

## Frederick Toates

‘The turf wars in psychology have been as intellectually silly as they have been disastrous’

Frederick Toates takes Lance Workman through his 40-year career with the Open University, discussing the ‘wanting vs. liking’ distinction, the state of higher education, and much more

**We have at least one thing in common – we both did a DPhil at Sussex. What brought you to Sussex?**  
The late great Stuart Sutherland... a brilliant psychologist, the eccentric’s eccentric and the founder of the Department of Experimental Psychology at Sussex. I was keen on applying systems theory to psychology and I discovered, by reading an exchange between Stuart and Sir Cyril Burt, that he shared this vision. I wrote to him, visited the university and was offered a DPhil position studying motivation, under the supervision of Keith Oatley. Famous and infamous in equal measure, Sussex in the 1960s, sometimes called ‘Oxford-by-the-Sea’, was definitely *the* place to be! Amongst students, my contemporaries included Richard Morris, of Morris maze fame, Lorraine Tyler, Tony Dickinson and Graham Hitch, of Baddeley/Hitch working memory fame.

**I was at Sussex in the 1980s and recall the influence of both Sutherland and Oatley. You’re now Emeritus Professor of Biological Psychology at the Open University. You’ve always had one foot in psychology and one in biology. Why biological psychology?**  
Somewhat by accident, I guess. My MSc thesis was on vision, involving biology and psychology. I believe passionately in integration across discipline boundaries but in no sense to privilege biology over social psychology. The turf wars in psychology have been as intellectually silly as they have been disastrous, in my view. It is obvious that biology and social context dynamically interweave at all stages. To study one to the exclusion of the other makes as much sense as a chemist trying to understand the water molecule by looking only at hydrogen. Unfortunately, some of the critics of a biological perspective have an outdated view of the subject, stuck in such things as genetic determinism.

**Yet you have written a book about B.F. Skinner. Surely he waged a turf war?**

Sadly, yes he did, and we are all the poorer for it. However, I would say some things in his defence. First, his turf war needs to be viewed in the context of the time... it was largely a mirror image of that of his opposition. For example, cognitive psychology became so absorbed in the computer analogy that it largely ignored the issue of how behaviour is actually produced. Secondly, more than anyone else, Skinner saw the need to use psychology to improve the human condition. For example, way back in the 1940s he predicted the current environmental crisis. If we are to survive the current crisis, we need all the help that we can get. I am always surprised that some psychologists will accept as gospel Darwin’s *evolutionary* principle of natural selection by consequences but reject the same *learning* principle of selection by consequences advanced by Skinner. I still see Skinner described as a stimulus–response psychologist, a position from which he was at great pains to distance himself.

**You have been with the OU for almost 40 years. Did you feel at the time that you were involved in something new and different?**

I joined in 1978, so it was established by then. Yes – indeed, I did feel that the OU was a fantastic invention, and its worth has been proven beyond all doubt. When Skinner spent a day with us in 1987, he reminded us of his own role in supporting the idea of an OU.

**I know that your teaching extends widely. Could you tell me something about that?**

Apart from the United Kingdom, I have taught conventional undergraduates in France, Germany, the Netherlands, Sweden, Denmark, the USA, Moldova and Romania. These days, I am regular teaching guest at Buckinghamshire New University, as well as the Universities of Amsterdam, Bedfordshire and Northampton.



Photo by Jon Sutton at the Open University, Milton Keynes

**My understanding of your academic specialism would be along the lines of the roles of motivation, emotion and learning in controlling behaviour in ourselves and other species.**

Yes. I took ideas first expressed by the Indian-Canadian psychologist Dalbir Bindra on the role of incentive stimuli in arousing motivation. I was struggling to try to get ideas of homeostasis to work, which they clearly did but only up to a point. However, the theory could not cover a number of anomalous phenomena, whereas Bindra's ideas worked much better. I had an encounter at a conference at the University of Sussex in 1984 with a young American psychologist, Kent Berridge, now at the University of Michigan. This proved life-changing for me since Kent took on board my ideas and gave them some neural embodiment, largely in terms of the role of the neurotransmitter dopamine. The full fruits of this development appeared in 1993, with the publication of the classic paper by Kent and Terry Robinson on incentive salience and addiction. This has become one of the all-time most cited articles in biological psychology.

**Berridge and Robinson made use of your ideas to develop a motivation model that differentiates between wanting and liking.**

Yes. This team coined two new expressions that are now popular in psychology: 'incentive salience' and 'wanting vs. liking'. The latter term refers to the fact that wanting and liking, which often correlate, can get

seriously out of alignment. For example, people might crave drugs intensely without liking them to the same degree. The researchers showed that dopamine lies at the basis of wanting but not liking, whereas liking is mediated by opioids, amongst other substances. I have been staggered as to just how far these ideas have now illuminated a wide range of phenomena in psychology: amongst others, addiction, obesity, attention, depression, schizophrenia and autism. Berridge and Robinson have just been given the American Psychological Association 2016 award for excellence.

**Tell me about Systems 1 and 2.**

This distinction refers to two different types of process that coexist in the brain. I have integrated such theorising with incentive motivation theory. System 1 is old in evolutionary and developmental terms and largely driven by physically present stimuli. System 2 is new in these terms, a kind of add-on to System 1 and involves offline conscious reasoning. Sometimes they act in harmony and sometimes in opposition, the latter case in, for example, giving in to temptation, when System 1 is urging engagement and System 2 is offering restraint. This has echoes of Freud's id and superego and Skinner's reinforcement controlled and rule-governed processes.

**You have written a large number of books covering areas where biology and psychology overlap. Then around 25 years ago you wrote a book on OCD.**

**Would it be fair to describe you as an expert witness in this field?**

It would not only be fair but you might describe me as the world's number one expert witness! With apologies to Paul Salkovskis, let me explain my unique credentials. I have studied it from both the inside, as a sufferer, and outside, as a psychologist, rather as my mentor Stuart Sutherland did with depression in his book *Breakdown*. My book, published the same week as *The Boy who Couldn't Stop Washing*, was, I believe, one of the two first on the subject and the only one written wearing two hats.

There is so much more knowledge now in the public domain on OCD. Then there was nothing. I got loads of mail from people in various countries saying, 'Thank God. I thought that I was alone.' Hans Eysenck wrote the foreword to my book. He told me: 'I agree with everything that you have written except where you said that you liked Skinner's autobiography. I found it the most boring book that I have ever read. Why should I be interested in his experiences in a French brothel?'

**Talking of which, recently you published a book on sex – *How Sexual Desire Works: The Enigmatic Urge*, which won the Association of American Publishers Book of the Year Award in the category 'Psychology'.** It applies incentive motivation theory to sexual desire, showing how this can illuminate a number of desire-related phenomena, such as the role of hormones, fantasy, fetishes, wanting vs. liking, sexual addiction, interactions with drugs and attachment, as well as sexual violence. The neurochemical dopamine has an important place in the book, translating the work of my American colleagues into the area of sexual desire.

One reviewer really took exception to it, adopting an extreme social constructionist perspective, logically an absurd position. Book authors be warned – reviewers can say what they want with total impunity and no right of reply.

**You've been involved in the Open University Psychology Society (OUPS) for over 32 years now and recently became its President.**

Yes, a great honour. I was chosen for that role following the death of our previous president, Lilli Hvingtoft-Foster, at almost 100 years of age, a founding member and formidable champion of OU psychology. OUPS was set up by OU psychology students, amongst them Lilli, for OU psychology students. Study can be a lonely experience for these students, and our society provides both national and regional events. Some events are course-related (e.g. revision days) and others are of general appeal, some are local pub-meets. Each year we hold a national conference at the University of Warwick. In addition, we run two Facebook sites where students can 'socialise' and get updates of events, et cetera. Lilli persuaded a number of notable speakers to come to

address us, including B.F. Skinner, Hans Eysenck, Robert Ressler (founder of the FBI Behavioural Sciences Unit) and Noam Chomsky.

**You are well published and very well regarded in your field. Can you now rest on your laurels, or are there any ambitions you still want to pursue?**

This sounds like a polite way of asking whether I am ready to move to the after-life! I simply cannot imagine a life without work, the OU and psychology. Golf and pruning roses are not for me. My wife and I are writing a book on sexual violence, a very odd choice for me, since it requires the nerves of steel that I do not possess. However, incentive motivation theory can, I believe, strongly illuminate it.

**I'm sure you will contribute for many years yet! I'm wondering, when you reflect upon the current situation in UK universities and that of when you started your university career, how do you feel?**

Frankly, depressed, shocked and angry. Successive governments have tried to turn universities into factories and I see no logic for doing this. How on earth did this country manage to produce Newton, Darwin, Bowlby, Broadbent, Bartlett, Sutherland, Baddeley, Gregory, Gray etc. without teams of accountants and spreadsheets? Of all people, psychologists should be in the vanguard of the opposition to such trends in education. We know about the toxic effects of excessive competition. We know that when something is intrinsically rewarding (in this case, discovery and scholarship), introducing extrinsic rewards, such as performance measures, targeted funding and citation counts can devalue the intrinsic reward. Also every hour spent ticking boxes is an hour less to spend with students. How can we possibly quantify what is teaching and what is research? If I spend an hour reading *The Psychologist*, is that teaching or research? It could well be both.

**So what do you think of measures of publication output in terms of counting articles, ranking impact?**

Nonsensical, though I take pleasure in small doses of getting such feedback, as in my role in the Robinson/Berridge classic! There is now so much repetition but you need to read it all to detect this. I see more errors in papers than ever before and not just typographical errors. Recently, I turned up a graph showing an experimental result and could not locate its source. So, I e-mailed a copy of the graph to its most likely source saying that I wanted to cite it. He told me that he was sorry but he had not a clue where the graph was from. Later, I was able to locate the graph in a paper from this same author.

Surely, this is evidence of pressurised authors. No one can keep up with all this. If we lived in a rational world, we would persuade academics to consider publishing fewer rather than more papers. Then we might have time to reflect on what is there already.

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