# RESEARCH ARTICLE



# Understanding a liminal condition: Comparing emerging representations of the "vegetative state"

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#### **Abstract**

Our research explored the social representations of the 'vegetative state' across different cultural (India, Italy, and the UK) and social milieus (left-leaning, right-leaning, and religious/tabloid newspapers). The aim was to discover how public discourse engages liminality between life and death. Qualitative and quantitative text analyses were conducted on news headlines and full-texts from British (n = 300), Indian (n = 300), and Italian (n = 300) newspapers published between January 1990 and June 2019. Our study shows three results: (a) the vegetative state is a potentially global issue that remains discussed with local timing and characteristics; (b) it is commonly represented in eight frames of different resonance across cultural milieus; (c) the news flows are organised on different dimensions (quality, political, and ideological). Results shed light on how liminality is discursively managed by the interplay of cultural resources and social positionings. In particular, this suggests a hitherto unrecognised function of the objectification process: personification as position-taking.

#### **KEYWORDS**

liminality, media analysis, social and cultural comparison, social representations, societal psychology, vegetative state

#### 1 | INTRODUCTION

### 1.1 | A social psychology of liminality

By questioning traditional values and realities concerning gender, borders, identities, life and death, contemporary societies may increasingly face the challenge of understanding liminal entities (Thomassen, 2014). The accentuated plurality of our social worlds indeed offers opportunities to move between different constellations of orders, identities, and roles (Salvatore & Venuleo, 2017). For this reason, some authors consider liminality as being an endemic condition of late modern societies (Greco & Stenner, 2017; Szakolczai, 2017).

Formerly developed by anthropologists (Szakolczai, 2017), the concept of liminality describes the temporary phase of transition from a taken-for-granted order, position, and identity to another (Motzkau & Clinch, 2017). In particular, this liminal period constitutes a condition of "ontological indeterminacy" in which existing values, norms, and prac-

tices (i.e., forms-of-process) are suspended, while new ones are not yet available (Greco & Stenner, 2017, p. 152). By mixing and combining elements and qualities from different forms-of-process, liminality poses a paradox: it "constitutes a sphere of non-exclusion where both/and and neither/nor apply at all once" (Motzkau & Clinch, 2017, p. 271). As such, liminality can be defined as a boundary state or condition which locates social objects "between and betwixt" traditional categories of meaning (Greco & Stenner, 2017). Liminal entities, therefore, break the conventional system of classification that normally places objects, persons, or events in a given cultural space (Turner, 2017). Since liminal entities fall outside the natural and cultural order of things, common sense often perceives them as aberrations or anomalies (Greco & Stenner, 2017). Likewise, the literature on essentialism has shown that objects combining mutually exclusive entities (i.e., hybrids) might be referred to as "monstrosity" (Wagner et al., 2010). Therefore, as Wagner and colleagues argued about hybrids, liminal entities may be considered as being in "a state of non-identity and non-belonging" (2010, p. 232).

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Moreover, liminality extends our understanding of troubled or incomplete transitions, which have become more and more frequent (Salvatore & Venuleo, 2017). To this end, Greco and Stenner (2017) introduced the concept of "liminal hotspot" for circumstances where liminality persists in time and space. These stalled transitions give rise to novel phenomena whose features cannot be understood by any easily recognisable order (Greco & Stenner, 2017).

Social representations theory (SRT), being concerned with how individuals and groups make sense of new realities (Sammut et al., 2015), offers the theoretical, epistemological, and methodological tools to address the conceptual and empirical challenges brought about by liminal hotspots. We argue that, by breaking down taken-for-granted realities, liminal hotspots set paradoxes that can be solved through a collective effort of re-presentation aimed at creating new meanings and taking a position between them. Although SRT holds promise to elaborate liminal hotspots, it does not do so without limitations. For instance, Andreouli et al. (2019) argued that the emergence of new phenomena is lost when their novelty is assimilated into existing and familiar representations. However, since liminal hotspots stimulate a potential but not yet actual occasion for the construction of new representations (Andreouli et al., 2019), they constitute a persisting challenge to any representational process. Therefore, by looking at the elaboration of understanding liminal hotspots comparatively, SRT may trace the processes of adjustment of emerging representations that allow us to cope with liminality.

Our research explores how the social representations of the vegetative state, which creates a liminal state between life and death, are built in the news of different cultural and social milieus: India, Italy, and the United Kingdom (UK). By focusing on this liminal hotspot, we identify the process of familiarisation and meaning-making involved in the social construction of representations that go beyond the traditional categorisation system. We are observing early stages of how in public discourse a dichotomy 'life-death' is unfolded and normalised in a polytomous differentiations between the extremes of 'alive' and 'dead'.

#### 1.2 | A liminal and dilemmatic condition

The vegetative state is a clinical condition in which a patient is in a "transient state of wakefulness without awareness" (West, 2014, p. 7). While some physiological functions are preserved (e.g., sleep-wake cycles, eye movements and spontaneous reflexes), there is no evidence of self and environmental awareness. One year following a traumatic event and 6 months after an anoxic brain injury, a patient's vegetative state is labelled as "permanent"; which implies low chances of recovery (RCP, 2013). This clinical condition was made possible by technological innovations over the past 40 years; improved resuscitation techniques make it possible and feasible to keep a person alive in precarious circumstances. We are dealing with a phenomenon enabled by new technology that would not have to be discussed otherwise. Patients who in the past were pronounced dead after a severe brain injury can now survive while progressing through a coma (Kitzinger & Kitzinger, 2013). So far, this condition is very rare, at around 19 cases per million

population (Bernat, 2012), but this number is likely to grow with the diffusion of medical ICU apparatus, ageing populations, and the deon-tological imperative of preserving and extending life at all cost (Nettleton et al., 2014).

By being intrinsically ambiguous, the vegetative state thus brings ontological (Kaufman, 2005), medical (Schnakers et al., 2009), ethical (Nettleton et al., 2014), and decisional (Kuehlmeyer et al., 2012) dilemmas into modern societies. The liminal condition, in which a person can be considered neither fully alive nor unequivocally dead, challenges notions of life, death, and personhood (Kaufman & Morgan, 2005). As a result, it creates a state of confusion and absence of clear references that legislators, experts, and caregivers struggle to understand and manage (Nettleton et al., 2014).

Moreover, this condition is surrounded by diagnostic uncertainty. For instance, the Minimally Conscious State (MCS) diagnosis was introduced after recognising that some patients show minimal and intermittent signs of consciousness (Giacino et al., 2002). Altogether, coma, the vegetative state, and MCS are labelled as Prolonged Disorder of Consciousness (RCP, 2013). In addition to that, there is the risk of misdiagnosing a patient with the vegetative state instead of Locked-in Syndrome (LIS), a condition in which a patient is aware but incapable of communicating and moving; therefore, unable to prove their own awareness when employing the behavioural scale used for the diagnosis (Laureys et al., 2004). Both MCS and LIS seriously challenge the possibility of a correct diagnosis. For instance, previous research claimed that 43% of patients with a disorder of consciousness are erroneously diagnosed with a vegetative state (Schnakers et al., 2009). Detecting awareness is a relevant issue in the understanding of the vegetative state, and it has been an object of dispute among experts (Cruse et al., 2011).

Additionally, the vegetative state generates questions about end-of-life decision-making (Kuehlmeyer et al., 2012). While one of the main aims of medicine is to preserve life (Kaufman, 2005), concepts of *suffering*, *dignity*, and *quality of life* play an important role (Bradbury, 2012). Moreover, since vegetative state patients live without mechanical support (e.g., ventilators), euthanasia occurs by withdrawing artificial nutrition and hydration (Kuehlmeyer et al., 2012). This adds further doubts over end-of-life decision-making (Holland et al., 2014). For these reasons, assisting a patient in a vegetative state potentially triggers conflicts about meaning and practices, such as care, therapeutic decisions, and treatments withdrawal; issues that in some cases lead to legal conflicts (RCP, 2013).

# **1.3** Research framework: social representations theory

This liminal vegetative state raises the question of how wider society understands it. This issue is usefully framed through the social representations theory (SRT; Howarth, 2006). Indeed, SRT is concerned with how social groups think, shape different ideas, apply values, and engage practices (i.e., representations) around salient, ambiguous, and unfamiliar social objects (Sammut et al., 2015). A social representation is a

social construction making what is unfamiliar familiar (Wagner et al., 1999) by talking, writing, and acting about it in a particular and observable way.

Social representations are built through two socio-cognitive processes: anchoring and objectification. In the former, novel issues are anchored within a known frame of reference. In the latter, this externalisation of an abstract idea or object is achieved by deploying concrete iconic images or familiar metaphors (Sammut et al., 2015). The liminal space between life and death is thereby filled with imagination and semi-technical language.

The main functions of these representations are to achieve social order with shared meaning and to make communication possible (Moscovici, 2008). First, the creation of a social order allows individuals and groups to navigate their material and social reality (instrumental). Second, the making of structured content of words and images provides the vocabulary for communication and interaction, allowing individuals and groups to unambiguously classify and argue an intricate social world (communicative; Bauer & Gaskell, 1999). These two functions of social representations are linked to different sides of the self-other-object relationship, illustrated by the psychosocial triangle (Moscovici, 1972). While the instrumental functions deal with the subject-object relation, the communicative ones relate primarily to the self-other relations (Gillespie, 2008); it is important to recognise that the one does not come without the other: joined-up intentionality requires a common understanding of things. Furthermore, representations come in different modes-habitual behaviour, individual cognition, informal and formal communication—and modalities of words. images or even sound; who knows, we might at some point in the future sing about a vegetative state as composers have put DNA into music (Bauer & Gaskell, 1999). The way to study a social representation is therefore within communication processes and their traces.

#### 1.4 The vegetative state in the mass media

According to Bauer and Gaskell's (1999), studying social representations in the mass media maps the discursive and argumentative resources on which social actors can draw. As Gamson and Modigliani (1989) did for nuclear power, our theoretical perspective does not equate mass media to public perceptions but assumes that media offer powerful insights on how public opinion positions are grounded. Depending on the representation of the atom, general support for nuclear power might be grounded in the discourse of technological progress, or it might be grounded in arguments about a Green energy mix or about National Grandeur. Support might change or not, while the anchoring images and arguments of "what is atomic energy" can change completely. In this very way, we analyse the vegetative state in mass media coverage.

Previous research investigated how media reported controversial stories concerning vegetative state patients. For instance, in reporting Terri Schiavo's case, American newspapers misrepresented the vegetative state by misreporting diagnosis, prognosis, and possibilities of recovering (Racine et al., 2008). An Italian study shows how, in

reporting vegetative state, newspapers avoided giving a precise clinical description of the condition, or misinformed the public while focusing on legal, political, or ethical issues (Latronico et al., 2011). Besides, analysis of British news about neurotechnology showed how media curate the idea of a "technofix" for brain-injuries. They fostered an illusory idea that it will be possible to communicate with brain-injured patients or recover from the condition thanks to the advancement of neuroscience (Samuel & Kitzinger, 2013).

In our opinion, this small but emerging literature has three limits. First, it focuses on patient cases having specific characteristics (e.g., patients' age, having expressed their will, etc.). Second, it ignores how the positioning of news platforms in the public sphere shape different versions of the phenomenon. Third, by taking a deficit perspective of an accuracy test, it highlights the errors in the media discourse. By contrast, with SRT we are primarily concerned with the process of transformation of "expert" knowledge into common sense, thus we are withholding judgement (i.e., public understanding of science) rather than dismissing lay communication a priori as misunderstandings or miscommunications (Bauer, 2015). We want to clarify the functions first before we focus on the disfunctions of public discourse, well recognising that social representations are echo chambers known to cultivate arguments with a confirmatory and motivated reasoning well before the social media platforms created a new language for this process of community formation (Sammut et al., 2021).

To overcome these limits, the present research will focus on two nested comparative dimensions: cultural and social milieus. Indeed, working from a constructionist paradigm, social representations are built within specific cultures and groups (Farr et al., 1984); a representation needs to clarify two types of "of": "of an object" and "of a social milieu". In particular, according to Jovchelovitch and Gervais (1999), representations of health and illness are grounded in different cultures, in which they are constructed through communication processes. Accordingly, our research takes into account the news flow in three countries which had initial public discussions on vegetative state cases: India, Italy, and the UK (Kishore, 2016; Lotto et al., 2012; Wilkinson & Savulescu, 2018). Moreover, the presence of the Vatican and a historically Catholic mentality in Italy, the Anglican-Protestant establishment in the UK, and the non-Western Hindu-Muslim culture of India provide an interesting comparative setting for initial explorations of a matter of pertinent ethical and moral concern. For the analysis of social milieus, we consider different political (left/right-leaning), ideological (religious/secular), and cultural (tabloid/quality) positions as constraints in the production of different social representations (Moscovici, 2008).

## 1.5 | Research aims

Our study compares the social representations of the vegetative state in public discourse as an emerging symbolic resource. This objective is divided into three sub-objectives: (a) gauging the relevance of the vegetative state in the news flow across time and countries; (b) comparing the issue framing across different countries; and (c) exploring



how representations are shaped by different political, ideological, and cultural positioning within the public spheres of India, Italy, and the UK.

### 2 | METHOD

Our methodology consisted of two steps: firstly, constructing a suitable text corpus from mass media reportage and secondly, applying several text analytics procedures by way of method triangulation. Thus, we compare the salience and framing of social representations of the vegetative state across India, Italy, and the UK since 1990.

# 2.1 | Constructing a text corpus

For salience analysis, our corpus involves the entire newshole for each country devoted to the vegetative state between January 1990 and June 2019 (N = 20,073; Italy, n = 10,393; UK, n = 6,699; India, n = 2,981). Articles were retrieved from the Factiva Database<sup>1</sup> by searching for the keyword "vegetative state" and without specifying the newspapers. In other words, we identified and counted all the articles on the topic published in all the available newspapers in the three countries and indexed in the Factiva database. Moreover, following Okoroji et al. (2021), we obtained a proxy for the total newshole published in each country over the period by searching for the word "the" (India, n = 37,828,031; Italy, n = 45,295,616; the UK, n = 98,257,528).

For text analysis, three major newspapers within each country were chosen according to three criteria of stratification: (a) left-leaning newspapers (The Hindu, India; La Repubblica, Italy; The Guardian, UK); (b) right-leaning newspapers (The Times of India, India; Corriere della Sera, Italy; The Daily Telegraph, UK); (c) a religious newspaper (Avvenire, Italy), and two popular newspaper (The Hindustan Times; India; The Sun, UK) (see Billett, 2010; Latronico et al., 2011). News items were retrieved from the Factiva Database by searching for the keyword "vegetative state" in the headlines, and in the body of the text, of the three defined newspapers in each country (the nine newspapers listed above) between January 1990 and June 2019. As a result, in total 2,580 articles were obtained. A stratified subsample of 900 headlines and articles (300 from each country, 100 from each newspaper) were randomly selected (item selected with random numbers) to conduct textual analyses. Representativeness of discourse was guaranteed by selecting a number of articles based on each newspaper's yearly production. Moreover, before conducting analyses, the selected articles were checked for misclassifications within the corpus: all the selected items fitted the research topic. Finally, the present research poses no ethical risks and received approval from the first author's institution because we conducted secondary analyses on publicly available data.

#### 2.2 Data analysis

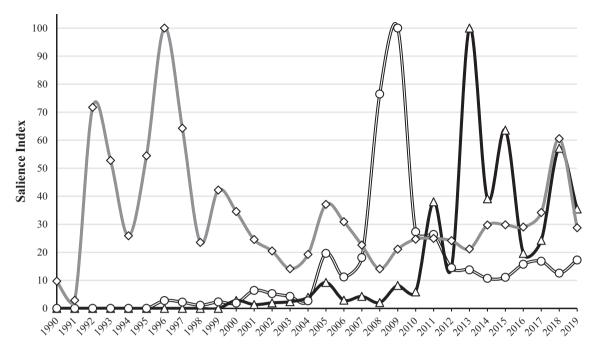
We combined qualitative and quantitative methods to overcome the limitations of each methodology (Bauer & Gaskell, 2000; Colucci & Montali, 2008). We performed a quantitative salience analysis (Bauer et al., 2006), a qualitative framing analysis (Elo & Kyngäs, 2008), and a quantitative lexical analysis (Colombo & Montali, 2010).

The salience of the vegetative state was calculated based on the ratio ( $S_r$ ) between articles devoted to the vegetative state in each year and the total number of articles in each year (see Appendix A). Therefore, increases in the ratio are increases of the salience (Okoroji et al., 2021). The data is plotted as annual salience 1990 to 2019 (standardised to peak year = 100 in each country). Since salience is informative when considered in comparative terms (Bauer & Howard, 2004), two main aspects were explored, *timing* and *peaks* of the news flow. We used years as units of counting in each country, aggregated across all newspapers.

The frames of representation were investigated by identifying and quantifying the meanings conveyed by the articles' titles (Bauer & Howard, 2004). We conceptualised media framing as a selection mechanism to include certain topics in the representation of an object or an issue (Franks et al., 2013). In other words, frames are structures that define feasible arguments for public reasoning by proposing "central ideas", "symbolic devices, "metaphors", and defining "a particular controversy" (Durant, Bauer, & Gaskell, 1998; p. 288). Social representations are therefore characterised by sets of argumentative frames that organise new and familiar topics (Okoroji et al., 2021). Moreover, the differential resonance of these frames across different milieus (Franks et al., 2013) defines different representations. For instance, media discourse may frame politics as a matter of "corruption", defining politicians as "thiefs", and demanding the reduction of parliamentary deputies. This "corruption" frame may resonate among populists, therefore we call it the populist representation of politics. Conversely, the frame of "social progress" may resonate among left-wing militants, who therefore hold on to another representation of politics.

Identifying frames involves classifying ideas, definitions, opinions, metaphors, images, causal, and moral attributions (Entman, 1993). This also allows the exploration of anchoring and objectification processes (Bauer et al., 2006; Schmitz et al., 2003). We focused on headlines because titles are constructed to provide the audience with what is cognitively most relevant for the understanding of the topic (Montali et al., 2013; van Dijk, 2015). Moreover, headlines form a macrocognitive structure that frames readers when processing their reading of the article (Teo, 2000). Accordingly, titles (n = 900) were our unit of frame analysis, and an inductively built codebook was applied (Elo & Kyngäs, 2008; see codebook in the Appendix B). To build the codebook, three independent coders worked separately through explorative coding. The process consisted of a bottom-up coding with the aim of identifying frames of the public discussion on the vegetative state. Throughout this process, subcategories were identified and incorporated into frames. Frames were built by considering both their internal homogeneity-contents that refer to the same central idea (e.g., awakenings referring to the frame "hope")-and their external

 $<sup>^1</sup>$  Factiva Database is a search engine, owned by Dow Jones & Co., and provided by ProQuest Library. This database aggregates contents from both licensed and free sources. It provides access to more than 30,000 sources among newspapers, journals, magazines, etc.) from nearly every country worldwide in 27 languages.



**FIGURE 1** The salience of the vegetative state press coverage across time (1990–2019) and countries (India, Italy, the UK). *Notes*: Salience index ( $S_r$ ) standardised to 0–100 (i.e., the relative peak year, the one in which the proportion of focal articles relative to general articles is highest = 100 in each country); India (Black line; absolute peak, the actual number of focal articles, in 2013 = 767 news items), Italy (Double line, absolute peak in 2009 = 2,223 news items), and the UK (Grey line, absolute peak in 2018 = 857)

heterogeneity, namely contents specific to one frame (e.g., awakenings do not fit into other frames, such as "hopelessness"). After having finally agreed on frames, their definition, and coding rules, coders implemented the codebook. Frames were tested on a sub-corpus of 300 titles to check stability and identify new frames. The modified codebook was then applied to another 100 items to test inter-coder reliability (86% of agreement). Finally, by following the codebook's guidelines, 900 items were assigned to a specific frame. As a result, eight frames and their frequencies were obtained. Different chi-square tests of independence and association strength (Cramers' Phi/V, and Pearson's Contingency coefficient) were calculated to (a) test whether framing varies across countries and (b) identify which differences were statistically relevant. For the latter, each frame was recoded into a binary variable (e.g., 0 = frame absent; 1 = frame present).

To explore how representations are shaped across different social milieus we conducted an Analysis of Lexical Correspondences (ALC) on the corpus of 900 articles by using T-Lab software. T-Lab is a word-driven software based on word frequency distribution (Montali et al., 2011). The outcome of this word-driven, statistical analysis is an automatically generated output that requires interpretation. One of the operations allowed by T-Lab is the ALC, which is a factorial analysis technique that has been widely acknowledged in the analyses of social representations (Brondi & Neresini, 2018; Chartier & Meunier, 2011; Doise et al., 1993). ALC shows differences and similarities among different sub-groups of the corpus by extracting factors that summarise a significant amount of information contained in the textual data and relate this to the extra-textual variables under consideration (i.e., newspaper). The similarities and differences across textual data

are translated in a dispersion graph, where most similar groups are positioned the closest along the axes. Each factor establishes a spatial bi-polar dimension, represented as an axis line, meaning that the lemmas and extra-textual variables on opposite poles exhibit the greatest differences (Colombo & Montali, 2010). In this research, we looked at differences across newspapers within three countries. The software allow us to conduct analyses in both British and Italian thanks to its internal vocabularies. Therefore, ALC was conducted by setting the "newspapers" as the active source variable.

### 3 | RESULTS

#### 3.1 | Media salience

The present analysis shows the intensity of the news coverage of the vegetative state (i.e., salience) across years and countries (Figure 1). By comparing the salience of the vegetative state from 1990 onwards, the Italian press shows the highest overall salience ( $S_r = 1.0$ ; 10,393 articles) followed by the British ( $S_r = 0.5$ ; 6,699 articles) and the Indian ( $S_r = 0.2$ ; 2,981 articles) press. However, changes over time are more revealing than overall intensities when gauging attention cycles.

In the Italian press, the vegetative state first made news in 1996, with a slow start being mentioned less than 10 times per year. After 2005, the coverage reached more than 150 articles. Numbers peaked in 2008 and 2009 when the topic entered in 1,772 and 2,223 articles respectively. This surge can be explained by the case of Eluana Englaro, which triggered a wider public discussion about the

end-of-life theme (Lotto et al., 2012). Although salience decreased after 2009, news attention remained stable at over 300 articles per year. Therefore, Englaro's case is as a watershed event in the Italian discourse. From 2016 onwards, the level of discourse grew again correlated with the parliamentarian debate about the Living-Will Law (approved in December 2017), and discussions of the British and French cases of Alfie Evans and Vincent Lambert (Ciliberti et al., 2018; Wilkinson & Savulescu, 2019).

In Britain, the vegetative state appeared earlier in the news and with higher coverage. British news reported a controversial debate around Tony Bland, who fell into a vegetative state in 1989 and who was allowed to die in 1993: the first right-to-die case in the UK (Dyer, 1993). After this opening event, the vegetative state coverage rose until it reached the first peak in 1996 (181 articles), the year in which Scotland faced its first right-to-die case (Dyer, 1996). Between 1996 and 2004, the coverage fluctuated; a second higher peak in 2005 (309 articles) is explained by the right-to-die debate on Terri Schiavo, a case which crossed over from America (Racine et al., 2008). After 2008, the vegetative state saw a constant growth in news attention until 2018, when it reached a peak of 857 articles, many of them concerning Alfie Evans's legal battle (Wilkinson & Savulescu, 2018).

In the Indian press, references to the vegetative state are negligible until 2005. As in the other countries, India faced a national controversial case, namely Aruna Shanbaug, a nurse who fell in a vegetative state after being raped in 1973; Aruna became an icon because it blended two issues: vegetative state and violence against women. The debate sparked at the end of 2009 with the plea for ending her life (Kishore, 2016). By 2011 the vegetative state was mentioned in 258 articles. Since then, it has maintained a stable though fluctuating presence in the news. The topic reached highest coverage in 2013, with 767 articles. Ultimately, the last two peaks in 2015 (497) and 2018 (464) are explained by Aruna Shanbaug's death from pneumonia, which reignited the debate about end-of-life.

Our salience analysis shows that each country's press discourse opens onto the vegetative state. But in no case is this already a major public debate or controversy. The number of published items is at the level of monthly, rather than weekly or daily news. This indicates that the vegetative state is an emergent issue, of potentially global significance. In each country, the topic was introduced in a controversial case. However, the lack of synchrony in the news coverage of the vegetative state across countries suggests that the vegetative state remains a local issue. Apart from synchronic peaks of different intensity in 2005 and 2018 (only for India and the UK), each country is characterised by a different flow of news salience. Italy has most news items and the highest peak in 2009. This means that over the period studied, the topic of vegetative state resonated more in the Italian press than in the other two countries we compared.

# 3.2 | Media framing of the vegetative state

The media representations of the vegetative state can be characterised by eight frames unevenly shared among the press analysed within the

three examined countries (Figure 2a). Much of the discourse is about *End-of-life mobilisation* (29.7%), which presents the vegetative state as a matter of social mobilisation for or against the *right to die or live*. Indeed, titles contain an explicit or implicit reference to a personal, legal, or political stance within euthanasia debate.

T<sub>1</sub>: Woman appeals for daughter's mercy killing. (India)

T<sub>2</sub>: The right of dying without useless suffering. (Italy)

 $T_3$ : Parents in a legal fight to take brain-damaged son to Vatican doctors. (UK)

Besides, When to end? frame (15.8%) structures the issue in terms of deciding on either withdrawing or keeping life supports to a vegetative state patient. For instance, headlines refer to laws or guidelines, actors, and dilemmas that characterise the decisional scenario.

T<sub>4</sub>: Towards a law on euthanasia. (India)

 $T_5$ : Living-will: it has already been made by two thousand Italians. (Italy)

 $T_6$ : Court decision no longer required in right-to-die cases, judge rules. (UK)

Therefore, much of the discussion on the vegetative state is about the end-of-life issue. In particular, this is shaped by its ideological and practical dimensions. The former delimits the moral boundaries of the end-of-life (i.e., what should be done), the latter defines the space of action in which the choice of ending a life takes place (i.e., what, how, and when it can be done).

Furthermore, *Building hope* (16.1%) is the second most frequent frame and displays the vegetative state in terms of hope and the possibility of coming out of it. For instance, headlines mainly refer to patients' fertility, recoveries (i.e., awakenings), or improvements of their clinical conditions.

T<sub>7</sub>: Aruna's health improves but she's still in ICU. (India)

T<sub>8</sub>: Rosalba's miraculous awakening 45 months after. (Italy)

T<sub>9</sub>: Coma woman has healthy baby. (UK)

Conversely, *No future condition* (11.1%) frames the discussion in terms of hopelessness by ruling out the chance of a positive turn. This picture is drawn through titles that describe the vegetative state as a death-like, miserable, and irreversible condition.

 $T_{10}$ : My brother will never come back. (India)

T<sub>11</sub>: A 15 years long ordeal. (Italy)

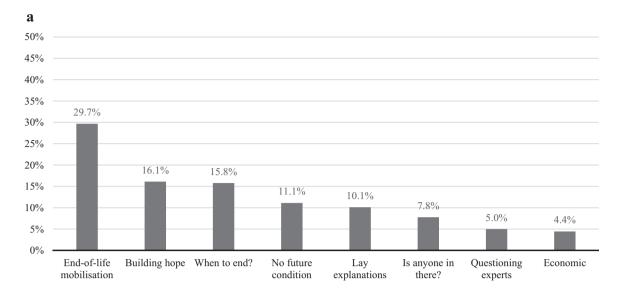
T<sub>12</sub>: Thug victim's living death. (UK)

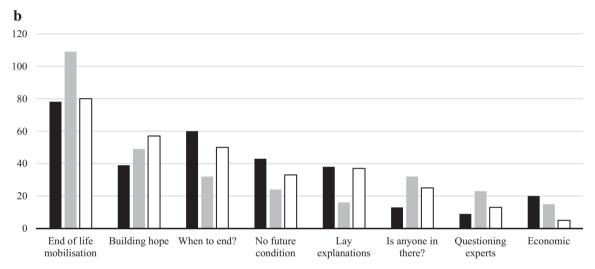
These frames build two antagonistic scenarios that define contrasting possibilities and sentiments. On the one hand, an optimistic representation opens up to a positive evolution of the situation, on the other, a pessimistic one does not allow for any change apart from a slow decay until death. Interestingly, according to titles' frequencies, the vegetative state is more likely to be represented in an optimistic than a pessimistic way.

Another section of the discourse, *Lay explanations* (10.1%), describes an unfamiliar issue by providing explanations of the condition (whether plausible or not) such as causes, portraits or stories of a vegetative state patient, and crime or justice news.

 $T_{13}$ : Patients to face serious results in case of low oxygen levels. (India)

T<sub>14</sub>: Eluana, an Italian story. (Italy)





**FIGURE 2** (a) Frames of the vegetative state. *Notes*: Percentages (Y-axis) were calculated by dividing the frequencies of each frame by the total number of titles (i.e., 900). (b) Framing of the vegetative state across countries. *Notes*: The Y-axis reports frames' absolute frequencies; India (Black), Italy (Grey), and the UK (White).

T<sub>15</sub>: I shot my pal, but I did not murder him. (UK)

The next two frames represent the vegetative state as a dilemmatic condition in which there could still be the possibility of a hidden trace of life. First, *Is anyone in there?* (7.8%) defines the vegetative state as a matter of consciousness. Here the discussion plays around the possibility that a patient is aware, understands, feels or is capable of communicating somehow. Likewise, titles also refer to innovative techniques that should allow experts to detect consciousness or communicate with a patient.

 $T_{16}$ : Man in a vegetative state for 16 years responds to Hitchcock thriller. (India)

T<sub>17</sub>: I played tennis with consciousness. (Italy)

T<sub>18</sub>: Scans find consciousness in brain-injured patients. (UK)

Second, *Questioning experts* (5.0%) characterises the discussion by focusing on science uncertainties and contradictions. This frame highlights the idea that scientists do not have straightforward

explanations of the vegetative state. Headlines doubt experts' knowledge by pointing out diagnostic unreliability (e.g., mistaken diagnosis), medical mistakes and disagreements among experts or between experts and laypeople.

T<sub>19</sub>: Child not in a vegetative state. (India)

T<sub>20</sub>: Eluana can eat. No, she can't. A clash among physicians. (Italy)

 $T_{21}$ : Doctors said she was brain-dead, but I simply refused to give her up. (UK)

The uncertainty expressed by these two frames is held by considering the chance of being conscious in a vegetative state and by delegitimising experts' knowledge. Remarkably, science is portrayed in two different ways within these frames: as a useful tool for discovering awareness and allowing communication or as an unreliable method that may lead to wrong diagnoses. These opposing representations contribute to open dilemmas that foster controversy of the condition



TABLE 1 Chi-square tests of independence between frames and country, relative p, Cramer's Phi and Contingency coefficients

	End of life mobilisation	Building hope	When to end?	No future condition	Lay explanation	Is anyone in there?	Questioning experts	Economic
Pearson chi-square	0.617	4.012	10.101	6.098	11.32	8.582	7.298	9.157
Significance (2-sided)	0.008**	0.135	0.006**	0.047*	0.003**	0.014*	0.026*	0.010*
φ	0.103	0.067	0.106	0.082	0.112	0.098	0.90	0.101
С	0.103	0.067	0.105	0.082	0.111	0.097	0.90	0.10

Note:  $\chi^2$  (2, N = 900); Cramer's Phi =  $\phi$ ; Contingency coefficient = C; \*p < 0.05; \*\*p < 0.01.

In conclusion, *Economic* (4.4%), a rather marginal section of the discourse, provides a material outlook of the vegetative state. Indeed, this frame is about private and social costs in taking care of a vegetative state patient, compensations, and the management of goods and properties.

T<sub>22</sub>: Hospital expenses kept us away, says Aruna' sister. (India)

T<sub>23</sub>: Vegetative state woman has been fired. (Italy)

T<sub>24</sub>: Health trust must pay for brain-damaged to live at home. (UK)

# 3.3 | Divergent media framing across countries

Although the vegetative state is represented through eight common frames, their relative weight varies across Indian, Italian, and British newspapers. Chi-square test revealed a statistical relation between country and framing ( $\chi^2(14, N=900)=57.830, p<0.01$ ; Cramer's V=0.179, C=0.246). This means that specific frames resonate in different ways with each national press outlet. Chi-square tests of independence examined which of these frames are statistically different across countries (Figure 2b and Table 1).

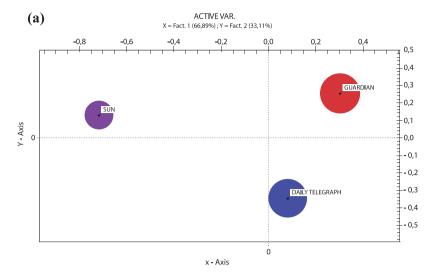
Many news items frame the topic as an end-of-life issue. However, results suggest that different national outlets give different importance to its ideological and practical aspects. The Italian press is more concerned with the End-of-Life mobilisation (40.8%) than the British (30.0%) and Indian (29.2%) ones; both the Indian (42.3%) and the British press (35.2%) are more focused on the When to end? frame than the Italian press (22.5%). Therefore, in Italy the press discourse on the end-of-life has an ideological character (i.e., what should be done); in the other two national press, the issue is framed as a practical one (i.e., what, how, and when can be done). Another difference concerns the prevalence of an optimistic or pessimistic representation of the vegetative state. While across countries there is no significant difference in framing the topic in terms of Building hope, the Indian press is more likely to frame it in terms of No future condition (43.0%) compared to the British (33.0%) and the Italian (24.0%). This suggests that both the British and the Italian press promote a more optimistic view of the vegetative state compared to the Indian one. The Indian press is pessimistic by favouring news that reports the negative outcomes. Furthermore, the Italian and the British press distinguish themselves from the Indian by representing the vegetative state in terms of consciousness. Actually, Italian (45.7%) and British (35.7%) titles frame the readings in terms of Is anyone in there? more frequently than in India (18.6%).

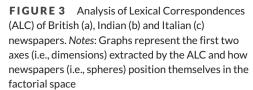
These results show how both Italian and British news represent the vegetative state as an uncertain condition that preserves hidden traces of life. In addition to that, the Italian press depicts the vegetative state in terms of medical uncertainty and controversy featuring *Questioning experts* frame; the Italian press (51.1%) uses this frame more than the British (28.9%) and the Indian (20.0%) respectively. Further, *Lay explanations* is more relevant in India (41.8%) and in the UK (40.7%) than it is in Italy (17.6%). Overall, Indian and British headlines are significantly more concerned with providing explanations for the vegetative state condition. Finally, the vegetative state is represented as an *Economic* matter in India (50.0%) and Italy (37.5%) while it is less so in the UK (12.5%).

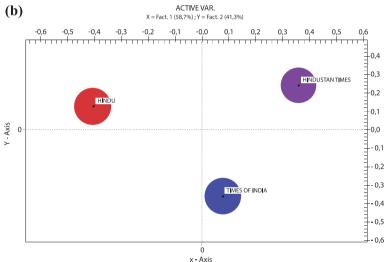
#### 3.4 | Representations in different social milieus

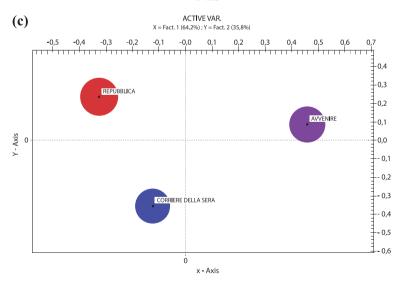
According to our results, newspapers represent the vegetative state around distinct and common contents within and across countries.

The ALC conducted on the sub-corpus of British newspaper extracted two factors (Figure 3a). We focus on the first factor since it explains the majority of the variance (66.9%). The distribution of the newspapers shows a clear distinction between The Daily Telegraph and The Guardian, which are located on the positive polarity of the horizontal axis, and the tabloid The Sun, which is located on the negative polarity of the same axis. The first two are characterised by discourse regarding controversial cases (Tony Bland, Alfie Evans, Hillsborough), therapeutic aspects (Treatment, Hydration, Feeding), end-of-life debate in its decision-making (Euthanasia, Withdrawal, Decision) and legal side (Court, Law, Solicitor). On the other hand, The Sun is concerned with telling the stories of persons (Ashya, Donna, Chico) and about crime and justice news related to a vegetative state patient (Attack, Thug, Jail). By interpreting factor one, the main differences between newspapers' contents vary along with a quality dimension. In particular, quality newspapers, such as The Guardian and The Daily Telegraph, discussed the end-of-life issues by means of personifications such as Tony Bland and Alfie Evans, which objectify the controversial end-of-life debate. Conversely, The Sun popularises the vegetative state by referring to ordinary stories and dramatic vicissitudes of many different persons. This discursive choice brings an extraordinary event, such as the vegetative state, back to everyday categories. Moreover, any reference on end-of-life decision making is absent from the discourse.









The ALC conducted on the sub-corpus of the Indian newspapers extracted two factors (Figure 3b). We focus on the first factor since it explains the majority of the variance (58.7%). The distribution of the newspapers shows a clear distinction between *Hindustan Times* and *Times of India*, which are located on the positive polarity of the hor-

izontal axis, and *The Hindu*, which is located on the negative polarity of the same axis. The first two are characterised by discourse regarding end-of-life (Euthanasia, Living Will, Passive) controversial cases (Aruna Shanbaug, Ward, Nurse), and alternative treatments (Stimulation, tDCS, Neurosurgery). Conversely, *The Hindu* frames the

discourse in terms of economic (Rupees, Compensation, Awards) and social justice (Police, Crime, Rape). By interpreting factor one, the main differences between newspapers' contents vary along with a political dimension. As noticed for the British press, the discussion around the end-of-life in *The Times of India* and *The Hindustan Times* is objectified through means of personification, namely Aruna Shanbaug. Conversely, *The Hindu* neglects discourse on the end-of-life decision-making and it focuses on tangible references to economic and justice issues.

The ALC conducted on the sub-corpus of Italian newspaper extracted two factors (Figure 3c). We focus on the first factor since it explains the majority of the variance (64.2%). The distribution of the newspapers shows a clear distinction between La Repubblica (centreleft) and Corriere della Sera (centre-right), which are located on the negative polarity of the horizontal axis, and Avvenire (religious), which is located on the positive polarity of the same axis. The first two newspapers are characterised by discourse regarding controversial cases (Schumacher, Eluana, Beppino), legal (Testament, Living will, Court) and political (Berlusconi, Government, Church) issues. Conversely, the Catholic discourse of Avvenire focuses on persons (Person, Patient, Relative), diagnosis (Diagnosis, Minimal, Disturbs), consciousness (Consciousness, Activity, Communicate), and research (Research, Researcher, Study). By interpreting factor one, the main differences between newspapers contents vary along with secular and religious polarities. As noticed for other national presses, the discussion around the end-of-life in La Repubblica and Corriere della Sera is objectified through means of personification, namely Eluana Englaro and Michael Schumacher. In addition to that, Italian articles are also embedded with the main political actors who take part in the discussion, such as the government and the Catholic Church. Conversely. Avvenire humanises patients and caregivers by affirming the presence of consciousness in the vegetative state and by reporting research studies that detected awareness in patients or showed communication with them. Moreover, the Catholic newspaper promotes a representation that questions scientific knowledge by doubting diagnoses and by appealing to innovative research in the field. These discursive choices aim to provide a representation of the vegetative state that is entrenched with the dimensions of life and hope.

### 4 | DISCUSSION AND CONCLUSION

The present research explored emergent social representations of the vegetative state in the news flow of three countries. First, we gauged the relevance of these emerging representations in the press discourse. Salience analysis shows how the presence of the vegetative state in the newspapers intensified over *time* and did so in each country. Similarly to what happened with other issues with a scientific angle such as nuclear power and biotechnologies (Bauer, 2015), the vegetative state was introduced into the public debate by watershed events, in this case, controversial vicissitudes of afflicted patients. However, the present level of salience bears no comparisons with the debates of either nuclear power or biotechnology; the vegetative state remains a

low-intensity news item, albeit present in all three contexts. This observation of low intensity but parallelism across context is consistent with a potentially emerging social issue. As argued by Brondi and Neresini (2018), public opinion does not hold defined and systematic representations of an object until it has received major attention from the media. For this reason, the vegetative state should be regarded as an emerging issue in the search of shared understanding. Moreover, since its first appearance in the news, the vegetative state's salience has fluctuated in each country several times over a long-time span. These cycles of attention—linked to specific cases—suggest that common sense has not identified criteria, norms, and practices capable of resolving the liminality of the vegetative state once and for all. Consequently, with news opportunity, the vegetative state gets renewed attention and sparks further discussions that renegotiate meanings and orient public opinion.

Our results also show salience differences across socio-cultural milieus: The vegetative state resonated more in the Italian press than in the other countries. Italy has the highest numbers of newspapers items overall referring to the vegetative state and it has the highest peak of press attention. This might reflect the influence of the Catholic Church in fuelling controversy around an object of moral and ethical sensitivity (Nettleton et al., 2014). A socio-cultural difference is the asynchrony of the newspapers' coverage across countries. The vegetative state is present in the press of all three countries, but at different times; this potentially global issue is discussed by the local newspapers still in local timing (e.g., controversies around a local patient). By comparison, other scientific-technological issues crossed national borders and found synchrony in joint attention as with the Chernobyl (1986) or Fukushima nuclear accidents (2011), or the great GM food debates of the late 1999 and beyond (Bauer, 2015). The vegetative state does not yet see any such global synchrony of attention in the press.

Even though results suggest cultural differences, we do not equate outlets to public opinion nor cultures, a distinction advised previously (Gamson & Modigliani, 1989). The present analysis has focused on the salience of the vegetative state within the press discourse, which as an elite discourse, is clearly only a segment of public opinion or culture, but nevertheless constitutes a significant circulation of signifiers, if not an early warning of an emerging issue. Therefore, future research could address how wider discourse forums may contribute to this public debate (parliamentary debates, broadcasting, social media and so on).

Our second objective was to examine the frames of the representations across three socio-cultural milieus. Our analysis shows that the vegetative state is represented in eight frames accounting for its ethical (Nettleton et al., 2014), decisional (Kuehlmeyer et al., 2012), ontological (Kaufman, 2005) and medical (Schnakers et al., 2009) ambiguities; this set of eight frames is common ground across the three contexts.

The ethical and decisional ambiguities are addressed by the *Endof-life mobilisation* and *When to end?* frames. The former views the vegetative state in ethical terms by reporting different ideological positions that aim at changing or defending the *status quo* of a *right-to-die* or *right-to-live*. The latter views the vegetative state as a decisional

matter by describing the actual and potential options regarding the end-of-life (e.g., living-will, who decides, and decisional dilemmas). Through these two frames, more than one-third of media discourse is making this an end-of-life issue. This evidence confirms previous media analyses (Latronico et al., 2011; Racine et al., 2008). In addition, our analysis deepens the end-of-life issue by highlighting its ethical implications. The literature on liminality has so far argued that, by disrupting a system of reference, liminal hotspots may temporarily paralyse both the social understanding and social action (Greco & Stenner, 2017). Remarkably, our frame analysis points to a representational effort to overcome this paralysis by orienting the re-construction of ethical and practical coordinates. The emerging representations of the vegetative state present two features that typically characterise the psycho-social management of liminal hotspots. Firstly, a polarisation that forces a solution towards either an ethical status quo (e.g., right-to-live) or a shifting of the norm (e.g., right-to-die). Secondly, a pattern-shift that creates "new normativities, capable of embracing a greater degree of complexity, within which the paradox can be resignified" (Greco & Stenner, 2017, p. 155). For instance, by appealing to the rule of individual freedom, the idea of a living-will allows the ethical and legal management of the vegetative state. Consistent with Motzkau and Clinch (2017), our results indicate that liminal hotspots may indeed be the source of novel thinking and regained agency even in contexts of resistance, such as in a society that is primarily oriented towards the preserving of life at all cost (Nettleton et al., 2014).

Then, the ontological and medical ambiguity of this liminal hotspot is absorbed by frames that provide us with understandings of its nature. By not fitting into the conventional system of categories (e.g., alive or dead), the vegetative state activates a meaning-making process that addresses ontological questions about its consequences, causes, and explanations. Firstly, Building hope and No future condition frame the vegetative state in terms of hope and hopelessness. These frames create two opposite scenarios based on outcomes and possibilities. Previous media literature refers here only to an optimistic narrative (e.g., recoveries) (Latronico et al., 2011; Racine et al., 2008; Samuel & Kitzinger, 2013). Moreover, these two frames confirm that liminal hotspots are characterised by the affective volatility which normally accompanies social change (Andreouli et al., 2019; Kofoed & Stenner, 2017). In our particular case, as well as shown by previous literature (Scott Georgsen & Thomassen, 2017), the paradoxical nature of liminality produces multiple and contrasting feelings (e.g. pessimism and optimism) that coexist within each analysed cultural milieu. Secondly, the Lay explanations frame addresses the ontological dilemma by the storytelling of vegetative state patients. In particular, as shown by literature on practitioners (Bird-David & Israeli, 2010), stories have an explanatory function that includes attempts to personify vegetative state patients. This offers us evidence for personification as a form of objectification. Personification indeed transforms anything abstract into something concrete by linking objects, phenomena, or ideas to a named person or group (Moscovici & Hewstone, 1983). Moreover, weaving the vegetative state into stories and cases may also serve to fill the ontological void created by a body which is emptied of its social identity and agency (Bird-David & Israeli, 2010). Our results

show the second meaning of personification: to reanimate the objectified world of science, to re-enchant a disenchanted state (Bangerter & Lehmann, 1997). Thirdly, the *Is anyone in there?* frame addresses the vegetative state by discussing the presence of consciousness in the patients. Attributing awareness to a body may rely on the general human propensity to attribute life to inanimate objects (Heider, 1944). Therefore, affirming awareness reassigns the status of "person" to a vegetative state patient. Conversely, declaring the absence of awareness may reduce it to its materialistic nature as a mere bundle of flesh, which is the precise opposite of personification, a corpse rather than a body.

Ultimately, in *Questioning experts*, healthcare and scientific uncertainties are reported. Medical ambiguity expressed by these two frames contributes to feeding controversy and uncertainty in the understanding of the vegetative state condition. Such articles report a lack of competence in reliably diagnosing the vegetative state and for detecting awareness. Therefore, in dealing with the ontological dilemmas brought about by the liminal hotspot, we observe a tension between lay and expert knowledge as the latter is perceived to be insufficient for providing an understanding of the vegetative state that resolves its paradoxes.

Although different socio-cultural milieus share a common representational template, frames resonate differently across countries' newspapers. According to Gamson and Modigliani (1989), symbolic devices are indeed not equally natural, familiar, and powerful since they rely on broader cultural resources. The different resonance of representational features allows us to characterise the vegetative state along with degrees of controversy and uncertainty. Italian newspapers' discourse is the most controversial. The Italian press is much more concerned with an ethical discussion around the end-of-life theme than the others, which are more interested in its management. This might suggest that while Italy still has to define moral boundaries of ending a life, the others may already consider the issue as morally acceptable. Again, the Catholic, cultural background might account for this difference. Furthermore, the Italian controversy also depicts the vegetative state as an uncertain condition since both "experts" and the "state of awareness" are disputed more frequently than elsewhere. Moreover, the Italian press do not report explanations of the condition. Conversely, Indian newspapers are less uncertain and controversial: experts and awareness disputes resonate significantly less, the vegetative state is more likely couched in pessimistic/realistic terms, and the economic and practical matters are more relevant than in the other contexts. Ultimately, the British news is moderately controversial. While it seems to have gone beyond the moral discussions about ending treatment, it is characterised by the most optimistic representation of the vegetative state and by a moderate interest in the disputes around awareness and experts. These results may be accounted for by historical differences across Italy, Britain, and India, or by features of the analysed news outlets with different traditions of journalism. However, the resonance of frames across countries could also rely on the specific features of the patient cases which prompted much of the discussion. For instance, the patients' age may have influenced the resonance of Building Hope or No future condition frames, since all the cases discussed by each national

press differ along with the age of patients. All these additional factors of history, journalistic practice, and youth of the cases, could contribute to explaining the resonance of frames across countries; newsprints are both an expression of culture and at the same sources of an influence within a culture (Gamson & Modigliani, 1989).

Our third objective was to explore representations across different social milieus. We analysed lexical correspondences across different newspapers within each country. The results show that the national press organises its discourse in relation to different dimensions: a quality dimension (tabloid vs. quality papers) in the UK, a political dimension in India (right vs. left), and an ideological dimension in Italy (secular vs. religious).

Looking at the contents allowed us to interpret similarities and differences by using a dialogical perspective (Marková, 2018). For instance, each national press insists on issues like end-of-life, but Indian and British ones refer to decisional aspects of end-of-life, whereas Italian articles refer to the political debate on it. Our interpretation is that newspapers privilege different contents as an act of position-taking within each public sphere. These position-takings are aimed to define an interest at stake (Doise et al., 1993). Accordingly, newspapers navigate between possible knowledge and discourses, choosing the contents that allow them to build and promote a version of the vegetative state which is coherent with their values and identities. Moreover, although personification feature is present in every country, it draws on different local characters (e.g., Englaro for Italy, Evans for the UK, Shanbaug for India). In our ALC, personification is used across social milieus to take a position on the vegetative state. For instance, media cases in the liberal press ignite public debate on life and death (e.g., Tony Bland, Alfie Evans, Aruna Shanbaug, and Eluana Englaro) showing the existence of different perspectives on this liminal issue. Conversely, the Italian Catholic newspaper refers to ordinary people and their suffering (e.g., patients, caregivers, relatives), and to the presence of consciousness in vegetative state patients. This resolves the intrinsic paradoxes of the vegetative state by humanising it and reaffirming the sacredness of life. In this sense, personification is not neutral, but it strategically promotes different versions of the phenomenon which are coherent with values and identity of a given group.

Therefore, our research shed light on the sense-making processes at work that attempt to deparadoxify liminality. The paradox is indeed discursively managed by the interplay of cultural resources and social milieus. On the one hand, cultures offer representational contents to reduce the worry about a liminal hotspot. On the other, discourse producers (e.g., newspapers) actively drew on these cultural resources by segmenting, selecting, and producing vocabulary, concepts and concerns—to promote a specific version of the phenomenon at stake. For instance, Avvenire-affiliated with the Roman Catholic Churchresolved the paradox of the "object" by representing it as life rather than death. This discursive attempt is clearly a strategy of polarisation. The Catholic press escapes the indeterminacy of the vegetative state by forcing a solution towards the form-of-process which best fits its moral order. In other words, in this case, to resolve liminality meant taking position among a constellation of possible meanings. Conversely, the liberal press seems to be more tolerant of the paradoxes of the liminal hotspot. In particular, by personifying the vegetative state in controversial cases it provides with a common ground, which allows some understanding and communication, but it does not resolve the paradox as yet. By offering an unsettled representation, the liberal discourse keeps the discussion open and set on a path for a potential patternshift.

Thus, social representations theory is a useful paradigm for researching this struggle for meaning in liminality; it guides us to observe empirically and comparatively the emergence of a polytomous constellation of meanings where hitherto there was only a dichotomy "alive" or "dead". On the other hand, looking at representing a liminal hotspot allowed us to identify a novel role for personification as an extension of the objectification function; position-taking has hitherto been only addressed as a feature of anchoring (Doise et al., 1993).

Despite its limitations (see Andreouli et al., 2019), using the SRT approach allowed us to highlight comparatively how liminal hotspots may vary in the degree of paradox across cultural and social milieus. The vegetative state remains paradoxical in the liberal discourse while it is solved in the Catholic press. In other words, our results evidence that de-paradoxyfication relies on different positionings in the public sphere, and that these recruit different representational contents. Moreover, these representations do not settle once for all, but are part of the continuous search for understanding and deliberation regarding an unsolvable enigma of our human existence. As Moscovici and Farr (1984) wrote, SRT considers people in so far as they try "to know and to understand the things that surround them, and try to solve the commonplace enigmas of their own birth, their bodily existence, their humiliations, of the sky above them, of the states of minds of their neighbours and of the powers that dominate them: enigmas that occupy and preoccupy them from the cradle. and of which they never cease to speak" (p. 28; words in italic have been changed into third-person plural by authors). As shown by our research, the vegetative state is such an unsolved enigma that raises fundamental questions for societal debates. It is precisely by looking at this struggle that social psychology grasps the process of continuous reconstruction of our social worlds challenged by liminal hotspots.

#### 4.1 | Limitations and future research

With our results we displayed when and where the vegetative state entered into the public discussion, we showed how the vegetative state is being represented through eight common frames, and we spotted the dimensions along which newspapers organise their representations within each public sphere (ideological, political, and quality). We are hereby aware of some limitations concerning our research. As far as the frame analysis and the ALC are concerned, one main limitation is that we could not take as yet how representations of the vegetative state change over time. The number of news items in our text corpus is not sufficient for a meaningful time comparison with our methodology. However, we provide a baseline for future comparisons of diachronic changes.

A clear limitation is also our Indian sub-corpus. By considering only English-speaking news, we are biasing our take on public opinion towards an elite discourse and against more popular Indian news sources, which are a complex linguistic universe.

Furthermore, a natural extension of the present study would be to investigate other types of discourse (Bauer & Gaskell, 1999); in particular, exploring if the representational templates identified in the media analysis resonate in experts and laypeople conversations. These developments will also contribute to research that explores the relationship between media and public perceptions in the formation of public opinion on an issue such as the vegetative state (see Gamson & Modigliani, 1989). Our current study captures an emerging issue at a notably early stage of a potentially global debate.

Research like this is of crucial importance as moral scoping, since the vegetative state is a growing phenomenon due to ethical imperatives and the technological progress of modern society (Kaufman & Morgan, 2005). More research should explore comparatively how people build up representations of this growing liminal space between "being alive" and "being dead" with semi-technical language, images, and feasible arguments that will guide how people make end-of-life decisions for themselves and for others in the future.

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#### CONFLICT OF INTEREST

The authors declare that they have no conflict of interest whatsoever that is relevant to the publication of the current article.

# DATA AVAILABILITY STATEMENT

Data and outputs of analysis are provided in the supporting information attached to the present article.

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# ETHICAL STATEMENT

The manuscript adheres to ethical guidelines specified in the APA Code of Conduct. The research has been approved by the Ethics Committee of the University of Milano-Bicocca.

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