

# Swearing – the language of life and death

Richard Stephens leads us through a colourful research journey

**Liverpool FC manager Bill Shankly once said, 'Some people believe football is a matter of life and death, I am very disappointed with that attitude. I can assure you it is much, much more important than that.' The same could be said for swearing and taboo language, as this article explains. Swearing is a relatively new focus for psychology research but an apt one. From swearing in pain to swearing in foreign tongues, and several points in between, a number of investigators have begun to rise to the challenge of striving to understand the emotional power undoubtedly contained within some of the shortest of utterances in the lexicon. Here, then, is a brief introduction.**

In 2004 my second daughter was born and, aspiring to be a modern dad, I stayed with and supported my wife through the labour. After a while it became clear that things were not going according to plan. This was mainly because our daughter was trying, unsuccessfully, to come out feet first. What followed was a very long and difficult labour for my wife, and towards the end her pain was such that she swore out loud. Indeed, she produced a rather impressive selection of expletives during each wave of agonising contractions. But as the contractions passed and the pain subsided, she became embarrassed and apologetic over having let fly in front of the nurses, midwives and doctors, only to redouble her efforts when the next wave of contractions struck. The staff, however, had clearly seen all of this before. A midwife explained to us that swearing, four-letter words, cursing, profanity, bad language – whatever you care to call it – is a completely normal and routine part of the process of giving birth. Amid the joy at the arrival of our healthy daughter and the mental disorientation of a very difficult and emotional day, I found this fascinating.

When I eventually returned to my desk at Keele University School of Psychology I wondered why it was that people swear in response to pain. Was it a coping mechanism, an outlet for frustration, or what? I did some literature searching to find out what psychologists thought of the link between swearing and pain. To my surprise I could not find anything written on this topic, although there were some

papers on the psychology of swearing more generally. Professor Timothy Jay of Massachusetts College of Liberal Arts in the States, whom I have since had the pleasure of meeting, has forged a career investigating why people swear and has written several books on the topic. His main thesis is that swearing is not, as is often argued, a sign of low intelligence and inarticulateness, but rather that swearing is emotional language. In his words: 'Curse words do things to sentences that noncurse words cannot do' (Jay, 1999, p.137). Indeed, Professor Jay is rather scathing at psycholinguists' tendency to have largely ignored swearing. He says: 'Linguistic definitions of language [that omit cursing] are ultimately invalid, although polite' (Jay, 1999, p.11).

I spoke with colleagues. Two psychological explanations of why people might swear when in pain were put forward. The 'disinhibition' explanation was the idea that in the momentary stress of acute pain we enter a state of social disinhibition (a diminished concern for social propriety) and reduced self-control so that words and ideas that we would usually suppress are expressed. The other explanation was that swearing in response to pain represents 'pain catastrophising' behaviour. Pain catastrophising is an exaggerated negative 'mental-set' brought to bear during pain experience (Sullivan et al., 2001). Catastrophic thinking exaggerates the level of threat posed by a painful event and heightens the pain intensity experienced. While there was some plausibility to the idea of swearing being an expression of pain catastrophising, it also seemed illogical. Swearing as catastrophising would serve to increase feelings of hurt and discomfort, whereas most people seek to reduce the pain they are feeling.

## Our research

Over the next few years my students and I worked up a laboratory procedure for assessing swearing as a response to pain. We used the ice-water challenge (or more

### questions

Is swearing essential, or a bad habit best kicked?

Could you live without it?

### resources

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formally, the cold pressor paradigm) to provide a stimulus that is painful but not harmful. Participants are asked to hold their hand in ice water for as long as they can tolerate, to a maximum of five minutes. While doing this we needed them to swear and we thought it important that they used swear words of their own choosing. Initially we had them read a passage of text and they filled in blanks with either swear words or neutral words (Stephens & Clatworthy, 2006). Later on we just asked them to provide a swear word they might use if they banged their head or hit their thumb with a hammer, and then we asked them to repeat that during the cold water immersion. The words most popularly chosen were, as you would expect, 'fuck' and 'shit'.

In our first published paper (Stephens et al., 2009) we showed that people withstood the ice-water challenge for longer, rated it as less painful, and showed a greater increase in heart rate when repeating a swear word throughout the procedure, as opposed to repeating a neutral word. We theorised, based on the rise in heart rate with swearing, that participants were experiencing an emotional reaction to swearing, setting off the fight or flight response, in turn producing stress-induced analgesia.

Next, we replicated the findings for cold-water immersion time and heart rate, but additionally showed that the reduction in pain from swearing was moderated by daily swearing frequency (Stephens & Umland, 2011). Let me explain this point further. In this second study we asked

people to estimate how often they swear in everyday life. The responses we got ranged from zero to 60 swear words per day. Interestingly, the higher the daily swearing frequency the less was the benefit for pain tolerance when swearing, compared with not swearing. This suggests that people become habituated to swearing so that it has a lesser impact the more you do it. On the strength of these findings, sensible advice is not to swear overmuch in everyday situations, so that the impact of swearing can be at its fullest when needed most!

We then aimed to investigate how an emotional response can lead to increased pain tolerance (Stephens & Allsop, 2012). We began with the assumption that the emotion that speakers feel when they swear is aggression. Then we assessed whether increasing state aggression alters the experience of pain. In this study we had participants play a first person shooter video game which led to them reporting feeling more aggressive compared with the control condition of playing a golf video game. We went on to show that participants withstood the ice-water challenge for longer and their heart rate remained elevated after playing the first person shooter game compared with the golf game. This is consistent with our theory that swearing acts on pain perception via the emotion aggression.

So, our research shows that swearing can help people better tolerate pain, that too much swearing in everyday situations can reduce its effectiveness, and that swearing probably works by making people feel more aggressive, in turn setting off the fight or flight response. Swearing as a response to pain appears not to be an expression of pain catastrophising, because if it were, there should have been a heightened sensation of pain with swearing. The idea of swearing in response to pain as disinhibitory behaviour also seems unlikely as this predicts no alteration in pain perception, contrary to our findings. Our research instead indicates that swearing as a response to pain represents a form of pain management. While this had never been empirically demonstrated before, it seems nevertheless to have been well known anecdotally by nurses, midwives and mothers-to-be.

The media reaction to our research was unbelievable. When the first paper was published in late July 2009 my phone rang off its hook as journalists from all over the world sought to arrange interviews: with Evan Davis on *The Today Programme*, with Arthur Smith for *The One Show* and with Stephen Fry and Brian Blessed for *Stephen Fry's Planet Word*.



**Swearing, four-letter words, cursing, profanity, bad language – whatever you care to call it – is a completely normal and routine part of the process of giving birth**

*Does swearing have an analgesic effect?*

Poster presentation at the British Psychological Society Psychobiology Section annual conference, 18–20 September 2006, Windermere.

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Actually, on reflection, we were probably quite lucky in the timing of our research on swearing and pain. Maybe a few years earlier and it would still have been too much of a taboo topic to secure peer review publication. This is not so today. Indeed, it really does appear that 'now' is the time for researching the psychology of swearing, as demonstrated by the recent publication of a number of fascinating studies.

### Recent swearing research

In 2010 Jean-Marc Deweale of Birkbeck, University of London, published the entertainingly titled paper "Christ fucking shit merde!" Language preferences for swearing among maximally proficient multilinguals' (Deweale, 2010). The paper describes an online survey of 396 multilingual adults who, uniquely, can choose what language to swear in. Where preferences for swearing in a second language were observed it was for languages used socially and frequently. But, interestingly, they overwhelmingly opt usually to swear in their first (native) language rather than languages acquired later on. This was despite similar levels of self-perceived proficiency and frequency of use of the acquired language. It appears the emotional resonance of swearing is felt to be greater in the native language.

Also in 2010, John Ringman and colleagues at the University College of Los Angeles Easton Center for Alzheimer's Disease Research produced a paper looking at whether swearing can help diagnose dementia (Ringman et al., 2010). In it they describe noticing something unusual during their dementia screening clinics. There is a neuropsychological test known colloquially as the 'FAS test' (and more formally as the Controlled Oral Word Association Test). It requires participants to generate as many words as they can in one minute beginning with each of the letters F, A and S. One patient believed to have fronto-temporal dementia produced only two words in the 'F' section of the test: 'fuck' and 'fart'. Given that it was still not possible to diagnose specific dementias until autopsy, the researchers wondered whether a tendency for dementia patients to produce swear words on this task might help.

Looking back over archived data they found that a number of fronto-temporal dementia patients produced the word 'fuck' but no Alzheimer's patients did. This, they said, indicates that the production of the

word 'fuck' is 'pathognomonic' for fronto-temporal dementia ('pathognomonic' means 'characteristic for a particular disease'). However, they acknowledge that a diagnostic tool based on this phenomenon would have limited sensitivity, since over 80 per cent of the fronto-temporal dementia patients did *not* produce any swear words. Swearing in this context seems to reflect disinhibition arising from the frontal-lobe impairment that is characteristic of fronto-temporal dementia. Overall, this paper presents an interesting phenomenon, but it concludes that swearing can only assist with diagnosing dementia to a very limited extent.

In the same year, Teresa Stone of the School of Nursing and Midwifery in Australia's University of Newcastle produced a paper examining verbal aggression, including swearing, within healthcare settings in Australia. Stone et al. (2010) surveyed 39 male and 68 female nurses across paediatric, adult mental health, and child and adolescent mental health departments. One third of the nurses reported being sworn at by patients at least weekly, and this did not differ according to specialism. The swear words perceived as most offensive were: 'cunt', 'cocksucker' and 'motherfucker'. These papers highlight a hitherto uninvestigated but serious problem in healthcare. Aggressive swearing at nurses causes distress and the nurses interviewed had few effective strategies to deal with it.

Other researchers, at Bristol University, assessed changes in autonomic activity brought on by reading aloud swear words (Bowers & Pleydell-Pearce, 2011). Their main interest lay in the theoretical area of linguistic relativity, which is the idea that how we think is influenced by the form

of language that we use.

An example of this is the word 'friend'. English speakers can speak of a friend without having to consider gender. However, Spanish speakers must consider the gender of the person concerned because the

Spanish words for friend are *amiga* (for a woman) and *amigo* (for a man). According to the theory of linguistic relativity, speakers of English and Spanish would have different conceptualisations of the idea of a friend. They examined emotional responsiveness to two different forms of words that nevertheless carry the same overall meaning. They used a very offensive swear word ('cunt') and a euphemism ('C-word') that captures the semantics of the word while being expressed in a different verbal form. They

also used 'fuck' and 'F-word'. Unsurprisingly they found that participants exhibited greater autonomic arousal, indicating stress, when they read aloud the swear words compared with the euphemistic forms. This, they argue, provides evidence for linguistic relativity, since the same concepts appeared to be processed differently according to the form of language employed. They also argued that swear words may access emotional centres of the brain without mediation by higher-level cognitive systems. This is an intriguing idea as it provides a neurological basis to the argument that swearing is emotional language.

Finally, we have a paper from Megan Robbins and colleagues at the University of Arizona Psychology Department (Robbins et al., 2011). The study was concerned with the implications of swearing for coping with and adjusting to illness among women with rheumatoid arthritis and breast cancer. They used what they called the Electronically Activated Recorder (EAR), a device that sampled recordings of what participants were saying for 50 seconds every 18 minutes throughout the waking day. Swearing made up 0.1 per cent of the participants overall speech, and was related to increased levels of depressive symptoms and reduced emotional support. Of course, these findings are correlational and one cannot determine whether swearing was a precursor or a consequence of the increase in depressive symptoms and the decrease in emotional support. Nevertheless, they indicate that how and when people choose to swear may have negative consequences as well as positive.

### Future directions

Despite a flurry of activity in recent years, research on the psychological effects of swearing is still in its infancy. Our research at Keele suggests that daily swearing frequency affects how much power swearing has – and that the power lessens with increasing amounts of everyday swearing. This raises interesting issues around how long the effects of swearing last. Our research and that of Bowers shows there is a physiological response to swearing, in terms of faster heart rate and increased skin conductivity. The phenomenon of swearing would be better understood if it were known for what timescale these physiological changes in response to swearing persist and how long it takes to recover them once they have become depleted. Research to answer this question is ongoing in my laboratory at Keele.

There are numerous other pressing

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A coping mechanism, an outlet for frustration, or what?

questions. We have shown that swearing can ease the acute pain of the ice-water challenge. What about clinical pain? It would not make sense to suggest swearing as a clinical tool, but it might be sound clinical management advice for anyone unable to access medical care because they are in a remote location, or even awaiting

an ambulance, to swear as a means of obtaining short-term relief until medical intervention is possible. There are interesting questions around the emotional effects of swearing. It seems likely that swearing may help people not only express their emotions but also experience them more vividly – as predicted by the principle of linguistic relativity that I mentioned earlier. It is certainly true that people swear in positive as well as negative emotional contexts. A good example of this was when windsurfer Bryony Shaw spontaneously expressed her

euphoria on live daytime TV having just won Olympic Bronze, proclaiming 'I'm so fucking happy!' ('Bryony Shaw prompts BBC apology', 2008).

At first blush swearing may seem a frivolous research topic for a psychologist to pursue. But if one considers that psychology is the study of people, and if

one agrees that people are emotional beings (more Captain Kirk than Mr Spock), then understanding swearing, as the language of emotion, can improve our understanding of people. In his book the comedian Richard Dooling makes an excellent point when he says that the four-letter words are 'inextricably bound up with almost everything' (Dooling, 1996). When I give research talks I usually end with a slide containing transcripts of the final utterances of air-crash pilots, captured on the black box flight recorder, taken from [www.planecrashinfo.com/lastwords](http://www.planecrashinfo.com/lastwords). I use it to emphasise an important point: that swearing is the language of life and death. This surely explains the great interest in how and why people swear, and I join with others (Jay & Janschewitz, 2011) in calling out for more research on the psychology of swearing.



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