

'Never been proven to work in the real world': appeals to the notion of 'the real world' as a discursive strategy in vaccine-critical discourse

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A growing area of interest is the study of health-related discourse in online discussion forums. Such studies can be divided into those whose concern is risk talk online (e.g. Richardson, 2001; 2003) and those interested in online patient peer-support groups (e.g. Hunt and Harvey, 2015; Seale, 2006; Seale *et al.*, 2010). This paper aims to contribute to the body of knowledge in these related fields. The paper presents a corpus-driven study of the uses of the expression (*in the*) *real world* in the five million word JABSforum corpus, a corpus comprising 3,272 forum threads gathered between 2005 and 2010 from the discussion forum of the JABS (Justice, Awareness and Basic Support) group website. The JABSforum corpus comprises what can be termed 'vaccine-critical' discourse, 'vaccine-critical' being the term used to describe organised groups which campaign either against vaccination in general or for reform to government vaccination policy (Hobson-West, 2005; 2007). The JABS forum shares some features of the risk-talk forums described by Richardson (2001; 2003) and some aspects of patient peer-support forums, in that it serves as a place where parents can seek advice but is also a locus for organised resistance to vaccination policy.

The decision to look at the string (*in the*) *real world* arose from the observation that, with 65 citations, *in the real world* is among the more frequently occurring, linguistically meaningful, four-word N-grams in the JABSforum corpus. The adjective *real* is interesting. Tognini-Bonelli (1993:194-195) observes that *real* can serve a 'focussing' or a 'selective' function. When fulfilling a focussing function, *real* merely intensifies the noun (as in *real difficulties*). But when fulfilling a selective function, it is evaluative and encodes 'inferential meaning', that is, the choice of *real* + noun triggers the presupposition of the existence of another element which makes up a contrasting set and encodes an implicit negative evaluation of the latter (*ibid.*). The use of the adjective *real* is particularly interesting in the context of vaccine-critical discourse, in which appeals to the authority of the lived experience of parents are often used as a means for resisting mainstream medical-scientific opinion (Hobson-West, 2005).

The study reported here uses WordSmith 7.0 (Scott, 2016) to analyse JABSforum concordance data, although the starting point for the study was perusal of a list of 4-word N-grams from the JABSforum corpus calculated using AntConc 3.4.4 (Anthony, 2016). In order to establish the norms of use of (*in the*) *real world* in internet-based discourse, ukWaC is consulted, accessed by means of Sketch Engine (Kilgarriff et al., 2014). The relative frequencies per million words (pmw) of *real world* and *in the real world* in ukWaC and JABSforum are compared. A word sketch of *real world* is drawn up using Sketch Engine's word sketch function in order to describe the typical uses of (*in the*) *real world*. LogDice is used as the measure of statistical significance. Finally, concordance evidence for (*in the*) *real world* in the JABSforum corpus is examined, using WordSmith Tools and the cluster program is used to identify frequent expressions. Frequency of recurrent strings in JABSforum is

expressed using raw frequency alone since WordSmith's cluster program does not calculate statistical significance. In the discussion which follows, frequency information and collocational significance scores (where available) are shown in angle brackets. Examples of word forms are shown in lower case, lemmas in upper case.

A comparison of the relative frequencies of *real world* and *in the real world* in the JABSforum and ukWaC corpora reveals markedly frequent use of these expressions in the JABSforum corpus. The relative frequency of *real world* in JABSforum <19.75 pmw> is noticeably higher than in ukWaC <8.10 pmw> and that of *in the real world* even more so <13.65 pmw in JABSforum compared with 2.60 in ukWaC>. Concordance evidence from ukWaC shows that, in the expression *real world*, *real* fulfils a selective function. The implied contrast is with an imagined world. However, the nature of the evaluation implied varies according to the context in which *real world* is used. A Sketch Engine word sketch of *real world* in ukWaC shows that the expression typically occurs as part of a prepositional phrase. The most frequently occurring strings are *LIVE in the real world* <256; 3.72>, *HAPPEN in the real world* <91; 3.40>, *WORK in the real world* <88; 0.72>, *EXIST in the real world* <80; 3.34>, *experience of the real world* <35; 0.08>, *out of touch with the real world* <34; 3.07>, *RETURN to the real world* <30; 1.51>, *OBJECT in the real world* <28; 1.57>, *OPERATE in the real world* <27; 1.44> and *APPLY in the real world* <27; 0.97>. Expressions such as *WORK/OPERATE/APPLY in the real world* and *object(s) in the real world* are typically used in contexts in which the implied contrasting element is the world of (social) scientific ideas or theory. However, the world of theory is not usually evaluated negatively, except insofar as an idea is deemed worthy only if it is successfully applied in a real world context, as the following examples illustrate:

- (1) ... hopes of producing *an eco-friendly car that works in the real world*.
- (2) Judges looked for creative and *unique business ideas that could be applied in the real world*.
- (3) Mandelbrot describes *the use of fractal mathematics to understand objects in the real world*.

In contrast, expressions such as *LIVE in the real world*, *out of touch with the real world*, and so on, are typically used to express a negative evaluation of a person or group of people by implying that their ideas or beliefs about the world are unrealistic. For example:

- (4) They want their Government to *live in the real world* not a fantasy world.
- (5) This is further evidence of how *totally out of touch with the real world* our politicians are.
- (6) Many of us feel this plan is the product of ivory tower bureaucrats and is *1000 miles removed from the real world*.

In the JABSforum corpus, the expression *real world* most frequently occurs in the strings *work(s) in the real world* <13 occurrences>, *proven in the real world* <6>, *go/get (out) into the real world* <6> and *live/living in the real world* <3>. Expressions involving (*in the*) *real world* are frequently used to express a negative

evaluation of the safety or efficacy of particular vaccines or of the robustness of the science behind them. Such claims are used by forum interactants to challenge the arguments of their interlocutors or of the medical-scientific community, as the following examples illustrate:

- (7) ... show me the real science that Cervarix *actually works in the real world* rather than just believing the corporate marketing hype that sells this vaccine.
- (8) At least green tea extract has been *proven in the real world* to both prevent and treat cervical cancer unlike Cervarix.
- (9) Where is the statistical analysis of safety and side effects *in the real world* for combined dosing of vaccines?

Elsewhere, expressions such as *go/get out into the real world* and *live/living in the real world*, and so on, are used in order to express a negative evaluation of medical-scientific practitioners or other authorities:

- (10) Why don't they *get out into the real world* and see what the real childhood health problems are?
- (11) They don't *live in the real world* but in world of PR and PC that is all networked to common purpose.
- (12) Anyone reading this article should try navigating the depths of the Department of Health's website [...] Out here *in the real world* of real parents, real teachers and real children we now all know at least one family with an autistic child.

In Example 12, above, it is interesting to note the way in which the lived experience of 'real' parents, teachers and children is evaluated positively in contrast with the claims of the Department of Health.

In conclusion, JABS forum interactants use appeals to the 'real world' in order to challenge arguments they encounter or to express a negative evaluation of the medical-scientific authorities. What is particularly interesting about the relatively high frequency in the JABSforum data of appeals to the 'real world' is that it reflects previous observations that appeals to the lived experience of parents is privileged in vaccine-critical discourse. Use of (*in the*) *real world* constitutes one of a number of rhetorical strategies used to resist vaccination policy.

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