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'THE MYTHOLOGICAL MARAUDING VIOLENT SCHIZOPHRENIC': USING THE WORD SKETCH TOOL TO EXAMINE REPRESENTATIONS OF SCHIZOPHRENIC PEOPLE AS VIOLENT IN THE BRITISH PRESS

JAMES BALFOUR

LANCASTER UNIVERSITY

ABSTRACT

Combining theories and methods from Corpus Linguistics and Critical Discourse Analysis, this article uses Sketch Engine's word sketch tool to examine how the British press manipulate language to represent schizophrenic people as dangerous in a 15-million-word corpus of British national newspaper articles published between 2000 and 2015. Focussing on collocates of the lexeme SCHIZOPHRENIC (n.), the analysis revealed that while modifiers explicitly characterising schizophrenic people as dangerous are infrequent, several discursive strategies operating cumulatively across multiple texts suggest that the lexeme has an implicit semantic prosody of "dangerousness" in the British press. First, SCHIZOPHRENIC exhibits a semantic preference for violent actions when in subject position, indicating that schizophrenic people as individuals are represented unusually frequently as engaging in violent behaviour. Second, there is evidence of a tendency to semi-instrumentalise schizophrenic people in terms of dangerous weapons. Third, modifiers of SCHIZOPHRENIC occur as part of lay-diagnoses, solely based on evidence of violent behaviour. Finally, SCHIZOPHRENIC is sometimes grammatically co-ordinated with other social groups perceived as dangerous. The article concludes by arguing that, while the label SCHIZOPHRENIC (n.) is problematic owing to its semantic prosody, charities and medical professionals should work towards challenging widespread misconceptions revealed in this study, rather than discouraging use of the label.

CONTACT

James Balfour, ESRC Centre for Corpus Approaches to Social Science (CASS), Department of Linguistics and English Language, FASS Building, Lancaster University, Lancaster, Lancashire. LA1 4YW. j.balfour@lancaster.ac.uk

ORCID

0000-0002-4176-6403

'The mythological marauding violent schizophrenic': using the word sketch tool to examine representations of schizophrenic people as violent in the British press

James Balfour
Lancaster University

1. Introduction

Schizophrenia spectrum disorders are characterised by symptoms such as delusions, hallucinations and disorganised thinking (American Psychiatric Association, 2013, p. 89). Delusions refer to 'fixed beliefs that are not amenable to change in light of conflicting evidence' while hallucinations refer to where individuals have 'perception-like experiences that occur without an external stimulus', which 'are vivid and clear, with the full force and impact of normal perceptions, and not under voluntary control' (American Psychiatric Association, 2013, p. 89). Other challenges faced by people diagnosed with schizophrenia include widespread stigma towards the disorder (Dickerson *et al.*, 2002). Individuals who internalise stigma are more likely to have low self-esteem (Wahl, 1999, Karakaş *et al*, 2016), be poorer (Link *et al.*, 1987) and less likely to seek out medical treatment (Harrison and Gill, 2010; Sirey *et al.*, 2001).

One of the ways this stigma manifests is through misinformed representations of schizophrenia in the media. Research has shown that the British national press typically represents people with schizophrenia as violent criminals (e.g. Schizophrenia Commission Report, 2012; Clement & Foster, 2008; Chopra & Doody, 2007). Unlike other mental disorders, representations of schizophrenia in the media are getting more negative over time. Goulden *et al.* (2011) found that, while representations in the British press of anxiety and attention deficit hyperactivity disorder (ADHD) are becoming more positive over time, representations of people with schizophrenia remain misinformed and stigmatising. These misinformed representations in the press have been shown to shape public attitudes. Angermeyer *et al.* (2005) found that routine readers of tabloids tended to desire greater social distance from people with schizophrenia than the general population. They suggested that, as members of the public are unlikely to have first-hand experiences of people with schizophrenia, they obtain most of their information about schizophrenia from the media, which reproduces negative misconceptions.

Recent studies published in psychiatry and health journals have, in particular, criticised the press' exaggerated link between people with schizophrenia and violent crime. In their metanalysis of 20 studies reporting on the risk of people with schizophrenia and other psychoses committing violent crimes, Fazel *et al.* (2009a) showed that, while there was an increased risk of people diagnosed with schizophrenia committing homicides, this was largely mediated by substance abuse, and that the risk posed by people with schizo-

phrenia who abused substances was similar to the risk posed by people who abuse sub-stances without the diagnosis. A later study (Fazel *et al.* 2009b, p. 2021), which factored in substance abuse, concluded that 'the association between schizophrenia and violent crime is minimal unless the patient is also diagnosed as having a substance abuse comorbidity'. On the contrary, Brekke *et al.* (2001) and Teplin *et al.* (2005) showed that people with schizophrenia are more likely to be the victims of violent crimes than arrested as a per-petrator.

The exaggerated link between schizophrenia and violence may be a self-fulfilling prophecy. People with schizophrenia who internalise stigmatising beliefs are more likely to have self-esteem issues and are less likely to seek professional medical help (Harrison & Gill, 2010). This increases the frequency and intensity of psychotic symptoms (Goldstone *et al.* 2012, p. 1369) and the likelihood that people with paranoid schizophrenia will com-ply with command hallucinations, which increases the risk of them perpetrating violent crimes (Barrowcliff & Haddock, 2006). Given estimates that roughly 1% of the U.K. pop-ulation experience symptoms of schizophrenia at some point in their lives (Frith & John-stone, 2003, p. 1), the potential harm caused is significant.

To date, no research has seriously explored the role of language in how the press mis-represents people with schizophrenia as violent and dangerous. That is not to say that some scholars have not suggested language as an area of interest. Goulden *et al.* (2011), for instance, acknowledged that the press rarely use language that explicitly stigmatises mentally ill people, suggesting that press instead manipulate language to convey implicit meanings. Both Goulden *et al.* (2011) and Kalucy *et al.* (2011, p. 546) also suggest that it is the manner in which mental illnesses are reported on which is problematic, rather than over-reporting. The reliance on more subtle ways of representing schizophrenic people as violent may be an attempt to avoid openly violating rules put forward by the Inde-pendent Press Standard Organisation (IPSO), which dictates that the press cannot dis-criminate openly discriminate against social groups or publish inaccuracies or misleading information.[1]

Sketch Engine's word sketch tool (introduced in Section 2. below) requires that the search query is a lexeme rather than a word form. Lexemes, represented using capital let-ters, consist of all the grammatical variants of a word, whereas individual word forms are represented using italics. Thus, the lexeme SCHIZOPHRENIC (n.) captures the word forms *schizophrenic, schizophrenics, schizophrenic's* and *schizophrenics'*. This study focuses on the lex-eme SCHIZOPHRENIC (n.) over related lexemes because it directly refers to an identity, as opposed to, for instance, the abstract diagnosis SCHIZOPHRENIC (n.), or the label SCHIZOPHRENIC (adj.) that Magliano *et al.* (2010) have shown is also used metaphorically. That said, use of the noun SCHIZOPHRENIC, as opposed to multi-word labels such as *person*

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1   https://www.ipso.co.uk/editors-code-of-practice/

with schizophrenia, has been discouraged by charities for being reductionist.[2] However, these criticisms disregard its well-meaning origins. Introduced by Bleuler, ([1911] 1950, p. 7), the new identifying form was assumed to surpass the constraints of the traditional nomenclature (i.e. schizophrenia), which 'only designates the disease, not the diseased'. Likewise, Laing (1960, p. 34) argued that 'no one *has* schizophrenia, like having a cold […] The patient has not 'got' schizophrenia. He is schizophrenic'. These arguments should be taken seriously, despite running counter to the tendency in discourse analysis to criticise reductionist labels (cf. Baker's (2005, p. 22) critique of *gay* as a noun). Indeed, people with schizophrenia have been shown to differ in the extent to which they feel their diagnosis forms a main part of their identity, suggesting that different people may choose to identify with different labels (Tucker, 2009).

2.   Theoretical and methodological considerations

The study aligns itself with the field of Corpus-Assisted Discourse Analysis, which 'adopts and adapts concepts, constructs and metrics developed within Corpus Linguistics to achieve aims compatible with those of CDA' (Baker *et al.*, 2013, p. 258). Critical Discourse Analysis (CDA) is a field comprising theories and methods that allow for the critical study of language as an instrument of power and domination. For instance van Leeuwen's (2008) theory of Social Actor Representation provides a framework for examining the implications behind different ways in which social actors can be represented in texts.

Corpus Linguistics (CL) refers to a set of methods used to mine large machine-readable datasets for language patterns using statistical calculations. While corpus linguists are informed by various theories about language, for instance traditional grammatical approaches (e.g. Quirk *et al.*, 1985, Biber *et al.*, 1999) and more recently Construction Grammar (e.g. Yoon & Gries, 2016), this study draws primarily on Sinclair's (1991) Lexical Grammar. This approach rejects traditional distinctions between lexis and grammar, suggesting that the structure of language is largely idiomatic (ibid.) and composed of multi-word units. These extended units of meaning are formed by four processes: collocation and colligation, and semantic preference and semantic prosody. Collocation refers to the process where a word occurs unusually frequently within the linguistic environment of another, while colligation refers to the co-occurrence of a word with a particular word class (Hoey, 1997, p. 8). While collocation and colligation refer to observable textual patterns, semantic preference and semantic prosody refer to semantic relationships between words. Semantic preference refers to the co-occurrence of a word with a particular semantic field (Sinclair, 1998), while semantic prosody refers to the co-occurrence of

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a word with collocates of a typically positive or negative polarity, which imbue the node with certain evaluative colouring (Louw, 1993). Sinclair (1998) has suggested that semantic prosody extends beyond positive-negative polarity to include more specific semantic categories which reflect the word's pragmatic meaning in a particular context. For instance, Sinclair (1998, p. 20) suggests that the word *budge*, by virtue of its semantic preference for words referring inability, has a semantic prosody of "difficulty".

By using CL methods, I circumvent the limitations of previous studies examining the representation of mental illness in the media. For instance, using CL methods allows the analyst to examine patterns in large representative datasets thereby helping to avoid 'cherry-picking' texts that agree with a priori biases (Mautner, 2009, p. 34). Previous studies examining representations of people with mental illnesses in the press have tended to focus on a small set of articles taken from a narrow set of newspapers or a specific year (e.g. Goulden *et al.*, 2011; Kalucy *et al.*, 2011; Kenez *et al.*, 2015). Others curiously exclude articles that are not 'hard news', for instance those that appear in entertainment, advertising or business sections of newspapers (e.g. Kenez *et al.*, 2015; Paterson, 2007). These studies thus use datasets that are unlikely to be representative of the press' reporting of people with mental illnesses as a whole. By contrast, the corpus used for the present study accounts for all articles published in the British press between 2000 and 2016 that explicitly refer to schizophrenia. Another way that CL methods help reduce cognitive bias is that it enables the analyst to take a data-driven approach, where the analysis is guided by the patterns identified via computer tools rather than their own interests. This is conducive to making 'serendipitous discoveries' that differ from or even challenge a priori biases (Partington *et al.*, 2013, p. 9).

The study uses a corpus constructed for a larger project, which examines more comprehensively representations of people with schizophrenia in the British national press.[3] Articles were obtained from the online newspaper archive LexisNexis. The search query 'schiz*' identified all articles published between 2000-01-01 and 2015-12-31 which contained one or more words beginning with the character sequence *schiz*. The search query needed to be more specific, however, as irrelevant words beginning with the same sequence of characters were being captured. Hence, as each year of the dataset was being compiled, a concordance search was used to identify irrelevant words also beginning with *schiz*, which, in subsequent queries, were placed after the Boolean operator 'NOT'. The time span of the corpus was motivated by methodological principles as well as practical considerations. On the one hand, a larger dataset is more representative of the British press reportage, especially as related studies have only looked at data spanning less than

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3   The findings reported here are part of a larger project examining how people with schizophrenia are represented using language in the British press between 2000 and 2015, which was funded by the Faculty of Arts and Social Sciences (FASS), which is affiliated with the CASS (Corpus Approaches to Social Science) centre at Lancaster University.

five years (e.g. Goulden *et al.*, 2011; Kalucy *et al.*, 2011; Kenez *et al.*, 2015). On the other, national press articles on LexisNexis are patchy prior to 2000, which would potentially threaten the representativeness of the subcorpora prior to that year. The corpus was finally subject to a cleaning process where duplicated texts, for instance, identical copies in both print and online editions, were removed. The resulting corpus contains 16,466 unique articles, and a total of 15,134,066 tokens.

For the analysis, I used the Sketch Engine's 'word sketch' tool (Kilgarriff *et al.*, 2014), which has previously been utilised successfully to carry out CDA research (e.g. Jaworska & Kinloch, 2017; Baker *et al.*, 2013). Once the corpus had been tagged for parts-of-speech using the TreeTagger tool (Schmid, 1994), Sketch Engine identifies collocates of a lexeme, and groups them according to their grammatical relationship with the node. For this analysis, I only considered the top 25 collocates listed for each frame in descending order of their logDice score, and each collocate had to co-occur at least four times. While the logDice score can range from 0 to 14, where 14 denotes the highest association strength, Rychly (2008) suggests it is unlikely to exceed 10. While some of the individual collocates under consideration are weak and infrequent, the analysis suggests that these collocates occur as part of broader discursive strategies that are seemingly more frequent.

3. Analysis

In the word sketch, collocates are arranged in columns according to the grammatical relationship they have with SCHIZOPHRENIC (see Figure 1). This article will focus on patterns in three frames in particular: collocates that are modifiers of SCHIZOPHRENIC, collocates that are verbs which predicate SCHIZOPHRENIC as a grammatical subject, and noun phrases which are grammatically co-ordinated with SCHIZOPHRENIC.

Overall, the lexeme SCHIZOPHRENIC occurs a total of 3,605 times in the corpus and was comprised of the word forms *schizophrenic* (2,953), *schizophrenics* (644), *schizophrenic's* (25) and *schizophrenics'* (3). This distribution is interesting, because it shows that SCHIZOPHRENIC is typically used in the singular, that is, to represent schizophrenic people individually rather than collectively. While the TreeTagger was mostly accurate, there are some mistaggings. For instance, some adjectives in the *nouns and verbs modified by 'schizophrenic'* frame are mistagged as nouns. These are *gunman* (n = 4, LD = 8.30), *killer* (n = 6, LD = 6.57) and *man* (n = 11, LD = 5.27). The letter *n* refers to the frequency of the collocation while LD refers to the logDice score. Mistagged collocates are only mentioned in the analysis if they provide additional evidence of a pattern identified elsewhere.

schizophrenic (noun) — Schizophrenia 2000-2015 freq = 3,605 (207.63 per million)

modifiers of "schizophrenic"			nouns and verbs modified by "schizophrenic"			verbs with "schizophrenic" as object			verbs with "schizophrenic" as subject			"schizophrenic" and/or ...		
	2,229	0.62		208	0.06		1,156	0.32		1,229	0.34		682	0.19
paranoid ✚	1,234	12.81	depressive	4	8.95	diagnose	77	10.13	stab	90	10.53	depressive	18	9.68
bit	47	9.22	clunis	4	8.49	free	13	8.24	kill	76	9.70	clunis	16	9.50
dangerous	47	8.79	gunman	4	8.30	jail	12	7.84	attack	18	8.41	kernan	13	9.20
violent	48	8.72	fellowship	4	8.01	release	18	7.72	behead	12	8.22	addict	15	9.11
paranoid	22	8.30	barrett	5	7.94	treat	19	7.50	commit	13	7.94	barrett	13	9.02
chronic	26	8.24	nash	4	6.78	mumble	6	7.37	murder	11	7.82	psychopath	8	8.47
borderline	20	8.11	killer	6	6.57	arm	6	7.21	believe	21	7.59	ray	8	8.45
gmt	33	7.93	man	11	5.27	detain	7	7.20	rape	7	7.40	napper	8	8.41
pm	24	7.66	byline	4	2.81	be ✚	578	7.10	knife	6	7.25	campbell	8	8.30
undiagnosed	12	7.42				play	27	7.07	claim	15	7.18	bryan	7	8.27
alcoholic	10	7.11				seem	8	7.07	threaten	7	7.09	abram	6	8.03
homeless	11	7.07				delude	5	7.04	suffer	16	7.07	gettler	5	7.89
likely	10	7.04				arrest	8	6.91	spend	10	7.04	psychotic	5	7.87
37-year-old	8	6.84				allow	12	6.86	hear	15	7.02	ferguson	5	7.75
little	21	6.74				feel	11	6.81	admit	10	6.98	nash	6	7.67
incurable	7	6.65				institutionalise	4	6.77	pose	6	6.96	linford	4	7.56
sword-wielding	6	6.45				lock	5	6.67	think	11	6.82	elgizouli	4	7.56
am	8	6.29				sentence	5	6.64	punch	4	6.64	fischer	4	7.48
40-year-old	5	6.13				shoot	9	6.61	inherit	4	6.63	deyanov	4	7.47
crazed	5	6.06				become	21	6.57	slash	4	6.63	killer	5	7.45
psychotic	7	5.97				charge	5	6.52	stalk	4	6.61	khan	4	7.42
edition	10	5.95				convict	5	6.43	die	10	6.41	alcoholic	4	7.39
most	9	5.93				name	6	6.39	lose	6	6.35	joseph	4	7.37
album	5	5.89				hold	7	6.06	live	8	6.33	suspect	4	7.35
pint-sized	4	5.86				help	7	5.97	keep	5	6.27	patient	8	7.25

Figure 1: *Five frames with the most collocates for the lexeme* SCHIZOPHRENIC

3.1.   *'The sword-wielding schizophrenic': attributives referring to dangerousness*

I begin by examining collocates modifying SCHIZOPHRENIC that characterised schizophrenic people as dangerous (see Table 1).

Collocate	Frequency	logDice score
dangerous	47	8.79
violent	48	8.72
sword-wielding	6	6.45
most	9	5.93

Table 1: *Modifying collocates referring to perceived dangerousness*

Two collocates, *dangerous* and *violent*, explicitly characterise schizophrenics in terms of perceived dangerousness (see Excerpts 1 and 2).

(1) HOW is it that dangerous schizophrenics are let out to roam the country and kill people – but a man is put in a mental hospital against his will just for being fat? (*The Sun,* 2005-02-25).

(2) After her husband, Jonathan, was murdered by a violent schizophrenic who had been released with wholly inadequate supervision, she refused to be turned into a figure of pathetic tragedy (*The Independent*, 2005-11-23).

Modifers explicitly characterising schizophrenic people as dangerous are relatively infrequent compared with what one might expect from reading previous literature. However, the press, especially in light of rules put forward by IPSO, may be drawing on more indirect means to represent schizophrenic people as dangerous.

An example of a more subtle strategy is the use of the verb *roam* predicating *violent schizophrenics* in Excerpt 1. Using a 50% sample of ukWaC[4] as a reference corpus, *roam* co-occurs unusually frequently with a non-human animal as its subject. This is illustrated by the fact that ten of its top 25 collocates include words that denote wild animals (see Table 2).

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4   ukWaC (uk Web as Corpus) contains 1.1 billion words of British English texts obtained from websites with a .uk domain. The corpus was accessed via CQPweb (Hardie, 2012).

Collocate	Frequency	Log Ratio score[5]
wildebeest	5	9.21
peacocks	7	9.2
deer	59	7.79
buffalo	18	7.75
dinosaurs	8	7.47

Table 2: *Top 25 collocates of* roam *in ukWaC referring to wild animals*

Hence, in Excerpt 1, *schizophrenics* occupies the place of what would typically be an animal subject in British English. This pairing is therefore an animalising strategy where a group is likened to non-human animals, typically on the basis that they are unpredictable, primitive, potentially dangerous and estranged from socially shared morals (Haslam & Loughnan, 2014, p. 403). Interestingly, *gangs* (n = 12, LR = 7.42) is also a top 25 collocate of *roam*, suggesting that *roam* is sometimes used as an animalising strategy when referring to other social groups perceived as dangerous (see Excerpt 3).

> (3) These murder gangs who roam our land at will have killed thousands of our people, injured and maimed tens of thousands more and caused damage to property running into tens of millions of pounds (uk*WaC*, text 550197).

Another modifier, *sword-wielding*, is likewise a more subtle strategy used to represent schizophrenic people as dangerous. In all of its instances, it refers to Andrew Kernan, a schizophrenic person who was shot dead by police in 2001 for refusing to put down a sword he was carrying, having been perceived by police as a threat to others (see Excerpt 4).

> (4) Earlier yesterday the mother of Andrew Kernan, 37, the sword-wielding schizophrenic shot dead by police in Liverpool, denied that he was a danger to the public (*The Mail*, 2001-07-17).

Here, the process of holding a weapon, which we would expect to be expressed using a verb, is transposed into a pre-modifying participle (cf. *the sword-wielding schizophrenic vs. the schizophrenic wielded the sword*). This way of representing a social actor resembles van Leeuwen's (2008, p. 46) category of 'instrumentalisation', where the instrument(s) with

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5   To measure collocations in ukWaC, a different statistic had to be used, as logDice is not available in CQPWeb. Instead, collocational strength was measured using LogRatio, an effect-size statistic measuring the ratio between the frequency with which a word occurs within a collocational span and the frequency with which it occurs elsewhere. For details, see http://cass.lancs.ac.uk/log-ratio-an-informal-introduction/

which individuals carry out a particular action stand for the individuals themselves (e.g. *a bomb landed in the marketplace*). By analogy to van Leeuwen's (2008, p. 47) category of 'semi-objectivation', where social actors are represented via an object but where its modifiers indicate a human actor (*She put her hand on Mary Kate's shoulder*), we may conceive of this as 'semi-instrumentalisation', as the individual wielding the sword is still mentioned in the noun phrase (i.e. *schizophrenic*). Referring to Andrew Kernan in terms of the sword he was carrying before other aspects of his identity or behaviour (e.g. his mental trauma) might be an attempt to appeal to what is perceived by journalists to be newsworthy. Jewkes (2015), building on the seminal work of Galtung & Ruge (1965), suggests that the press select and structure stories according to a series of news values. Here, the press appear to be appealing to the news value of 'violence and conflict' by placing the weapon in the prominent clause-initial position (Jewkes, 2015, p. 63-4). While *sword-wielding* only occurs six times as a collocate, further evidence of semi-instrumentalisation can be found elsewhere. For instance, a grammatically identical construction (*A MACHETE-wielding schizophrenic*) occurs in Excerpt 16 below. Moreover, in the second frame, *nouns and verbs modified by 'schizophrenic'*, where SCHIZOPHRENIC is mistagged as an adjective, one of the collocates is *gunman* (n = 4, LD = 8.30). Here, reference to the weapon is linked with the schizophrenic person by incorporating it into a compound noun (see Excerpt 5). This is suggestive of a broader tendency to semi-instrumentalise schizophrenic people in terms of weapons in the press.

(5) Schizophrenic gunman who held three people hostage at bank posted terrifying Facebook messages in hours before stand-off which left one victim dead and a second critically injured (*MailOnline*, 2013-08-14).

However, not all collocates occurring in contexts where schizophrenic people are linked with dangerous behaviour necessarily represent them as dangerous. For instance, four instances of *dangerous* appear in contexts where newspapers invoke the trope of the "dangerous schizophrenic" in order to repudiate its veracity (see Excerpts 6 and 7).

(6) Most schizophrenics are never violent. The manifestation of McNaughton's illness – being driven to kill – is rare, as in the case of Peter Sutcliffe, the Yorkshire Ripper (*The Mail*, 2008-01-26).

(7) The 2007 act was motivated as much by the desire to assuage popular fear of the mythological marauding 'violent schizophrenic' as by the hope of getting better clinical outcomes (*The Guardian*, 2008-06-29).

Interestingly, all of these more positive instances invoke SCHIZOPHRENIC in its rarer plural form, suggesting that the press are more likely to represent schizophrenic people more positively when referring to people with the disorder collectively. This may be because the press is hesitant to characterise an entire social group as dangerous, as this explicitly

violates the rules put forward by IPSO, that the press should openly discriminate against social groups. While they provide a contrasting picture of schizophrenic people, which challenges the prevailing representation, they illustrate the inconsistent stance of some newspapers towards people with schizophrenia. That said, it is encouraging that, however infrequently, the UK press are gradually publishing articles that dispel popular misconceptions about people with schizophrenia.

3.2.   'A likely schizophrenic': attributive adjectives indexing lay-diagnoses

Three collocates, *borderline*, *likely* and *undiagnosed*, occur in contexts where non-medical professionals are quoted as lay-diagnosing individuals as schizophrenic (see Table 3).

Collocate	Frequency	logDice score
borderline	20	8.11
undiagnosed	12	7.42
likely	12	7.04

Table 3: Modifying collocates referring to lay-diagnoses

All ten instances of *likely* co-occur with SCHIZOPHRENIC in a quotation from the actor Christian Bale, who lay-diagnoses the biblical character Moses as a likely schizophrenic (see Excerpt 8). Lay-diagnoses are interesting because they provide insights into what symptoms non-specialists view as characteristic of schizophrenia.

> (8) Christian Bale describes Moses as 'barbaric' and a 'likely schizophrenic'; The actor plays the biblical character in Ridley Scott's new film (*Independent.co.uk*, 2014-11-27).

In nine instances, the only reason offered to justify Bale's lay-diagnosis in the entire article is that Moses was a *barbaric* person, which may lead readers to infer that Moses was *likely schizophrenic* because he was *barbaric*.[6] Indeed, in nine instances, the association between *schizophrenic* and *barbaric* is strengthened via grammatical co-ordination by the conjunction *and*. This invites readers to infer a semantic equivalence between the two concepts, for instance that they are hyponyms of "violent trait". This process can be illustrated with a series of examples. When we encounter co-ordinated words such as *cats and dogs*, the co-ordination makes sense because the two nouns share the same hypernym, i.e.

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6   However, this is not the only interpretation. For instance, readers could infer that Moses was schizophrenic based on the fact that he supposedly heard the voice of God, which could be interpreted as an auditory hallucination. However, given the gross misunderstandings about schizophrenia and its symptoms prevalent among the public (Olafsdottir and Pescosolido, 2011), combined with the tendency to link schizophrenia with violence elsewhere in the press, this interpretation is less likely.

"pet". Likewise, when we hear *red and green* we infer the shared hypernym "colour". Compare this to when we see two concepts which do not intuitively share a hypernym such as *green and dog*. In these cases, we are likely to question why the two have been co-ordinated. Thus, the use of grammatical co-ordination in these nine examples may invite readers to draw equivalence between being schizophrenic and being barbaric. While Bale's statements are condemned as *reflecting bigotry* and *causing upset* later in some of the articles, this is only in relation to Christians, seemingly unaware of the way the statement might offend people with schizophrenia.

The collocate *undiagnosed* on four occasions likewise occurs as part of lay-diagnoses based solely on evidence of violent behaviour. The implication in these examples is that violent behaviour performed by the individual revealed them to be schizophrenic. The tendency to construct mentally ill people as having a concealed identity, which is only brought to light after violent events, has also been identified in Serbian newspapers (Bilić & Georgaca, 2007, p. 175). This presents mentally ill people as chameleon-like in their identities, and as individuals who are able to blend into the community and thereby pose a more serious threat to the public. While in Excerpt 9 it is ambiguous whether the individual was diagnosed by a medical professional or not, and potentially not being a lay-diagnosis, in Excerpt 10, the diagnosis is explicitly framed as the opinion of the perpetrator's father.

> (9) Session drummer Gordon, 63, wrote Layla with Eric Clapton. But in June 1983, the undiagnosed schizophrenic beat his mother to death with a hammer. He was jailed for second-degree murder (*The Mail*, 2008-09-23).

> (10) Peter Lanza dubbed his son Adam 'evil' for killing 20 children and six staff at the Connecticut school just before Christmas in 2012. Explaining that his son spent his entire life troubled by mental illness, Lanza, a vice president for GE Energy Financial Services said that in his opinion he thought his youngest boy was an undiagnosed schizophrenic. "You can't get any more evil" (*MailOnline*, 2014-03-10).

The lay-diagnosis in Excerpt 10 is legitimised simultaneously via evidence that the individual murdered people, but also via a direct quote from his father, in which he is referred to as evil (*you can't get any more evil*). Eagleton (2010, p. 7) suggests that the word *evil* connotes excessive, wanton violence, inexplicable cruelty, and malign intent.

Another two instances of *undiagnosed* (Excerpts 11 and 12) also occur within retrospective lay-diagnoses, although not on the basis of explicit physical violence.

> (11) I genuinely believe he was an undiagnosed schizophrenic. He'd just snap... once in Tramp, he had a go at Keith Richards; he gave him some verbal that was fuckin' ugly. Keith ignored it, but if the guy had done it to me, I'd have run (*The Independent*, 2000-02-19).

> (12) Yet there are acute moments as Keith reminds them of his increasingly dire deeds, and an intriguing suggestion that Keith may be an undiagnosed schizophrenic as well as an addict (*The Times*, 2012-05-09).

The collocate *borderline* is used in the context of lay-diagnoses. In three instances, *borderline* occurs in stories that quote a previous bodyguard of the musician Britney Spears, who describes her as *borderline schizophrenic*. However, the only evidence on which the lay-diagnosis is based is outrageous and destructive behaviour (*she was out of her mind on drink and drugs, Britney's hell-raising*).

> (13) He also told how he feared for her children's safety and believed she was out of her mind on drink or drugs when looking after them. Barretto was prepared to testify about Britney's hell-raising, but neither the court or her legal team chose to examine him, meaning his evidence went unchallenged. He branded her a "borderline schizophrenic" and told how she overdosed in a hotel room days after leaving rehab (*The Star*, 2007-10-02).

In total, 16 instances (nine of *likely*, four of *undiagnosed* and three of *borderline*) locate sordid and violent behaviours as the only symptom on which a diagnosis of schizophrenia need be based. While the American Psychiatric Association (2013, p. 12) acknowledges that some schizophrenic people may behave violently *in response to* persecutory delusions, these are never referred to as a symptom per se.

3.3. 'beheading', 'punching', 'slashing' and 'stabbing': verb collocates

Many of the verb collocates when SCHIZOPHRENIC is the subject (middle of Figure 1), refer to violent actions (see Table 4 below). This supports the findings of other studies showing that schizophrenic people are frequently represented as enacting violence in the British press (Clement & Foster, 2008; Chopra & Doody, 2007).

Collocate	Frequency	logDice score
stabbed	90	10.53
killed	76	9.70
attacked	18	8.41
beheaded	12	8.22
COMMIT	13	7.94
MURDER	11	7.82
raped	7	7.40
knifed	6	7.25
THREATEN	7	7.09
POSE	6	6.69
punched	4	6.64
DIE	10	6.41

Table 4: *Verb collocates referring to violent acts*

Eight of these collocates explicitly refer to violent actions, such as MURDER, *killed*, and *raped*, while two others, namely THREATEN and POSE, refer to the anticipation that they will be violent in the future. However, four instances of POSE and two of THREATEN refer to these events retrospectively, after the individual has already committed a violent act (see Excerpts 14 and 15). Elsewhere COMMIT always occurs in contexts where it takes a violent crime as its object. Moreover, the reporting verbs *admitted* (n = 10, LD = 6.98), CLAIM (n = 15, LD = 7.18), HEAR (n = 7, LD = 7.02) and BELIEVE (n = 21, LD = 7.59) all typically occur in the context of court proceedings in which schizophrenic people confess to having committed murder.

(14) Three major opportunities were missed to assess risks posed by a paranoid schizophrenic who repeatedly stabbed a woman in a supermarket, a report has found (*The Independent*, 2012-06-30).

(15) A social worker failed to act when this schizophrenic threatened to butcher a family. Hours later, he stabbed a woman to death (*The Mail*, 2003-02-18).

Some verbs are more specific in the type of violence they refer to than others. For instance, verbs such as *killed*, *attacked* and MURDER are more abstract, and do not specific a specific violent action. In contrast, the verbs *punched* and *knifed* are coded for the type of weapon used, *slashed* and *stabbed* for the trajectory of the sharp weapon and *beheaded* for the type of bodily mutilation inflicted (see Excerpts 16-18). In using verbs that represent violence more vividly, the press perhaps appeal to Jewkes' (2015, p. 63-66) news value of 'visual spectacle and graphic imagery', which posits that the press are more likely to report on violence if it is more visually striking.

> (16) PC Nina Mackay , of east London, was knifed by a paranoid schizophrenic in October 1997 (*The Observer*, 2003-12-28).

> (17) A paranoid schizophrenic beheaded his flatmate in a frenzied attack after suffering from delusions that he was being persecuted, a court has heard (*The Mirror*, 2013-12-02).

> (18) A MACHETE-wielding schizophrenic who slashed two guards in a rampage through MI5's HQ was locked up in a mental health unit indefinitely yesterday (*The Sun*, 2005-06-22).

In total, 19 out of the 25 collocates in this frame (76%) represent schizophrenic people as engaging in violent crimes. Thus, when SCHIZOPHRENIC occurs as the grammatical agent in a clause, this is almost always in the context of them enacting violent crimes. By representing schizophrenic individuals as committing violent crimes unusually frequently, at the expense of other kinds of activities, the press implicitly suggest that schizophrenic people as a group are dangerous. In doing so, the press are able to avoid violating the rules put forward by IPSO.

3.4.   'A schizophrenic had died from asphyxia': schizophrenic people as the victims of violence

Section 3.3 has shown that the press represent violent crimes committed by schizophrenic people, sometimes using language that creates a vivid picture in readers' minds. It is interesting to compare these representations with the language choices made when reporting on violence committed against schizophrenic people, to see whether exaggerated language around violence is peculiar to schizophrenic people, or a stylistic feature of the press more generally.

In contrast to other collocates, DIE does not refer to cases when people with schizophrenia are violent to others, but to cases when others are violent to them. Given reports showing that people with schizophrenia are 14 times more likely to be the targets of violence than the perpetrators of it (Brekke *et al.*, 2001), it is curious that collocates referring to this are so infrequent in the word sketch.

(19) They found the 52-year-old schizophrenic had died from asphyxia after officers restrained him in the prone position, with his hands cuffed behind his back (*Independent.co.uk*, 2015-02-23).

(20) They highlight the inquiry in 2004 into the death of David "Rocky" Bennett, a schizophrenic who died after a struggle with staff at an NHS hospital in Norwich (*The Telegraph*, 2006-01-11).

(21) The Met is bracing itself for more criticism this week when a private investigation into the death of Sean Rigg, a 40-year old musician and schizophrenic who died in police custody in Brixton in 2008, reports its results (*Sunday Express*, 2013-05-12).

Three of the 10 occurrences of DIE are in the context of violence, where grammatical agency is obscured (see Excerpts 19-21). First, in using the verb DIE, the action is represented in the middle voice, that is, a voice that is neither active nor passive and is not coded for agency (Halliday & Matthiessen, 2004, p. 350). Dreyfus (2017, p. 281) has argued that, of all clause types, middle clauses attribute the least responsibility to the agent, who is not represented as a participant. Even when the agent is mentioned in Excerpts 19 and 20, the link to the action is via a temporal conjunction (*after*), rather than a *by*-phrase indicating causality. In other words, the link between the two events – the violence inflicted by the medical staff and the police officers, and the death of the schizophrenic person – is represented as sequential rather than causal. In Excerpt 21, the responsible agents are, to use van Leeuwen's (2008, p. 29) term, 'backgrounded', in that they are not explicitly mentioned in conjunction with the event at all, but can only be inferred from the context (i.e. *police custody*). In this article, the only textual evidence that Sean Rigg was killed at all is found in the following paragraph, where police officers are referred to as having *used unsuitable force after arresting Mr Rigg*.

To see whether these three examples were part of a broader tendency to obscure grammatical agency when reporting on violence inflicted on schizophrenic people, I examined all articles in the corpus in which the names *Sean Rigg*, *Colin Holt*, and *David Bennett* (the three targets of violence named in Excerpts 18-20) occurred. None of these articles represented violence inflicted upon schizophrenic people with the same transparency as violence carried out by schizophrenic people, that is, as the grammatical subject of a transitive verb. Instead, in roughly one third of clauses where these names were represented as the targets of violence (32/104, 30.8%), that violence is hinted at only via the nominalisation *death*, where, as in the above examples, the actor is elided from the clause. For instance, in Excerpt 22, the actor is backgrounded, and only retrievable from the reference to *police actions*.

(22) The jury hearing evidence about the death of Sean Rigg returned a scathing verdict on Wednesday about police actions, saying they contributed to the death of the 40-year old musician while he was in custody in Brixton police station (*The Guardian*, 2012-08-02).

A possible explanation for why the press obscure agency is because the incident has only just occurred and has not yet received a legal verdict (Dreyfus, 2017, p. 382). Likewise, the press may wish to safeguard the reputation of state services such as the police, who take great pains to maintain a positive media image (Schlesinger & Tumber, 1994). However, many of the articles report that the officers who restrained Colin Holt and Sean Rigg were charged for murder, and the press enthusiastically criticise state services elsewhere. For instance, the collocate ALLOW (n = 12, LD = 6.86), which occurs in the frame listing verb collocates of SCHIZOPHRENIC when it is a grammatical object, occurs in all its instances in contexts where medical staff are accused of being careless and enabling dangerous patients to commit murder (e.g. see Excerpt 23).

> (23) AN appalling catalogue of care-in-the-community blunders that ended with a paranoid schizophrenic being allowed free to stab a man to death in a park was revealed last night (*The Mail*, 2005-03-03).

Evidently, the press choose to represent violence differently depending on whether it is perpetrated by schizophrenic people or towards them. While violence carried out by schizophrenic people is represented in more detail in transitive clauses, with the agent clearly marked as subject, violence inflicted towards them is represented using language that obscures agency, for instance using the middle voice and backgrounding the agent. This entails that violence enacted by schizophrenic people is represented through language as more deliberate than the violence inflicted towards them. The tendency is curious given that people who are mentally ill are more likely to be perceived as having diminished responsibility and thereby less agentive than other people.

3.5. 'A schizophrenic or a cold-blooded killer?': grammatical co-ordination with negative social categories

One typically judges people by the company they keep. It is therefore interesting to examine noun collocates that are grammatically co-ordinated with SCHIZOPHRENIC to see which social groups schizophrenic people are typically introduced alongside in the British press. As discussed in Section 3.2. above, co-ordinated noun phrases typically require a semantic 'common denominator'. By examining the sorts of social groups that schizophrenic people tend to be grouped with, it is possible to identify which attributes of schizophrenic people the press view as salient.

Four collocates in this frame refer to identities that are popularly perceived as socially deviant (see Table 5).

Collocate	Frequency	logDice score
ADDICT	15	9.11
PSYCHOPATH	8	8.47
KILLER	5	7.45
alcoholics	4	7.39

Table 5: *Nominal categories co-ordinated with* SCHIZOPHRENIC *referring to socially deviant identities.*

Two collocates, KILLER and PSYCHOPATH, refer to social categories which define people by their violent and anti-social behaviour. KILLER is an instance of 'functionalisation' (van Leeuwen, 2008, p. 42), where individuals are represented via what they do, in this case, kill people. Hervè (2007, p. 31) characterises psychopaths as 'instrumentally impulsive individuals with poor behavioural controls who callously and remorselessly bleed others for purely selfish reasons via manipulation, intimidation, and violence'. Thus, by linking schizophrenic people with killers and psychopaths using the co-ordinating conjunctions *and/or*, the press draw equivalence between the two social groups (see Excerpts 24-26). Given the shared characteristics of killers and psychopaths and the over-riding representation of schizophrenic people as violent encountered hitherto, it is likely that the shared characteristic inferred will be "dangerous person" or "violent person".

(24) Jury's question: was he a schizophrenic or a cold-blooded killer? (*The Independent*, 2006-03-17).

(25) Was he a schizophrenic or a potential psychopath? Both thoughts raced through his mind (*The Observer*, 2016-06-16).

(26) Had I crossed a mental Rubicon and become a schizophrenic, or a potential psychopath? (*The Telegraph*, 2013-05-27).

In one instance of KILLER and three instances of PSYCHOPATH, the co-ordination occurs within a question, suggesting that the two groups are similar enough to be confused. In Excerpt 24, this refers whether someone who carried out a violent crime had schizophrenia or was a *cold-blooded killer*, suggesting uncertainty around their agency and responsibility. In Excerpts 25 and 26 the association appears to be one of genuine confusion, suggesting that schizophrenics and psychopaths are similar enough to be confused. This reflects a broader tendency for the British press to represent schizophrenia as similar to other diagnoses (Foster, 2006). Indeed, one would be forgiven for confusing the two diagnostic terms given that schizophrenics are elsewhere represented in the British press as enacting extreme violence, being estranged from socially shared morals, and passing as

'normal' people. That said, in practice, people diagnosed with schizophrenia are unlikely to meet the diagnostic criteria for what is understood as psychopathy (Rice & Harris, 1995, p. 339).

Two collocates in this frame, ADDICT and *alcoholics*, also draw associations between the lexeme SCHIZOPHRENIC and social deviance. Bilić & Georgaca (2007) observe the press' tendency to list patients with psychosis alongside social groups perceived as dangerous, such as drug addicts and people with contagious diseases. They suggest that 'simply by the successive listing of patients with psychosis, alcoholics, drug additions and HIV positive patients, all groups that are typically associated with some form of dangerousness to themselves and others, the dangerousness of these groups is consolidated and their distance from "normal people" intensified' (ibid. 176). This is best illustrated in Excerpt 27, where describing the patients of an addiction treatment centre called The Meadows, the speaker lists schizophrenics in a long list of dangerous social deviants.

> (27) 'The Meadows is a completely different beast', she says. 'This is not to belittle The Priory, but it is a spin dry compared to The Meadows, which is a hospital for the mentally ill. 'You are shoulder to shoulder with paedophiles, schizophrenics, heroin addicts, sex addicts, whatever (*The Mail*, 2006-03-26).

Excerpt 27 resembles a broader phenomenon characteristic of moral panic discourse. McEnery (2004, pp. 169-173) found that, in 18th century moral panic discourse around swearing, the grammatical co-ordination of swearing with other behaviours perceived as negative, such as *adultery* and *drunkenness*, may be an example of what Hall *et al.* Call (1978, p. 223) a 'spiral of signification', where the similarities between them are highlighted and the threat they pose is amplified. Likewise, Baker (2005, p. 70) found that, in the British tabloid press, the words *gay(s)* and *homosexual(s)* tended to collocate with other minority identities perceived as problematic, such as *lesbians*, *adulterers* and *immigrants*. This, he argues, serves to define homosexuals by way of the perceived shared characteristics between these groups, that is, their problematic and scandalous associations. Here too, by co-ordinating SCHIZOPHRENIC with other identities perceived as dangerous, the press exaggerates their perceived dangerousness more than if they were mentioned on their own.

4. Conclusions

This study has used the word sketch tool to provide insights into how the press manipulate language in order to represent schizophrenic people as violent and dangerous. By examining collocates around the lexeme SCHIZOPHRENIC, the analysis observed that, while schizophrenic people were not referred to explicitly as violent and dangerous unusually frequently, several discursive strategies cumulatively operating across multiple texts help

imbue the lexeme with a semantic prosody of "dangerousness". Given that representations were generally more positive when the plural *schizophrenics* occurred, this semantic prosody may apply specifically to the singular form.

The analysis identified four main patterns. First, the collocates *borderline*, *likely* and *undiagnosed* occurred in cases where non-specialists lay-diagnosed individuals as schizophrenic based solely on evidence of violent behaviour. It was noted that this situates violence as a primary symptom of schizophrenia. Second, the collocate *sword-wielding* provided evidence of a tendency to semi-instrumentalise schizophrenic people by defining them in terms of dangerous weapons. While only a few cases were identified, constructions that were grammatically similar were found elsewhere, hinting that semi-instrumentalising schizophrenic people is a broader tendency in the press. Third, SCHIZOPHRENIC, when in subject position, collocated with a large set of verbs referring to violent actions, some of which vividly described the violent act (e.g. *slashed*, *stabbed*, *beheaded*). In contrast, when police and medical staff are represented as violent towards schizophrenic people, the language used was vague and grammatical agency was obscured. It was observed that, by repeatedly representing schizophrenic individuals as engaging in violent crimes, at the expense of other actions, the press implicitly suggest that most schizophrenic people are violent. Finally, it was found that SCHIZOPHRENIC tended to be grammatically co-ordinated with words referring to dangerous social deviants (e.g. PSYCHOPATH, KILLER, alcoholics), which potentially served to implicitly define schizophrenic people as dangerous. It was suggested that one of the reasons the press may choose to rely on a more varied set of implicit strategies is to avoid violating the rules put forward by the independent press regulator IPSO. By explicitly representing schizophrenic people as a group as violent and dangerous, the press would be violating the rules stipulating that the British press should not publish inaccuracies or to discriminate against social groups.

The findings also raise some issues for corpus linguists carrying out discourse analysis. For instance, the analysis showed that the semantic prosody of "dangerousness" was not necessarily sustained by the lexeme SCHIZOPHRENIC'S collocates, but by broader discursive strategies suggested by those collocates. Hence, it suggested that, while individual collocates may be relatively infrequent, the broader discursive strategies which those collocates manifest can be more far reaching. As the same manipulation strategies may be instantiated via a variety of surface forms, this means that they are difficult to measure using CL techniques. The notion of how the same semantic prosody can be expressed via a wide range of different collocations has already been touched on by Gabrielatos & Baker (2008, p. 21).

While this article has attempted to demonstrate that the lexeme SCHIZOPHRENIC (n.) has a semantic prosody of "dangerousness", it does not necessarily follow that the use of the label should be discouraged. For even if the national press now decide to avoid the

term, the negative attitudes which sustained the negative semantic prosodies of the word will remain, and find expression in other ways. Hence, as Harris (1992, p. 67) suggests, 'one of the consequences of bringing out detailed sets of regulations is that it fosters a loophole-seeking attitude'. In other words, by discouraging certain forms, the press will need to find more subtle and less detectable ways of negatively representing schizophrenic people. Instead, the British press should follow the lead set by other English speaking countries such as Australia and New Zealand in gradually providing more positive representations of people with schizophrenia and ensure that stories reporting on violent crimes committed by people with schizophrenia are framed as exceptional cases and not the way people diagnosed with schizophrenia typically behave.

Competing interests

The author has no competing interests to declare.

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