



‘Appeals to nature’ in marriage equality debates: A content analysis of newspaper and social media discourse

Clíodhna O’Connor*

Department of Psychology, Maynooth University, Ireland

In May 2015, Ireland held a referendum to legalize same-sex marriage, which passed with 62% of the vote. This study explores the role played by ‘appeals to nature’ in the referendum debate. Little research has investigated how biological attributions are spontaneously generated in real-world discourse regarding sexual rights. Through content analysis of newspaper and Twitter discussion of the referendum, this study aims to (1) establish the frequency of appeals to nature and their distribution across the various ‘sides’ of the debate and (2) analyse the forms these natural claims took and the rhetorical functions they fulfilled. Appeals to nature occurred in a minority of media discussion of the referendum (13.6% of newspaper articles and .3% of tweets). They were more prominent in material produced by anti-marriage equality commentators. Biological attributions predominantly occurred in relation to parenthood, traditional marriage, gender, and homosexuality. The article analyses the rhetorical dynamics of these natural claims and considers the implications for marriage equality research and activism. The analysis suggests appeals to nature allow anti-marriage equality discourse adapt to a cultural context that proscribes outright disapproval of same-sex relationships. However, it also queries whether previous research has overemphasized the significance of biological attributions in discourse about groups’ rights.

On 22 May 2015, the Republic of Ireland held a referendum to insert a provision for same-sex marriage (SSM) into its constitution. The referendum passed with 62% of the vote, with a voter turnout of 61%. This signified a major cultural shift in a traditionally conservative, Catholic country. It also represented a milestone in the global fight for marriage equality, marking the first time SSM had been legalized by popular vote. The current study explores the role played by ‘appeals to nature’ in the referendum debate. Social psychological research suggests that biologically grounded arguments have complex effects on intergroup relations, promoting tolerance in some contexts and stigmatization in others. However, little research has investigated how appeals to nature manifest in real-world sociopolitical contexts, as people struggle to articulate and defend their viewpoints. This study utilizes the media discourse that materialized during the referendum campaign to enlighten how appeals to nature feature in everyday debate about sexual rights, and how they can both sanction and challenge prejudice and inequalities.

*Correspondence should be addressed to Clíodhna O’Connor, Department of Psychology, Maynooth University, Maynooth, Co. Kildare, Ireland (email: Clíodhna.OConnor@nuim.ie).

Marriage equality

From the 1990s onwards, SSM was consolidated as a pre-eminent cause of gay rights organizations in Western countries (Klarman, 2012). Public opinion data show marked evolution in attitudes to SSM over the past decade: the percentage of the US population agreeing same-sex couples should have marriage rights increased from 30% in 2004 to 55% in 2014 (Armenia & Troia, 2017; Baunach, 2012), while British support for SSM increased from 47% in 2007 to 60% in 2014 (NatCen, 2015). Analysis suggests these transformations are primarily due to intracohort change rather than cohort succession, that is individuals' attitudes changing over time rather than older generations being 'replaced' by more liberal younger cohorts (Baunach, 2012).

The first legislation for SSM was introduced in the Netherlands in 2001; by 2016, SSM was available in over twenty countries worldwide. The Republic of Ireland joined these ranks in 2015. Uniquely, in Ireland, the decision to legalize SSM was made by national referendum.¹ Just 22 years after Ireland had decriminalized homosexual acts, the referendum result exemplifies the dramatic shifts many Western democracies have undergone on this issue. However, marriage remains unavailable to most lesbian and gay couples worldwide. The Irish case, being the first instance of legalization through popular vote, may contain valuable insights for the many jurisdictions where SSM remains illegal.

Appeals to nature

Social psychological research has demonstrated that attitudes to SSM have multiple antecedents, including homophobia (Moskowitz, Rieger, & Roloff, 2010), familial background (Brumbaugh, Sanchez, Nock, & Wright, 2008) and religious and ideological predispositions (Becker & Scheufele, 2011). Language is one key factor shaping responses to SSM. Seemingly minor terminological choices can profoundly affect public responses; for instance, opposition is lower to 'gay and lesbian marriage' than 'same-sex marriage' or 'homosexual marriage' (McCabe & Heerwig, 2012). One rhetorical feature that may play a particularly important role, and the focus of the current study, is the 'appeal to nature'.

In human societies, the attribute of 'natural' wields potent rhetorical power. Across cultures and contexts, 'natural' consistently carries positive valence, with 'unnatural' a correspondingly negative ascription (Rozin, 2005). Moore's (1903/1960) naturalistic fallacy captures the tendency to conflate 'natural' with what is good or right, such that descriptive 'is' statements implicitly become normative 'ought' statements. Research shows naturalistic fallacy errors are widespread, persistent and difficult to subvert (Friedrich, 2005; Tworek & Cimpian, 2016). This becomes problematic when 'natural' is applied to dysfunctional aspects of the status quo, such as intergroup divisions characterized by inequalities of status and power. Natural attributions are therefore an important topic of social psychological investigation.

Biological essentialism and the naturalization of homosexuality

The social psychological effects of naturalizing social inequalities are most comprehensively demonstrated in the literature on psychological essentialism (Prentice & Miller, 2007). The attribution of naturalness is a key dimension of the essentialization of social

¹ This was due to the legal necessity that any change to the Irish constitution be ratified by a national referendum. The referendum proposed to insert into the Irish constitution the provision, 'Marriage may be contracted in accordance with law by two persons without distinction as to their sex'. *Civil partnership for same-sex couples had been available in Ireland since 2011.*

categories, with the posited 'essence' typically seen as biological in origin (Dar-Nimrod & Heine, 2011). In psychological research, essentialism is typically approached as a contributor towards prejudice and discrimination (Haslam & Whelan, 2008). For instance, biological explanations of sex differences encourage endorsement of gender stereotypes (Brescoll & LaFrance, 2004), sexist attitudes (Keller, 2005), and acceptance of inequalities (Morton, Postmes, Haslam, & Hornsey, 2009). Similar effects are detected for biological accounts of race, mental illness, and obesity (Dar-Nimrod & Heine, 2011).

Research on biological attributions for sexual orientation is more ambivalent. Unlike gender and race, biological explanations of homosexuality tend to coincide with more progressive attitudes towards gay men and lesbians (Joslyn & Haider-Markel, 2016; Lewis, 2009; Piskur & Degelman, 1992; Whitley, 1990). Believing homosexuality is innate is one of the strongest predictors of supporting SSM (Haider-Markel & Joslyn, 2008; Wood & Bartkowski, 2004), exceeding the predictive power of political or religious conservatism (Whitehead, 2014). Most research linking biological attributions to positive attitudes is correlational, which limits insight into causal directionality. Nevertheless, it is often assumed that biological attributions promote more positive attitudes, in accordance with attribution theory's assertion that volitionality is a precondition for stigmatization (Weiner, 1985). This intuitive logic has influenced the discursive strategies of gay rights movements, wherein biological accounts of homosexuality have traditionally been central (Walters, 2014).

However, the effects of biological explanations of sexuality are not univalently positive. Boysen and Vogel (2007) found that reading about biological theories of homosexuality prompted polarization of existing attitudes; that is, participants with favourable attitudes towards gay rights became more favourable, and those with unfavourable attitudes became more unfavourable. Biological information is interpreted through the filter of pre-existing value commitments, so can entrench as well as mitigate prejudice (O'Connor & Joffe, 2013). Research suggests essentialist lay theories can be decomposed into beliefs regarding the immutability/uncontrollability of category membership and the discreteness of the category (Haslam & Levy, 2006; Hegarty & Pratto, 2001a). While the former supports more accepting attitudes, the latter means biological attributions can fuel antagonism by casting sexual minorities as intrinsically 'different' from the heterosexual majority (Haslam & Levy, 2006; Hegarty, 2002; Kahn & Fingerhut, 2011).

Further complications arise from the literature's overreliance on correlational results, and the emergence of experimental research showing biological attributions can be *consequences* of individuals' attitudes rather than vice versa (Hegarty & Golden, 2008). Morton and Postmes (2009) demonstrate that sexual minorities endorse biologically essentialist theories of sexuality selectively and strategically in response to contextually salient identity dynamics. Falomir-Pichastor and Hegarty (2014) report that prejudiced heterosexual men, who are threatened by evidence of growing sexual equality, react by increasing their endorsement of biological theories emphasizing the distinctiveness of heterosexuals and homosexuals. Such findings suggest biological theories may be better conceptualized as *post hoc* rationalizations rather than independent causes of prejudiced attitudes (Hegarty, 2002; Hegarty & Golden, 2008; Suhay & Jayaratne, 2013).

This conceptualization is further supported by public opinion data, which suggest the roots of attitudes and causal attributions alike lie in individuals' sociopolitical identifications. Haider-Markel and Joslyn's (2013) analysis of historical US opinion polls shows that micro-level polarization of Democrats and Republicans on attributions for

homosexuality only occurred following macro-level changes in policy debates – specifically, the newly partisan connotations biological attributions acquired among political elites. Similarly, Lewis' (2009) analysis of public opinion data suggests religiously derived moral judgements of homosexuality drive endorsement/rejection of innateness theories rather than the reverse. Religions weave causal attributions into their theology in distinctive ways: for instance, Catholic teachings accept homosexuality is innate but nevertheless deem homosexual acts sinful. Relative to other religions, Catholics are more likely to believe homosexuality is biological, yet still oppose SSM (Lewis, 2009). Thus, there is nothing 'essential' or inevitable about natural claims' effects on intergroup attitudes (Hubbard & Hegarty, 2014; Verkuyten, 2003). The same attribution can assimilate into sociopolitical narratives in divergent ways, with correspondingly different social consequences. Individuals' acceptance of biological explanations of homosexuality is determined by their perception of the symbolic meanings and identity markers those attributions hold in particular historical contexts (Hegarty, 2002). This contextual contingency underlines the importance of moving beyond the laboratory to observe natural attributions 'in action' in real-world sociopolitical contexts.

Naturalization beyond homosexuality

Most research investigating how natural claims interact with sexual discrimination has focused on essentialism of homosexuality itself. However, in the context of marriage equality debates, same-sex attraction is not the only object of naturalizing claims. Analysing the political discourse of the Australian religious right, Edwards (2007) observes that arguments against SSM frequently invoke a construction of marriage as sacred. As an institution, marriage is often seen as a primordial and universal human state, rather than a norm evolving over historical contexts (Cott, 2000). Duncan and Kimmelmeier (2012) show that such essentialist beliefs about marriage predict negative attitudes to SSM. Moreover, in their analysis essentialist beliefs about marriage proved more important than beliefs about homosexuality in mediating the effects of religiosity and political affiliation on attitudes to SSM.

Beyond Duncan and Kimmelmeier's (2012) study, minimal research has investigated how lay beliefs about *heterosexual* relationships might influence attitudes to marriage equality. Hubbard and Hegarty (2014) attribute this to psychology's tendency to take the minority category as 'the effect to be explained', thereby implicitly endorsing heterosexuality as the unproblematic norm. This is a missed empirical opportunity, because heterosexuality might actually be more subject to essentialization than homosexuality, as it is typically seen as more universal and immutable (Hegarty & Pratto, 2001b, 2004; Hubbard & Hegarty, 2014). Cole, Avery, Dodson, and Goodman's (2012) analysis of US newspapers reported that statements regarding the naturalness of marriage occurred in 52% of articles about SSM. However, Cole *et al.*'s (2012) definition of a natural claim was very broad, encompassing statements that SSM is immoral or threatens child welfare; whether such statements genuinely represent natural attributions is dubious. A British study also observes that the naturalness of marriage is a recurrent theme in media coverage of SSM, but does not quantify the frequency with which it occurs (Jowett, 2014).

Dyadic romantic relationships are not the only potential targets of naturalizing attributions, because marriage equality debates typically encompass broad considerations of family, community and societal institutions. For instance, gay/lesbian parenting has traditionally incited heavy opposition, which is often framed in terms of (un)naturalness

(Clarke, 2001). These ideas could conceivably surface in SSM debates. Additionally, feminist and queer theorists have long highlighted the role of biological gender binaries in legitimizing heteronormative ideologies (Butler, 1990; Fausto-Sterling, 2000; Wittig, 1981/2013). While gender essentialism is frequently studied in social psychology (Prentice & Miller, 2006), its relevance to SSM has not been investigated.

The current study: Appeals to nature in traditional and social media

Most social psychological research exploring biological attributions' effect on sexual prejudice has utilized quantitative survey or experimental designs. These typically collect responses to biological attributions that are pre-designed by survey and/or experimental materials. Little research has explored how natural claims are spontaneously generated in real-world communication. One exception is Sheldon, Pfeffer, Jayaratne, Feldbaum, and Petty's (2007) interview study exploring people's beliefs about the origins of homosexuality. Results confirmed that biological explanations can be recruited to portray same-sex attraction as either legitimate or disordered, according to an individual's ideological inclinations. However, the study remained a somewhat artificial research context, as it directly asked people their thoughts on the idea that homosexuality is genetic. This does not establish that natural attributions occur spontaneously in everyday thought and conversation about sexual rights, or the frequency with which they materialize. The first purpose of the current study is to quantify the frequency with which appeals to nature occur and their distribution across the various 'sides' of the marriage equality debate.

The second purpose is to catalogue the forms these natural claims take and the rhetorical functions they fulfil. The near-exclusive focus of extant research has been biological attributions for homosexuality itself, and most research has conceptualized these cognitive operations as causes of attitudes rather than rhetorical strategies. This study uses qualitative techniques to illuminate the discursive contexts in which appeals to nature occur 'in the wild', by investigating their presence in traditional and social media discussion of the Irish referendum. Media coverage is often proposed as a key influence on public attitudes and attributions regarding SSM (Becker & Scheufele, 2011; Garretson & Suhay, 2016; Lewis, 2009), but its content is rarely analysed in depth. Exceptions are Cole *et al.* (2012) and Jowett (2014), but these do not itemize the full range of phenomena that are naturalized in the context of marriage equality debates.

Traditional print media remain key sources of public information in Ireland, where 84% adults read newspapers weekly (Joint National Readership Survey, 2014). For the Irish electorate, newspaper content was a key source of information about the marriage referendum (Elkink, Farrell, Reidy, & Suiter, 2017; Healy, Sheehan, & Whelan, 2016). While only a small subsection of society produces this media content, Haider-Markel and Joslyn (2013) argue that elite framings of biological attributions are critical in determining the symbolic meanings they acquire in society at large. Newspapers are therefore valuable data in understanding the sociopolitical meanings afforded to natural claims during the referendum campaign.

This notwithstanding, traditional print media's influence is waning in the new media environment, where individuals actively produce, rather than passively consume, media content. This is facilitated by social networking platforms such as Twitter, a 'micro-blogging' platform where users exchange 140-character messages, which is used by one-quarter of the Irish population (Ipsos MRBI, 2015). Social issues like SSM are

extensively debated on social media: in the week before the vote, the official referendum hashtag (#MarRef) garnered over 450,000 tweets (Healy *et al.*, 2016). These data hold major empirical value due to their organic nature, recording the 'real-time' unfolding of public debates. Twitter data complement the scope of mass media research with more micro-level insight into individuals' immediate communication patterns.

The current project recruits both newspaper and Twitter data to identify the appeals to nature that surfaced on both sides of the Irish referendum debate. It reports a content analysis that synthesizes quantitative and qualitative techniques to answer the following questions:

1. How frequently do appeals to nature occur in debate about marriage equality?
2. How are appeals to nature distributed across the various 'sides' of the debate?
3. What are the typical objects of appeals to nature?
4. To what rhetorical functions are appeals to nature deployed?

Method

Data collection

Newspapers

The Nexis electronic database of Irish news publications was searched for articles containing the keyword string: `[gay!|OR|lesbian!|OR|same sex|OR|same-sex|OR|homo-sexual!]` AND `[referendum|OR|vote]` AND `[marriage|OR|marriage equality|OR|marry]`. The search was restricted to a 30-day period between 26 April 2015 and 25 May 2015. This incorporates the lead-up and immediate aftermath of the vote (the official referendum campaigns launched on 26 April and results were announced on 23 May). The search produced 1,163 articles. This corpus was then searched for articles containing the additional term `[natur!|OR|unnatur!|OR|biolog!]`. This left 231 articles. Duplicated and irrelevant articles were removed, leaving a usable sample of 158 articles.

Twitter

Historical Twitter data were purchased from a company (Sifter) that archives all public Twitter posts (tweets). Tweets are usually indexed with 'hashtags' indicating specific themes. The company provided a data set of all public tweets published between 26 April 2015 and 25 May 2015 that contained the official referendum hashtag (#MarRef). The data set was restricted to original tweets (i.e., not 'retweets') written in English. The #MarRef data set, numbering 180,929 unique tweets, was searched for tweets containing the keywords: `[nature|OR|natural|OR|naturally|OR|unnatural|OR|unnaturally|OR|biology|OR|biological|OR|biologically]`.² This left a final sample of 574 tweets. Usernames and other metadata were removed. The study received ethical approval from Maynooth University and followed the BPS ethical guidelines for internet-mediated research (Hewson & Buchanan, 2013).

² The electronic Nexis database allows newspaper content to be searched using Boolean operators that truncate search terms (e.g., "natur!"). This facility was not available for the Twitter data, which was delivered in a rich text file. The search strategy therefore involved a simple electronic keyword-search that included all morphological variations on the terms 'nature' and 'biology'.

Data analysis

All articles and tweets referring to nature were imported into ATLAS.ti for content analysis. Content analysis is a commonly used method for analysing textual data, which combines both quantitative and qualitative techniques (Krippendorff, 2004). Each article and tweet represented a single data unit. Data units were coded along two dimensions:

1. The *stance* adopted towards marriage equality, that is pro-, anti- or neutral/unclear. This dimension was coded on an exclusive basis (i.e., each data unit could receive just one code).
2. The *object* of the given appeal to nature, that is the phenomenon deemed natural. These codes were identified based on initial readings of the data and are presented in Table 1. This dimension was not coded exclusively, that is if an article/tweet attributed multiple phenomena to nature, it could receive multiple corresponding codes.

To assess reliability of the researcher's coding, approximately 10% of the data (19 articles, 59 tweets) was additionally coded by a second independent coder according to the above two dimensions. All codes showed satisfactory inter-rater reliability, with Cohen's κ values ranging from .75 to 1.00. ATLAS.ti's code frequency and co-occurrence tools were used to identify links between codes and compare their relative prevalence across the data.

The following section first presents the code frequencies. In accordance with the criterion that good qualitative analysis displays 'thick description' (Gaskell & Bauer, 2000; Lincoln & Guba, 1985) – that is a detailed account of the data's meaning in context – it then provides a descriptive account of the content that comprised each code, supported by illustrative quotes. Given the context of data production, where authors were explicitly engaged in public debate regarding a yes/no referendum, particular attention is paid to the data's rhetorical dynamics. That is, the analysis focuses on how appeals to nature were recruited to *persuade* readers of a particular position (Leach, 2000). To ensure fair incorporation of different perspectives (Mays & Pope, 2000), the analysis also attends to cases where appeals to nature were challenged or resisted.

The analysis complied with recognized criteria for trustworthy qualitative research (Gaskell & Bauer, 2000; Mays & Pope, 2000), namely systematic data collection, triangulation of multiple data sources, intercoder comparison, procedural transparency, reflexivity, thick description, and attention to deviant cases.

Results

Frequency of appeals to nature

The overall frequency of appeals to nature was estimated by calculating the proportion of data discussing marriage equality in general,³ which included reference to nature or biology. In the newspapers, the keyword-search suggested that 13.6% of the initial corpus of 1,163 articles referred to nature. In the larger Twitter data set, just .3% of all tweets included reference to nature.

³ It is important to note that these data sets do not represent the entirety of Irish media discussion of the referendum. The newspaper data set was restricted to newspapers included in the Nexis database of Irish news publications. Tabloids and free publications are underrepresented in this database. Meanwhile, the Twitter data were restricted to tweets that included the hashtag #MarRef. Undoubtedly there were many tweets that discussed the referendum but omitted this hashtag. However, there is no particular reason to suspect that this biased the results in any particular direction, as the hashtag was used by both sides of the referendum debate alike.

Stance on marriage equality

Almost half (48.7%; $N = 77$) of newspaper articles that made reference to nature were coded as espousing an anti-marriage equality position. Marriage equality was supported by 27.8% ($N = 44$) of articles. The stance of 23.4% ($N = 37$) was judged neutral or unclear.

Among the tweets making reference to nature, similar numbers supported (43.9%; $N = 252$) and opposed (42.7%; $N = 245$) marriage equality. A minority (13.4%; $N = 77$) of tweets was coded as neutral or unclear.

Objects of appeals to nature

Appeals to nature predominantly occurred in relation to four phenomena: parenthood, traditional marriage, gender, and homosexuality (Table 1).⁴ Figures 1 and 2 demonstrate how these natural claims were distributed across data units (articles and tweets respectively) that were hostile, supportive, or neutral regarding SSM.

Table 1. Most common objects of appeals to nature

Object of appeal to nature	Data set	N	% of data set	Example
Parenthood	Newspapers	86	54.4	'it is in the best interests of children and of society to promote and protect the model of children being born and raised in a family with their biological parents.' [1:26] ⁵
	Twitter	197	34.3	'ideal scenario is biological parents since natural instincts lower risk of abuse' [2:436]
Traditional marriage	Newspapers	57	36.1	'Marriage is specifically heterosexual by nature. Let's keep it that way' [1:78]
	Twitter	85	14.8	'Marriage affirms that nature has designed men and women to procreate and form families' [2:100]
Gender	Newspapers	27	17.1	'The complementarity of the sexes is not a doctrinal invention of any religion but is the basic self-evident biological fact of nature' [1:24]
	Twitter	27	4.7	'It's natural law that the sexes have different instincts that complement each other' [2:104]
Homosexuality	Newspapers	15	9.5	'same sex orientation is part of the natural order' [1:54]
	Twitter	56	9.8	'to be gay is a natural thing' [2:297]

⁴ A variety of other phenomena (e.g., desire to marry, equality, national character) were occasionally naturalised; however, these are not discussed here due to their very low frequencies (< 10 articles/tweets).

⁵ The numbers after quoted text identify the data set (1 = newspapers, 2 = Twitter) and data unit (i.e., specific article/tweet) from which the quote was taken. Quotes from newspaper articles are reprinted verbatim. Due to ethical considerations when analysing social media data, any quoted tweets are slightly paraphrased. This is in line with social media research guidelines from the British Psychological Society (Hewson & Buchanan, 2013) and American Psychological Association (Kraut et al., 2004), which suggest that to minimise the risk that quoted text can be traced back to its author via search engines, quotations should be slightly altered. In this study, this was primarily achieved by replacing certain words with synonyms and re-ordering clauses. Changes were minimal and the meaning and tone of all quoted tweets was preserved.

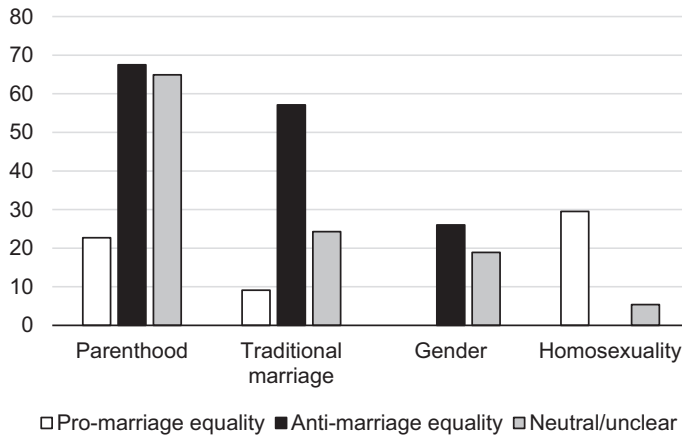


Figure 1. Percentage of neutral, pro-, and anti- marriage equality articles that contained the various appeals to nature.

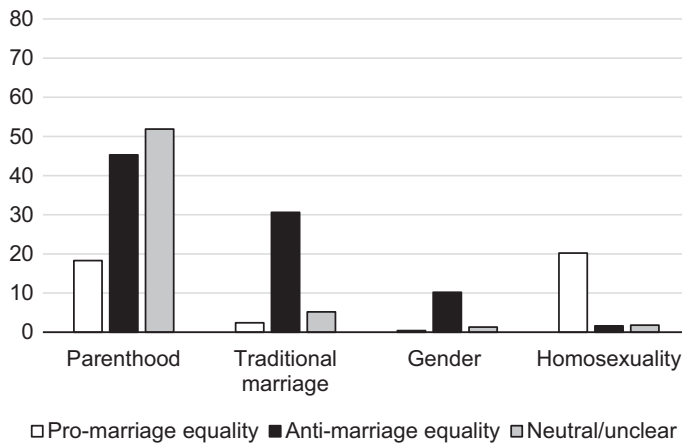


Figure 2. Percentage of neutral, pro-, and anti- marriage equality tweets that contained the various appeals to nature.

Parenthood

Reference to the biological basis of parenthood occurred in over half (54.4%) of newspaper articles and approximately one-third (34.3%) of tweets. Figures 1 and 2 show these predominantly materialized in data units displaying negative or neutral attitudes to SSM.

The overriding function of this subset of natural claims was to embed the referendum within a discursive frame of child welfare. Opponents of marriage equality argued that by facilitating more diverse family structures, legalizing SSM would undermine the legal and cultural respect afforded to genetic parent–child relationships. Marriage equality was thereby constructed as a threat to children because parenting based on ‘*natural ties*’ [1:96] was seen as uniquely valuable.

There is no bond equal to the innate natural instincts of a mother and father. [2:53]

Genetic parentage was construed as of pragmatic as well as intrinsic value. Anti-SSM tweets asserted that biological parents are '*naturally primed*' [2:409] or '*genetically predisposed*' [2:432] to deliver more effective parenting. As a result, '*kids brought up by biological parents do better in life*' [2:14]. This purported advantage was sometimes supported by reference to unnamed 'research' or personal testimonies from individuals raised without biological parents, who described their sense of loss. However, these same sources of evidence were also used by marriage equality advocates to counter the premise that biological families supplied superior childrearing. Several articles and tweets stipulated that scientific research had identified no negative effect of same-sex parenting, while children of single or adoptive parents used Twitter to express offence at the implication their upbringing was impoverished.

I'm adopted and don't know who my biological father is. How can you think I'm any lesser because of it? [2:239]

While some SSM critics acknowledged genetically unrelated adults can provide excellent childcare, they portrayed these situations as non-ideal and only acceptable when circumstantially unavoidable. They positioned SSM as deliberately disadvantaging children by depriving them of the optimally healthy environments that natural families conferred.

[...] the general natural law, when not poisoned by aberration, that parenthood by a male and female remains the most balanced, secure and healthy environment for children [1:101]

Specific worries were that adoption or custody proceedings would no longer favour biological parents and that SSM would increase use of alternative procreation technologies. Surrogacy was criticized as an ethically compromised '*commodification of human procreation*' [1:14]. The 'unnatural' basis of alternative reproduction strategies was paramount in worries about their increased prevalence.

A male homosexual couple can only procreate with a donor egg and a surrogate mother. These practices necessarily and deliberately cut the natural ties between a child and his or her biological parent. [1:97]

Supporters of marriage equality objected to these arguments by refuting the relevance of reproduction to the referendum. They characterized the emphasis on surrogacy as '*scaremongering*' [2:213] or a '*Trojan horse*' [1:75] and denied the referendum would alter reproductive norms.

Children will continue to be raised by their natural parents. There won't be a baby-boom among gay couples. [2:147]

At root of the discussion of surrogacy and child welfare was a disputed definition of parenthood. Anti-SSM campaigners constructed true parenthood as essentially and necessarily biological in origin. The notion that sociolegal judgement could override biological fact in determining parental status provoked outrage.

state authorities [...] will dispense "parenthood" in the manner of fuel vouchers [1:55]

Pro-marriage equality commentators, on the other hand, believed genetic relatedness was neither necessary nor sufficient to produce a 'real' parent. Many articles and tweets explicitly separated the criteria of genetic relatedness and quality of parenting, positioning the latter as the key determinant of child welfare.

it is the attachments and bonds formed between a child and parents and not simply the biological link which is crucial to a child's. welfare and development [1:75]

Marriage equality advocates also accused conservatives of hypocrisy in their current valorization of 'natural ties', given the Irish Catholic Church's history of removing children from unmarried mothers. Such comments suggested appreciation of the rhetorical functions of appeals to nature and wariness about their use in political debate.

I get queasy when "nature" and natural law theory are invoked to justify injustice and cement social and religious structures that fly in the face of fairness. It was natural law, after all, that Christian moralists relied on to criminalise homosexual acts and to steal babes from the arms of thousands of "fallen" Irish women. [1:105]

Traditional heterosexual marriage

This form of natural appeal revolved around constructing the traditional institution of marriage as an immutable biological phenomenon. These claims overwhelmingly occurred within data units opposing SSM (Figures 1 and 2). They functioned to justify the status quo by portraying the prevailing definition of marriage as synchronous with human nature.

The natural status of heterosexual unions was usually justified with reference to their capacity for procreation. This was taken as evidence of how relationships were 'meant' to be configured.

Nature designed men & women to procreate and raise children. Marriage affirms this. [2:6]

These data often invoked a teleological view of nature that framed marriage as natural 'law', 'design' or 'order'. These constructions implied supernatural intent, and were often directly interlaced with religious significance. Nature was construed as direct reflection of God's will.

God designed complementary sexes to propagate our species. Same-sex marriage is against natural law. [2:293]

The essentialization of male-female unions was promoted by emphasizing their historical and geographical prevalence, which was interpreted as proof of their natural origin.

Only heterosexual marriage, the basic unit of society, is in accordance with the teaching of the Bible and with nature itself. Marriage therefore is not an arbitrary, man-made idea and has rightly enjoyed privileged status not alone in western society but in societies throughout the world [1:107]

Further contributing to essentialization, commentators constructed heterosexual partnerships as discretely and fundamentally different from homosexual relationships. Several articles posited that because legally recognized marriage requires consummation, same-sex partnerships were excluded by definition, evidently not counting same-sex sexual activity as consummating acts. Marriage was thus '*specifically heterosexual by nature*' [1:78] and the idea same-sex partnerships could be classed as marriage was '*bizarre*' [2:242], '*grotesque*' [1:16], and '*oxymoronic*' [2:89]. SSM opponents believed collapsing both forms of relationship under the single category of 'marriage' would demean the institution.

gay marriage isn't about equality but devaluing all marriage [2:569]

Worries about marriage's expanding boundaries were also visible in 'slippery slope' arguments, which forecast the ultimate legitimation of polygamous, incestuous, and transactional marriages.

When referendum is passed marriage to sibling will be next. No biological objection. [2:75]

Supporters of marriage equality sought to de-essentialize marriage by emphasizing its cultural origins, defining it as '*man-made*' [2:216] or '*a human invention*' [2:86]. They highlighted the institution's historical changes, particularly regarding gender relations and divorce legislation and concluded '*there is no one common definition*' [1:35] of marriage. They also challenged the distinction between heterosexual and homosexual couples by asserting same-sex partnerships display equivalent '*fidelity, commitment and devotion in stable relationships*' [1:98] and deserve equivalent recognition.

The two sides thus diverged in understandings of the boundaries of the marital institution. However, they coincided in valorizing marriage as a uniquely advantageous relationship that benefits individuals and is '*essential to the wellbeing of society*' [1:51]. The rewards and 'special' nature of marriage, exceeding any other form of commitment, were emphasized by those seeking to both retain and expand its definition.

The union of man and woman in marriage is unique, natural, and beautiful, good for individuals, communities and whole societies [2:209]

Married people tend to be healthier, happier and live longer than their non-married fellow citizens. Gay and lesbian Irishmen and Irishwomen need emotional and economic stability as much as anyone else. And when they have it, society benefits. [1:98]

Gender

The third most common form of natural appeal targeted gender roles. These statements usually appeared within arguments against SSM (Figures 1 and 2). They typically implied that due to the fusion of different 'kinds', heterosexual relationships are intrinsically superior to homosexual relationships.

The premise for these claims was that male and female are fundamentally discrete biological categories. Their union in marriage synchronized these two distinct natures.

Man and woman are genetically, biologically and functionally different. Their union as a couple has been the fundamental cornerstone of society from time immemorial. [1:57]

The conceptual frame in which this sex difference was usually explained was 'complementarity', which was characterized as a '*basic self-evident biological fact of nature*' [1:24]. This concept posits that men and women's distinct attributes create a unique synergy, where the strengths of one compensate for the other's weaknesses. As same-sex partnerships cannot achieve the 'wholeness' complementarity allegedly bequeaths, optimally fulfilling relationships require a mixture of sexes. Sex differences were also positioned as benefitting the larger family unit, thereby reinforcing the aforementioned child welfare frame. Mothers and fathers purportedly offered distinct and equally necessary forms of care and '*role models*' [1:6]. As same-sex couples cannot provide both modalities of care, they necessarily represented deficient childrearing contexts.

mums and dads have distinctive characteristics needed by children through the various developmental phases. During infancy, babies of both sexes are in need of both their mother and their father [1:134]

The marriage equality debate prompted some conservative commentators to air their worries about gender developments in contemporary society. Some saw in the referendum campaign the '*imposition of a new theory of gender which says there are no real differences between the sexes*' [1:89]. They portrayed questioning the binary conception of gender as an ideological fad that wilfully denied physical reality.

The underlying momentum behind these legal absurdities may be found in a gender ideology which holds that whether you are male or female is a matter of your own choice. Differences of biological sex are seen as mere accidents which can be manipulated with the help of modern science. [1:99]

Beyond labelling sex differences as 'biological', 'genetic' or 'natural', there was no engagement with any specific evidence from the science of sexual dimorphism. The biological basis of gender was instead evidenced by appeals to divine design or '*common sense*' [1:34]. Yet unlike the naturalized constructions of parenthood and marriage, which were contested by liberal commentators, essentialized representations of gender mostly went unchallenged. Just two articles and one tweet (all pro-marriage equality) problematized gender stereotypes or queried their biological foundations.

Homosexuality

Naturalized constructions of homosexuality were the final form of natural appeal. Unlike the natural claims above, natural accounts of homosexuality were most prominent in media supporting marriage equality (Figures 1 and 2). Their key function was to normalize same-sex attraction as an unremarkable aspect of human variability.

Natural claims regarding homosexuality typically manifested in assertions of innateness as people referred to same-sex attraction as something one was '*born with*' [2:68]. These natural claims were usually deployed in response to perceived instances of homophobia, to invalidate the moralization of homosexuality. Biological attributions rarely took centre stage in constructing justifications for why same-sex couples should be granted marriage rights specifically.

Throughout the data, there was apparent consensus regarding the natural basis of homosexuality. Commentators seldom felt obliged to furnish evidence explicitly justifying statements that homosexuality has biological origins. This was rarely disputed and alternative theories, such as socialization or lifestyle choice, were not proposed. Indeed, numerous anti-marriage equality commentators stipulated that they accepted the *'point that same sex orientation is part of the natural order'* [1:54].

However, agreement that homosexuality was natural did not necessitate positive views towards gay rights. A small number of tweets applied the attribute of natural to construct homosexuality as a disorder.

Homosexual relationships are against the natural order. They are objectively disordered [2:532]

Essentialist representations of homosexuality were sometimes used to accentuate the difference between gay and straight relationships and distance gay individuals from the 'normal' majority.

Gay&straight relationships are never the same. Not what nature intended [2:560]

Some tweets characterized same-sex attraction or relationships as 'unnatural'. This disparaged homosexual relationships in general, as well as SSM specifically.

Man+Woman equals natural, balanced! Man+Man equals unnatural, bad [2:389]

However, such sentiments were rare. Moreover, they usually attracted a succession of responses either affirming the biological basis of homosexuality or contesting the normative import of claims of (un)naturalness. This was often achieved by highlighting aspects of modern life that are accepted despite their 'unnatural' status (*'flying'* [2:495], *'the internet'* [2:486], *'medicine'* [2:447], *'glasses'* [2:434], *'electricity and deodorant'* [2:90]). Such comparisons functioned to imply hypocrisy in those who selectively deployed natural appeals to rationalize their policy preference. Thus, the social media data revealed some reflexivity regarding the rhetorical functions of appeals to nature.

Discussion

The current study illuminates how natural attributions were rhetorically mobilized as SSM was put to public vote in a country struggling to reconcile its conservative Catholic traditions with an increasingly liberal popular culture. The unique case of the Irish referendum offers a valuable opportunity for scholars and activists interested in how public attitudes to marriage equality evolve and produce concrete social change.

Appeals to nature in anti-marriage equality discourse

The analysis shows that appeals to nature were more frequently used by opponents of SSM, who deployed them in three key ways. First, they reconstructed the referendum as a child welfare issue by emphasizing parental genetic relatedness and casting SSM as threatening this. Second, they justified the marital status quo by promulgating essentialist representations of traditional heterosexual marriage. Third, they recruited biological

accounts of gender differences to imply heterosexual relationships are intrinsically superior to homosexual relationships.

These natural claims reflect how opposition to SSM adapts to changing cultural contexts, where more secular liberal norms proscribe outright disapproval of same-sex relationships. With direct objections to expressions of commitment by same-sex couples disallowed, 'family values' is a politically safer domain; in particular, child welfare is an undisputed good. Conservative commentators hitched their arguments to this value, such that much discourse revolved around opposition to same-sex *parenting* rather than the referendum question of SSM. Objections to same-sex parenting were both moral and practical. This accords with Clarke's (2001) study, where people criticized same-sex parenting on grounds both intrinsic (e.g., sinfulness) and pragmatic (e.g., worries about bullying). In the current data, collected 15 years after Clarke (2001), attributions of sinfulness were absent. Recruiting nature, however, allowed the continued assertion of an intrinsic deficiency to same-sex parenting. By valorizing the biological dimension of parenthood, on which same-sex parenting necessarily falls short, the 'stakes' of the referendum became a generation of deprived children. Natural claims were also utilized to assert pragmatic deficiencies: evolutionary principles were invoked to suggest genetically unrelated carers lack the biological imperative to protect children's welfare. Additionally, biologically determinist accounts of gendered parenting styles implied single-sex carers provide deficient and 'imbalanced' childrearing environments.

Duncan and Kemmelmeier's (2012) survey study proposes that much of the controversy SSM elicits arises from the essentialization of marriage itself. The current research confirms such representations are present in real-world debate about SSM. As identified in Edwards' (2007) Australian study, anti-SSM discourses constructed heterosexual marriage as qualitatively different from homosexual relationships. Research shows that perceiving homosexuals and heterosexuals as discretely different predicts more negative attitudes to LGBT rights (Haslam & Levy, 2006; Hegarty & Pratto, 2001a). Naturalistic registers root this distinction in ontological reality, thereby making heterosexual marriage's unique status fixed and immutable (Edwards, 2007). Edwards (2007) also observed a conservative argument that renouncing natural-realist understandings of marriage will unleash an anarchic situation with no social regulation of sexuality whatsoever. This underpins 'slippery slope' arguments, which posit that relaxing marriage's boundaries will ultimately legitimate incestuous, polyamorous, paedophilic, and even interspecies relationships. Such pronouncements indeed materialized in these data. These vilified phenomena were positioned on a continuum with homosexual relationships, with heterosexual marriage segregated as a categorically different entity.

Appeals to nature also targeted the biological basis of gender roles. This aligns with Sullivan-Blum's (2006) interviews with conservative Christians, whose attitudes to sexuality were premised on commitment to an immutable gender binary. The analysis particularly highlights the significance of 'complementarity' in justifying heteronormative standards. This was previously identified by O'Connor and Joffe (2014), who illustrated how media sources reconstructed neuroscientific findings of sexual dimorphism to argue men and women are biologically destined for distinct social roles. The current study shows that besides reinforcing gender inequalities, complementarity is used to demean homosexual relationships by implying they lack the coherence of heterosexual unions. This reinforces previous research demonstrating that responses to sexual orientation cannot be disentangled from understandings of gender (Falomir-Pichastor & Mugny, 2009; Kilianski, 2003; Kite & Deaux, 1987; Sheldon *et al.*, 2007). Notably, while liberal

commentators mounted strong objections to naturalistic accounts of parenting and marriage, there was no such backlash against essentialist representations of gender. The uncontested reinforcement of restrictive gender binaries may be an additional side-effect of naturalistic discourses in SSM debates.

The predominance of essentialist accounts of parenthood, marriage, and gender in anti-SSM discourse is interesting, given that to date, biological attributions for *homosexuality* have been the near-exclusive focus of research on essentialism and sexual prejudice. Minimal research explores the implications of essentialist understandings of marriage, parenthood, or gender in an LGBT rights context. Given their prominence here, research enlightening these discursive strategies is clearly warranted.

Anti-SSM campaigners' focus on naturalizing traditional *heterosexual* family structures is also interesting, given previous research suggesting explanations of group differences preferentially focus on non-normative groups (Hegarty & Bruckmüller, 2013). Typically, lay explanations of sexuality focus disproportionately on 'gayness' over 'straightness', which reinforces essentialist stereotypes by directing attention to the minority group's dispositional traits (Hegarty & Pratto, 2001b, 2004; Hegarty, Pratto, & Lemieux, 2004). The current data's departure from these patterns may reflect a cultural context that discourages explicit judgement of gay relationships. The naturalization of heterosexual family structures could also be conceptualized as rhetorical defence against threatening social change. Falomir-Pichastor and Hegarty (2014) found prejudiced men responded to the threat of growing sexual equality by increasing their endorsement of biological theories of sexuality. Conceivably, essentialist constructions of parenthood and marriage might fulfil similar functions. Indeed, these might be *more* effective defensive strategies if biological theories of homosexuality are already widely accepted, which might impose a ceiling on their effect. This is pertinent given Ireland's Catholic heritage: Catholic doctrine views homosexual inclinations as innate despite deeming homosexual acts sinful. If baseline acceptance of innateness theories of sexuality is high, people may turn to biological accounts of other phenomena to achieve the desired defensive effect. Further experimental research is required to investigate the psychosocial functions of these natural attributions.

Appeals to nature in pro-marriage equality discourse

Research shows biological attributions for homosexuality usually correlate with more positive attitudes to same-sex relationships (Haider-Markel & Joslyn, 2008; Whitehead, 2014; Wood & Bartkowski, 2004). Accordingly, natural claims regarding homosexuality typically occurred in pro-marriage equality articles. However, overall they were not particularly frequent, accounting for approximately one-tenth of references to nature. Moreover, these attributions often manifested as incidental 'asides', rarely occupying focal positions in advancing the rationale for the referendum proposition. The intended function of these attributions was apparently to counter an assumed belief among conservative opponents that homosexuality is unnatural or chosen. Yet the data revealed little evidence for the latter: rather the innateness of homosexuality seemed widely accepted, even among opponents of SSM. The analysis reinforces findings that it is possible to believe homosexuality is natural and maintain opposition to SSM, or indeed use essentialist representations to further stigmatize sexual minorities (Haslam & Levy, 2006; Hegarty, 2002; Kahn & Fingerhut, 2011).

Given this, it is worth considering biological accounts' value for marriage equality campaigns. It remains debatable whether biological determination of sexual orientation

chimes with either scientific evidence (Ashley, 2013) or phenomenological experience (Sullivan-Blum, 2006; Whisman, 1996). Some activists suggest LGBT advocates should maintain commitment to biological causation for strategic purposes, because of its assumed effectiveness eliciting public support (Stein, 2011; Sullivan-Blum, 2006). However, believing homosexuality is biologically ordained does not necessitate tolerant attitudes. Moreover, biological accounts of homosexuality could have harmful secondary effects. Arguably, the impetus to renounce individual control over sexuality implicitly acquiesces with a view of homosexuality as a less legitimate lifestyle. Rooting arguments for equal status in terms of 'we can't help it' could detract from the more fundamental principle that civil rights should be universal, irrespective of a group's origins (Stein, 2011; Walters, 2014; Whisman, 1996). Structuring pro-marriage equality arguments within naturalistic registers may also legitimize their use by anti-SSM campaigners, who can exploit essentialism's system justification effects to reinforce traditional configurations of marriage, families, and gender.

Furthermore, Kitzinger and Wilkinson (2004) argue that naturalization of same-sex partnerships often manifests in contentions they are 'the same' as heterosexual unions, which risks validating heterosexist norms of family life. The current data did suggest that marriage equality advocates engaged in a valorization of marriage itself. Their typical response to opponents' emphasis on genetic parenthood was to assert that two committed parents are sufficient for a nourishing childhood. Privileging monogamous, two-parent families risks marginalizing other family structures and the children residing within them. The data suggest non-traditional families were collateral casualties of the referendum debate, with families of single, separated, and adoptive parents feeling demeaned and excluded by the universal veneration of traditional family structures.

How important are appeals to nature?

The analysis must be qualified by considering the overall importance of appeals to nature in debating SSM. Cole *et al.*'s (2012) media study reported that naturalistic accounts of marriage occurred in half of articles about SSM; however, their expansive definition of a natural claim makes this figure difficult to interpret. The current study restricted analysis to explicit references to nature or biology and found natural claims in a minority (13.6%) of newspaper articles discussing the referendum. They were rarer still on social media, present in just .3% of tweets. The two data sets are not directly comparable due to their different contingencies, particularly the length restriction on tweets. Nevertheless, the results suggest appeals to nature may be more prominent in elite than lay discourse about marriage equality. This vindicates Haider-Markel and Joslyn's (2013) argument for greater attention to biological attributions' role in macro-political processes. However, the rarity of natural claims in lay discourse may also raise queries about their real-world importance. Further research using unobtrusive techniques is required to establish whether the essentialism literature has overemphasized the significance of biological attributions in discourse about groups' rights.

Given the discursive context, where writers were explicitly trying to affect voting intentions, it is likely that commentators employed appeals to nature because they believed in their rhetorical effectiveness. The current study was not equipped to appraise their effects on audience attitudes. However, it is worth noting that despite appropriating most of the debate's references to nature, the anti-marriage equality campaign lost by a sizeable margin. Appeals to nature are certainly not a guaranteed route to rhetorical victory.

Moreover, the data revealed some explicit resistance to natural claims, and a level of reflexivity regarding their rhetorical functions. This was particularly evident in social media, as users reacted to natural claims with ridicule, sarcasm, or outright dismissal. The data showed sensitivity to inconsistencies in how natural appeals were deployed, and interest in exposing the apparent hypocrisy those inconsistencies revealed. This may reflect a 'motivated scepticism' that selectively targeted political opponents: commentators rarely critically evaluated their own use of natural claims. Nevertheless, the presence of resistance shows that appeals to nature are not an inordinately powerful rhetorical resource to which people immediately capitulate. Future research should expand on the discursive strategies whereby people contest natural claims.

Conclusions

A key strength of this study is its ecological validity and real-world relevance. The research moved beyond the laboratory to collect material that was spontaneously generated as people engaged with a political event in which they were deeply invested, and for which stakes were high. As newspaper articles are written by a small minority and Twitter is used more by younger demographics, this content is not representative of the entire population. Nevertheless, its organic quality lends valuable insight into real-world communication patterns. The project's qualitative approach helps deepen and contextualize understanding of how appeals to nature manifest in everyday discourse. The results can also inform future, more controlled research by providing a reference point against which to assess the ecological validity of stimuli and measures.

The Irish referendum offered a unique and timely opportunity to explore the natural claims that surface when marriage equality is put to popular vote. This study corroborates research demonstrating the rhetorical flexibility of biological lay theories, which can be adapted to serve innumerable contextually strategic purposes (Falomir-Pichastor & Hegarty, 2014; Morton & Postmes, 2009; Verkuyten, 2003). The analysis suggests natural claims allow anti-marriage equality campaigners adapt to increasingly liberal cultural norms by avoiding overtly ideological or religious language, lending their arguments an objective sheen. These rhetorical constructions justify rejection of SSM, while simultaneously perpetuating exclusionary representations of family units and gender binaries. However, the analysis also sheds doubt on the overall importance of appeals to nature in marriage equality debates. Appeals to nature were rare, regularly contested, and did not prevent a large majority voting for marriage equality. Further research using unobtrusive techniques is required to determine the true significance they hold in everyday social discourse.

Acknowledgements

This research was made possible through a grant awarded by The Society for the Psychological Study of Social Issues. The author thanks Fiachra O'Connor for research assistance and Prof. Peter Hegarty for valuable comments on an earlier draft of this article.

References

- Armenia, A., & Troia, B. (2017). Evolving opinions: Evidence on marriage equality attitudes from panel data. *Social Science Quarterly*. Advance online publication. doi:10.1111/ssqu.12312

- Ashley, K. B. (2013). The science on sexual orientation: A review of the recent literature. *Journal of Gay & Lesbian Mental Health, 17*(2), 175–182. doi:10.1080/19359705.2013.767179
- Baunach, D. M. (2012). Changing same-sex marriage attitudes in America from 1988 through 2010. *Public Opinion Quarterly, 76*(2), 364–378. doi:10.1093/poq/nfs022
- Becker, A. B., & Scheufele, D. A. (2011). New voters, new outlook? Predispositions, social networks, and the changing politics of gay civil rights. *Social Science Quarterly, 92*(2), 324–345. doi:10.1111/j.1540-6237.2011.00771.x
- Boysen, G. A., & Vogel, D. L. (2007). Biased assimilation and attitude polarization in response to learning about biological explanations of homosexuality. *Sex Roles, 57*, 755–762. doi:10.1007/s11199-007-9256-7
- Brescoll, V., & LaFrance, M. (2004). The correlates and consequences of newspaper reports of research on sex differences. *Psychological Science, 15*, 515–520. doi:10.1111/j.0956-7976.2004.00712.x
- Brumbaugh, S. M., Sanchez, L. A., Nock, S. L., & Wright, J. D. (2008). Attitudes toward gay marriage in states undergoing marriage law transformation. *Journal of Marriage and Family, 70*(2), 345–359. doi:10.1111/j.1741-3737.2008.00486.x
- Butler, J. (1990). *Gender trouble: Feminism and the subversion of identity*. London, UK: Routledge.
- Clarke, V. (2001). What about the children? Arguments against lesbian and gay parenting. *Women's Studies International Forum, 24*(5), 555–570. doi:10.1016/S0277-5395(01)00193-5
- Cole, E. R., Avery, L. R., Dodson, C., & Goodman, K. D. (2012). Against nature: How arguments about the naturalness of marriage privilege heterosexuality. *Journal of Social Issues, 68*(1), 46–62. doi:10.1111/j.1540-4560.2012.01735.x
- Cott, N. F. (2000). *Public vows: A history of marriage and the nation*. Cambridge, MA: Harvard University Press.
- Dar-Nimrod, I., & Heine, S. J. (2011). Genetic essentialism: On the deceptive determinism of DNA. *Psychological Bulletin, 137*, 800–818. doi:10.1037/a0021860
- Duncan, M. L., & Kimmelmeier, M. (2012). Attitudes toward same-sex marriage: An essentialist approach. *Analyses of Social Issues and Public Policy, 12*, 377–399. doi:10.1111/j.1530-2415.2012.01290.x
- Edwards, J. (2007). 'Marriage is sacred': The religious right's arguments against 'gay marriage' in Australia. *Culture, Health & Sexuality, 9*, 247–261. doi:10.1080/13691050601120548
- Elkink, J. A., Farrell, D. M., Reidy, T., & Suiter, J. (2017). Understanding the 2015 marriage referendum in Ireland: Context, campaign, and conservative Ireland. *Irish Political Studies*. Advance online publication. doi:10.1080/07907184.2016.1197209
- Falomir-Pichastor, J. M., & Hegarty, P. (2014). Maintaining distinctions under threat: Heterosexual men endorse the biological theory of sexuality when equality is the norm. *British Journal of Social Psychology, 53*, 731–751. doi:10.1111/bjso.12051
- Falomir-Pichastor, J. M., & Mugny, G. (2009). "I'm not gay.. I'm a real man!": Heterosexual men's gender self-esteem and sexual prejudice. *Personality and Social Psychology Bulletin, 35*, 1233–1243. doi:10.1177/0146167209338072
- Fausto-Sterling, A. (2000). *Sexing the body: Gender politics and the construction of sexuality*. New York, NY: Perseus.
- Friedrich, J. (2005). Naturalistic fallacy errors in lay interpretations of psychological science: Data and reflections on the Rind, Tromovitch, and Bauserman (1998) controversy. *Basic and Applied Social Psychology, 27*(1), 59–70. doi:10.1207/s15324834basps2701_6
- Garretson, J., & Suhay, E. (2016). Scientific communication about biological influences on homosexuality and the politics of gay rights. *Political Research Quarterly, 69*(1), 17–29. doi:10.1177/1065912915620050
- Gaskell, G., & Bauer, M. W. (2000). Towards public accountability: beyond sampling, reliability and validity. In M. W. Bauer & G. Gaskell (Eds.), *Qualitative researching with text, image and sound: A practical handbook* (pp. 336–350). London, UK: Sage.

- Haider-Markel, D. P., & Joslyn, M. R. (2008). Beliefs about the origins of homosexuality and support for gay rights: An empirical test of attribution theory. *Public Opinion Quarterly*, *72*(2), 291–310. doi:10.1093/poq/nfn015
- Haider-Markel, D. P., & Joslyn, M. R. (2013). Politicizing biology: Social movements, parties, and the case of homosexuality. *The Social Science Journal*, *50*, 603–615. doi:10.1016/j.soscij.2013.06.001
- Haslam, N., & Levy, S. R. (2006). Essentialist beliefs about homosexuality: Structure and implications for prejudice. *Personality and Social Psychology Bulletin*, *32*(4), 471–485. doi:10.1177/0146167205276516
- Haslam, N., & Whelan, J. (2008). Human natures: Psychological essentialism in thinking about differences between people. *Social and Personality Psychology Compass*, *2*, 1297–1312. doi:10.1111/j.1751-9004.2008.00112.x
- Healy, G., Sheehan, B., & Whelan, N. (2016). *Ireland says yes: The inside story of how the vote for marriage equality was won*. Sallins, Kildare: Merrion Press.
- Hegarty, P. (2002). 'It's not a choice, it's the way we're built': Symbolic beliefs about sexual orientation in the US and Britain. *Journal of Community & Applied Social Psychology*, *12*, 153–166. doi:10.1002/casp.669
- Hegarty, P., & Bruckmüller, S. (2013). Asymmetric explanations of group differences: Experimental evidence of Foucault's disciplinary power in social psychology. *Social and Personality Psychology Compass*, *7*, 176–186. doi:10.1111/spc3.12017
- Hegarty, P., & Golden, A. M. (2008). Attributional beliefs about the controllability of stigmatized traits: Antecedents or justifications of prejudice? *Journal of Applied Social Psychology*, *38*, 1023–1044. doi:10.1111/j.1559-1816.2008.00337.x
- Hegarty, P., & Pratto, F. (2001a). Sexual orientation beliefs: Their relationship to anti-gay attitudes and biological determinist arguments. *Journal of Homosexuality*, *41*(1), 121–135. doi:10.1300/J082v41n01_04
- Hegarty, P., & Pratto, F. (2001b). The effects of social category norms and stereotypes on explanations for intergroup differences. *Journal of Personality and Social Psychology*, *80*, 723. doi:10.1037/0022-3514.80.5.723
- Hegarty, P., & Pratto, F. (2004). The differences that norms make: Empiricism, social constructionism, and the interpretation of group differences. *Sex Roles*, *50*, 445–453. doi:10.1023/B:SERS.0000023065.56633.cb
- Hegarty, P., Pratto, F., & Lemieux, A. F. (2004). Heterosexist ambivalence and heterocentric norms: Drinking in intergroup discomfort. *Group Processes & Intergroup Relations*, *7*, 119–130. doi:10.1177/1368430204041399
- Hewson, C., & Buchanan, T. (2013). *Ethics guidelines for internet-mediated research*. Leicester, UK: British Psychological Society.
- Hubbard, K., & Hegarty, P. (2014). Why is the history of heterosexuality essential? Beliefs about the history of sexuality and their relationship to sexual prejudice. *Journal of Homosexuality*, *61*(4), 471–490. doi:10.1080/00918369.2014.865448
- Ipsos MRBI (2015). *Social networking quarterly – May 2015*. Retrieved from <http://www.ipsosmrbi.com/social-networking-quarterly-survey-may-15.html>
- Joint National Readership Survey (2014). *Topline report 2013/2014*. Dublin, Ireland: Millward Brown.
- Joslyn, M. R., & Haider-Markel, D. P. (2016). Genetic attributions, immutability, and stereotypical judgments: An analysis of homosexuality. *Social Science Quarterly*, *97*(2), 376–390. doi:10.1111/ssqu.12263
- Jowett, A. (2014). 'But if you legalise same sex marriage...': Arguments against equal marriage in the British press. *Feminism & Psychology*, *24*(1), 37–55. doi:10.1177/0959353513510655
- Kahn, K. B., & Fingerhut, A. W. (2011). Essentialist beliefs and sexual prejudice against gay men: Divergence at the levels of categories versus traits. *Psychology & Sexuality*, *2*(2), 137–146. doi:10.1080/19419899.2010.536562

- Keller, J. (2005). In genes we trust: The biological component of psychological essentialism and its relationship to mechanisms of motivated social cognition. *Journal of Personality and Social Psychology*, 88, 686–702. doi:10.1037/0022-3514.88.4.686
- Kilianski, S. E. (2003). Explaining heterosexual men's attitudes toward women and gay men: The theory of exclusively masculine identity. *Psychology of Men & Masculinity*, 4(1), 37–56. doi:10.1037/1524-9220.4.1.37
- Kite, M. E., & Deaux, K. (1987). Gender belief systems: Homosexuality and the implicit inversion theory. *Psychology of Women Quarterly*, 11(1), 83–96. doi:10.1111/j.1471-6402.1987.tb00776.x
- Kitzinger, C., & Wilkinson, S. (2004). Social advocacy for equal marriage: The politics of "rights" and the psychology of "mental health". *Analyses of Social Issues and Public Policy*, 4(1), 173–194. doi:10.1111/j.1530-2415.2004.00040.x
- Klarman, M. J. (2012). *From the closet to the altar: Courts, Backlash, and the struggle for same-sex marriage*. Oxford, UK: Oxford University Press.
- Kraut, R., Olson, J., Banaji, M., Bruckman, A., Cohen, J., & Couper, M. (2004). Psychological research online: Report of Board of Scientific Affairs' Advisory Group on the Conduct of Research on the Internet. *American Psychologist*, 59, 105. doi:10.1037/0003-066X.59.2.105
- Krippendorff, K. (2004). *Content analysis: An introduction to its methodology*. London, UK: Sage.
- Leach, J. (2000). Rhetorical analysis. In M. W. Bauer & G. Gaskell (Eds.), *Qualitative researching with text, image and sound: A practical handbook* (pp. 207–226). London, UK: Sage.
- Lewis, G. B. (2009). Does believing homosexuality is innate increase support for gay rights? *Policy Studies Journal*, 37, 669–693. doi:10.1111/j.1541-0072.2009.00330.x
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Newbury Park, CA: Sage.
- Mays, N., & Pope, C. (2000). Assessing quality in qualitative research. *British Medical Journal*, 320, 50–52. doi:10.1136/bmj.320.7226.50
- McCabe, B. J., & Heerwig, J. A. (2012). Reframing the marriage debate: Wording, context, and intensity of support for marriage and civil unions. *International Journal of Public Opinion Research*, 24(4), 429–449. doi:10.1093/ijpor/edr025
- Moore, G. E. (1903/1960). *Principia ethica*. Cambridge, UK: Cambridge University Press.
- Morton, T. A., & Postmes, T. (2009). When differences become essential: Minority essentialism in response to majority treatment. *Personality and Social Psychology Bulletin*, 35, 656–668. doi:10.1177/0146167208331254
- Morton, T. A., Postmes, T., Haslam, A. S., & Hornsey, M. J. (2009). Theorizing gender in the face of social change: Is there anything essential about essentialism? *Journal of Personality & Social Psychology*, 96, 653–664. doi:10.1037/a0012966
- Moskowitz, D. A., Rieger, G., & Roloff, M. E. (2010). Heterosexual attitudes toward same-sex marriage. *Journal of Homosexuality*, 57, 325–336. doi:10.1080/00918360903489176
- NatCen (2015). *British Social Attitudes: Support for same-sex marriage continues to rise*. Retrieved from <http://www.natcen.ac.uk/news-media/press-releases/2015/may/british-social-attitudes-support-for-same-sex-marriage-continues-to-rise/>
- O'Connor, C., & Joffe, H. (2013). How has neuroscience affected lay understandings of personhood? A review of the evidence. *Public Understanding of Science*, 22, 254–268. doi:10.1177/0963662513476812
- O'Connor, C., & Joffe, H. (2014). Gender on the brain: A case study of science communication in the new media environment. *PLoS ONE*, 9, e110830. doi:10.1371/journal.pone.0110830
- Piskur, J., & Degelman, D. (1992). Effect of reading a summary of research about biological bases of homosexual orientation on attitudes toward homosexuals. *Psychological Reports*, 71, 1219–1225. doi:10.2466/pr0.1992.71.3f.1219
- Prentice, D. A., & Miller, D. T. (2006). Essentializing differences between women and men. *Psychological Science*, 17, 129–135. doi:10.1111/j.1467-9280.2006.01675.x
- Prentice, D. A., & Miller, D. T. (2007). Psychological essentialism of human categories. *Current Directions in Psychological Science*, 16, 202–206. doi:10.1111/j.1467-8721.2007.00504.x
- Rozin, P. (2005). The Meaning of "Natural": Process more important than content. *Psychological Science*, 16, 652–658. doi:10.1111/j.1467-9280.2005.01589.x

- Sheldon, J. P., Pfeffer, C. A., Jayaratne, T. E., Feldbaum, M., & Petty, E. M. (2007). Beliefs about the etiology of homosexuality and about the ramifications of discovering its possible genetic origin. *Journal of Homosexuality*, *52*, 111–150. doi:10.1300/J082v52n03_06
- Stein, E. (2011). Sexual orientations, rights, and the body: Immutability, essentialism, and nativism. *Social Research*, *78*, 633–658.
- Suhay, E., & Jayaratne, T. E. (2013). Does biology justify ideology? The politics of genetic attribution. *Public Opinion Quarterly*, *77*, 497–521. doi:10.1093/poq/nfs049
- Sullivan-Blum, C. R. (2006). “The natural order of creation”: Naturalizing discourses in the Christian same-sex marriage debate. *Anthropologica*, *48*(2), 203–215. doi:10.2307/25605311
- Tworek, C. M., & Cimpian, A. (2016). Why do people tend to infer ought from is? The role of biases in explanation. *Psychological Science*, *27*, 1109–1122. doi:10.1177/09567976166650875
- Verkuyten, M. (2003). Discourses about ethnic group (de-) essentialism: Oppressive and progressive aspects. *British Journal of Social Psychology*, *42*(3), 371–391. doi:10.1348/014466603322438215
- Walters, S. D. (2014). *The tolerance trap: How god, genes and good intentions are sabotaging gay equality*. New York, NY: New York University Press.
- Weiner, B. (1985). An attributional theory of achievement motivation and emotion. *Psychological Review*, *92*, 548–573. doi:10.1037/0033-295X.92.4.548
- Whisman, V. (1996). *Queer by choice*. New York, NY: Routledge.
- Whitehead, A. L. (2014). Politics, religion, attribution theory, and attitudes toward same-sex unions. *Social Science Quarterly*, *95*, 701–718. doi:10.1111/ssqu.12085
- Whitley, B. E. (1990). The relationship of heterosexuals' attributions for the causes of homosexuality to attitudes toward lesbians and gay men. *Personality and Social Psychology Bulletin*, *16*, 369–377. doi:10.1177/0146167290162016
- Wittig, M. (1981/2013). One is not born a woman. In C. R. McCann & S.-L. Kim (Eds.), *Feminist local and global theory perspectives reader* (pp. 246–251). New York, NY: Routledge.
- Wood, P. B., & Bartkowski, J. P. (2004). Attribution style and public policy attitudes toward gay rights. *Social Science Quarterly*, *85*(1), 58–74. doi:10.1111/j.0038-4941.2004.08501005.x

Received 3 October 2016; revised version received 20 December 2016