicate an obsession with methodological detail, analysis and deduction: a scientific approach that pervaded both his scientific work and his private life. His theories became hugely influential within psychology, but what did he have to say about human nature at the time?

Darwin was extremely anxious about the effects that his ideas would have on Victorian society and especially on his wife, who was in favour of a creationist approach to understanding life on earth; he noted that it was 'like confessing a murder'. This led him to almost exclude the human species from his treatise *On the Origin of Species*. In this the only reference to humans – and indeed, to psychology – was in the last chapter:

> In the distant future I see open fields for far more important researches. Psychology will be based on a new foundation, that of the necessary acquirement of each mental power and capacity by graduation. Light will be thrown on the origin of man and his history.
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> (*On the Origin of Species*, First Edition, p.488)

Two years before the publication of the *Origin of Species*, he had written to Alfred Russell Wallace, who had come to similar conclusions about evolution and whose correspondence stimulated Darwin to make haste with publication; on being asked about 'man', Darwin had responded:

> I think I shall avoid whole subject, as so surrounded with prejudices, though I fully admit that it is the highest & most interesting problem for the naturalist.
>
> (Burkhardt, 1996)

In spite of his reluctance to comment on human nature in the *Origin of Species*, Darwin later published works specifically relating to the human species: *The Descent of Man, and Selection in Relation to Sex* (1871), which was originally three works combined for convenience, and *The Expression of the Emotions in Man and Animals* (1872). In these works, Darwin generally focused on anatomical features and the evidence that they provide in supporting his evolutionary theory of the continuity of species; he nevertheless makes numerous references to the 'states of mind' as the underpinning feature of expressions, and comments:

> He who admits on general grounds that the structure and habits of all animals have been gradually evolved, will look at the whole subject of expression in a new and interesting light.
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> (*The Expression of the Emotions*, 2nd edn, p.9.)

> "*The Descent of Man* ... made a novel contribution to psychology"

In *The Descent of Man*, Darwin provides arguments for the evolutionary continuity of physical features and also numerous psychological and social attributes. He points out continuity of features such as curiosity, imitation, attention, memory, imagination and reason, discusses the possible evolution of social structures involving sympathy, fidelity and courage, and concepts of beauty especially in relation to sexual selection. For many of his proposals he used evidence from cultures worldwide, both from his own experience and from his extensive correspondence with anyone that he felt might provide information beneficial to his developing ideas. *The Descent of Man* also made a novel contribution to psychology in that it was the first time that anybody had looked at humans as a naturalist observing a species of mammal or indeed animal (almost 100 years before Desmond Morris and *The Naked Ape*) and was able to step outside of our species and look at us as if as an alien naturalist.

In addition to the books and letters, two notebooks in particular provide insights into his views. As with all his notebooks, the *M Notebook* and the *N Notebook* on Man, Mind and Materialism are an almost random collection of bits of information, often in abbreviated form and with words missing. These two notebooks have been published in Gruber (1974), and Gruber provides an analysis of their content. The notes cover a very wide range of psychological topics, but many of the elements are comments from others to Darwin and not necessarily a reflection of Darwin's own views. Major parts relate to memory and to psychopathology, and there is some emphasis on the relative roles of hereditary and learned influences. Darwin did not intend these notebooks to be published. Many of the elements did not directly contribute to his intended published writings and it is not possible to determine the extent to which he agreed with many of the notes of others' comments and ideas.

In these notebooks, Darwin tended to concentrate on those elements which he felt were relevant to variation, adaptation and survival. He thus regarded memory in terms of the formation of deep-seated traces as relevant to these three concepts, and although not using modern terminology showed some awareness of long-term and short-term memory, recall and recognition evidence, and differences between conscious memory and unconscious habitual behaviour. Darwin noted many behaviours indicative of

references

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some psychopathological condition. Of particular interest is the note:

> My F[ather] says there is a perfect gradation between sound people and insane – that everybody is insane at some time.
>
> (*M Notebook*, p.13)

This Darwin regarded as further evidence of continuous variation within a species. The subsequent note includes the following, perhaps a forerunner of 'pathological' behaviours as defence mechanisms:

> My Grand F[ather] thought the feeling of anger, which rises almost involuntarily when a person is tired is akin to insanity. (I know the feeling also of depression, & both these give strength and & comfort to the body.)
>
> (*M Notebook*, p.14)

The five volumes of Charles Darwin's letters edited by his son Francis show that in his correspondence Charles Darwin wrote little of his views on matters psychological. Most of the letters are of discourse with other travellers, academics and enthusiasts concerning Darwin's thirst for knowledge and his responses to comments about his publications. Many of the letters were concerned with anatomical and ecological aspects of his developing theories. He did make some comments on intelligence, proposing that intellectual abilities show gradation between species and within a species, including the human species, and that such variations have relevance to the survival of individuals.

In an interesting response to a letter from Emily Talbot, Secretary of the Education Department of the American Social Science Association, following publication of *The Descent of Man*, and about six months before his death, Darwin expressed encouragement for research into educational needs:

> In response to your wish, I have much pleasure in expressing the interest which I feel in your proposed investigation on the mental and bodily development of infants. Very little is at present accurately known on this subject, and I believe that isolated observations will add but little to our knowledge, whereas tabulated results from a very large number of observations, systematically made, would probably throw much light on the sequence and period of development of the several faculties. This knowledge would probably give a foundation for some improvement in our education of young children, and would show us whether the system ought to be followed in all cases.
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> I will venture to specify a few points of inquiry which, as it seems to me, possess some scientific interest. For instance, does the education of the parents influence the mental powers of their children at any age, either at a very early or somewhat more advanced stage? This could perhaps be learned by schoolmasters and mistresses if a large number of children were first classed according to age and their mental attainments, and afterwards in accordance with the education of their parents, as far as this could be discovered. As observation is one of the earliest faculties developed in young children, and as this power would probably be exercised in an equal degree by the children of educated and uneducated persons, it seems not impossible that any transmitted effect from education could be displayed only at a somewhat advanced age. It would be desirable to test statistically, in a similar manner, the truth of the oft-repeated statement that coloured children at first learn as quickly as white children, but that they afterwards fall off in progress. If it could be proved that education acts not only on the individual, but, by transmission, on the race, this would be a great encouragement to all working on this all-important subject. It is well known that children sometimes exhibit, at a very early age, strong special tastes, for which no cause can be assigned, although occasionally they may be accounted for by reversion to the taste or occupation of some progenitor; and it would be interesting to learn how far such early tastes are persistent and influence the future career of the individual.
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> In some instances such tastes die away without apparently leaving any after effect, but it would be desirable to know how far this is commonly the case, as we should then know whether it were important to direct as far as this is possible the early tastes of our children. It may be more beneficial that a child should follow energetically some pursuit, of however trifling a nature, and thus acquire perseverance, than that he should be turned from it because of no future advantage to him.
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> (From Darwin & Seward, 1903. *More Letters of Charles Darwin*, vol.2)

This single letter seems to presage a range of approaches in education, and shows a remarkably modern approach to methodology.

In an autobiographical fragment written by Darwin in 1838 he mentions the distinction between real and constructed memory: '… and I think my memory is real, and not as often happens in similar cases, [derived] from hearing the thing often repeated, [when] one obtains so vivid an image, that it cannot be separated from memory …' (Darwin & Seward, 1903). He also considers selective memory when comparing his memory with that of his sisters.

In a brief autobiography written in

1876, principally for his children, Darwin made occasional comments about a distinction between learned and innate traits. He regarded his passion for collecting as innate, and humanity as learned. This autobiography also contains some of his views on scientific method. He was much opposed to dogmatism in academia, which was shown by many who would become opponents. This view was partly responsible for his tardiness in publishing many of his works. He claimed that he 'worked on true Baconian principles, and without any theory collected facts on a wholesale scale… by printed enquiries, by conversation… and by extensive reading', and that he 'steadily endeavoured to keep my mind free so as to give up any hypothesis… as soon as facts are shown to be opposed to it' (in Darwin, F., 1888).

Gruber (1974) has reviewed Darwin's contributions, both direct and as precursors, to psychology. He identifies five major themes gleaned from Darwin's writings that are indicative of Darwin's view of human nature: a materialistic approach to biology, the emotional continuity of man and other animals, the adaptive significance of all biological functions, an interest in variation of mental functions, and an evolutionary approach to embryology and child development. Gruber points out that Darwin was a forerunner of many of the principles and methods used in psychology – detailed observation, large sample experiments, questionnaires for gathering information rather than opinion, and objective case studies. Darwin's *A Biographical Sketch of an Infant* (reprinted in Gruber, 1974) detailed his observations of the behavioural development of his eldest son for the first few months of life.

> "Darwin was ... a strong proponent of the view that all human races were of the same species and had equal rights"

When reading Darwin's works one must bear in mind the times in which he was writing. In the 19th century many words and concepts that nowadays would be regarded as 'politically incorrect' were regarded as normal and correct. Darwin, for instance, refers to the 'barbarians of Tierra del Fuego' and to 'savages'. However, contrary to the prevailing view of the time, Darwin was opposed to slavery and a strong proponent of the view that all human races were of the same species, and had equal rights. In *The Descent of Man* he even wrote about the in group positive/outgroup negative way that humans treat other people (although he didn't use this phrase). This concept, which of course became very important in social psychology, is often attributed to later authors (e.g. William Graham Sumner in *Folkways* in 1906).

While many of the aspects that Darwin described have been superseded by more recent research, his interpretations were appropriate for the state of knowledge in the mid-19th century. His general principles have stood the test of time and provided a tremendous stimulus for subsequent research and discourse.

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