

Semantic contact and semantic barriers: reactionary responses to disruptive ideas

Alex Gillespie

Revolutions are not only fought in the streets, they are also fought at the level of ideas. I conceptualize how ideas collide in people's thought, talk and texts as *semantic contact*. The focus of my review is to identify how people use *semantic barriers* to subdue disruptive ideas attributed to outgroups in terms of three layers of defense. *Avoiding* entails denying outgroups any perspective. *Delegitimizing* entails acknowledging the perspectives of outgroups but dismissing them as uninformed or deceptive. *Limiting* entails acknowledging some validity in the outgroup perspective but isolating and rationalizing the implications. The reviewed research reveals that the outgroup is not only 'out there' but also lurks within the self's talk and thought, being resisted and suppressed in proportion to its disruptive potential.

Address

London School of Economics and Political Science, United Kingdom

Corresponding author: Gillespie, Alex (A.T.Gillespie@lse.ac.uk)

Current Opinion in Psychology 2020, 35:21–25

This review comes from a themed issue on **Social change (rallies, riots and revolutions)**

Edited by **Seamus Power**

<https://doi.org/10.1016/j.copsyc.2020.02.010>

2352-250X/© 2020 Published by Elsevier Ltd.

Introduction

"The great upheavals [...] of history are the visible effects of the invisible changes of human thought" [1]

Le Bon [1], in his classic text *The Crowd*, realized that a driving force of social change is revolutionary ideas. Before there are riots in the streets, there need to be motivating ideas that legitimize protest. But, revolutionary ideas provoke reactionary responses. What Le Bon failed to realize, or at least acknowledge, was that he himself was fighting against the revolutionary ideas of his time [2]. Le Bon [1], an anti-egalitarian member of the upper classes, dismissed 'equality and liberty' as a

'delusion' (p. 136). His vanguard attack on protestors was to conceptualize them as devoid of reason: 'unconscious and brutal' (p. xiii). These influential, but discredited [3], views have enabled reactionaries and dictators to interpret, manipulate and repress crowds.

Le Bon's text illustrates three concepts. First, within his text, there is a clearly delineated *semantic boundary* between his own views (crowds as 'unconscious and brutal') and the views he attributes to the rioting crowds (they want 'equality and liberty'). Second, along this boundary, there is *semantic contact* wherein his own views clash with the revolutionary ideas he voices in order to quash. Finally, within these moments of semantic contact, he uses *semantic barriers* to limit the disruptive potential of the revolutionary ideas (e.g. describing them as a 'delusion' and 'unconscious').

The target of my review is semantic barriers. After conceptualizing semantic barriers in terms of semantic boundaries and semantic contact, I proceed to review and conceptualize recent research on how people resist revolutionary ideas. Throughout, I will use Le Bon's text as a reference point to illustrate the reviewed concepts and findings.

Semantic boundaries

The distinction between self and other is usually based upon the boundary of the human skin [4]. In terms of the skin, self and other are visually separate, mutually exclusive and bounded loci of experience. However, social neuroscience has shown that the other is not only 'out there', but also psychologically active within the self's cognition, mediating basic processes in social cognition [5]. Equally, survey-based research has found that people do not have only direct perspectives (views, beliefs); they also have metaperspectives (views and beliefs attributed to others) and meta-metaperspectives (e.g. feeling misunderstood) [6,7].

The inadequacy of the skin as the basis for distinguishing self and other is particularly evident in talk [8]. The words we speak are populated by the phrases, quotes and ideas of other people [9–11]. We position ourselves and our views against a semantic field of alternatives [12]; other people's beliefs are landmark reference points in thought [13]. Human talk darts between direct perspectives ('I know'), metaperspectives ('they think') and meta-metaperspectives ('they don't understand'). Moreover, listening to people talk reveals that perspective-taking is not

perspective-accepting; instead, talk creates a perspectival space for thought and debate [11,14]. At the level of meanings, or semantics, the skin is porous, and words and meanings routinely traverse between self and other.

Alongside the dermatological boundary, which constitutes self and other as physically separate loci of experience and action, there is a semantic boundary, which circumscribes the meanings attributed to self and other. Semantic boundaries, unlike dermatological boundaries, are inherently unstable because they entail contact between potentially incompatible meanings.

Semantic contact

Semantic contact refers to the juxtaposition of the views of self with the views of other within a self's stream of thought, talk or text. It is a peculiar variant of semiotic mediation [15,16]. Whereas semiotic mediation refers to the sequential interaction of meanings within a stream of thought, semantic contact focuses on the subset of these interactions in which meanings attributed to others are psychologically active. Semantic contact is not talk about contact; rather, it is the meeting of meanings as it occurs moment to moment.

Semantic contact can be studied in any data in which there is a sequential stream of meanings that engage with meanings attributed to others. The sources of data that can be used are the same as for semiotic mediation: talk [17], diaries [18], talk-aloud protocols [19] and other texts [20].

The method of dialogical analysis [21^{*}] provides a three-step framework for analyzing semantic contact (Table 1). First, the direct perspective of the speaker or writer is identified. Second, the perspectives attributed to others (i.e. metaperspectives) are identified. Third, focusing on the moments of semantic contact (i.e. where direct perspectives are juxtaposed with metaperspectives), the analysis examines reactions to the meanings attributed to others.

Semantic barriers

Semantic contact can be disruptive and threatening, thus provoking defensive reactions. Semantic barriers are meanings used to reinforce the semantic boundary between the self's views and the views of others, thus protecting the self's universe of meaning from being destabilized [22^{*},23]. Although there is a wide variety of semantic barriers [24^{*},25^{*},26], they can be grouped into three layers of defense [27]: avoiding, delegitimizing and limiting. I consider these to be layers because each successive layer requires a breach of the preceding layer (i.e. if avoiding is successful there is no need to delegitimize). As each layer is breached, the disruptive idea is one step closer to having an impact on the semantic universe. Below, I review the literature on each layer of defense (see Table 2).

The first layer of semantic barriers focus on avoiding acknowledgment of the motives, beliefs or feelings of the outgroup. For example, talk and text about refugees and poverty often manage to avoid giving voice to the people concerned, conveniently enabling a conceptualization from the outside [28^{*},29]. Equally, in intergroup dialogue between Greek and Turkish Cypriots, there is a taboo that prohibits any perspective-taking that might lead to a critique of local war heroes [30]. Avoiding is facilitated by semantic structures that frame outgroup members as not having a perspective, being an 'it' rather than a 'thou' [31]. This is done through dehumanization (e.g. representing the outgroup as vermin [32]) and meaning complexes such as 'evil', which, like a force of nature, have no grounding in human reason [33].

The second layer of semantic barriers acknowledge the existence of the outgroup's perspective but work to delegitimize that perspective to such an extent that it can be dismissed. Delegitimizing often begins by emphasizing the subjectivity of the outgroup perspective (e.g. 'they think', 'their perception' [22^{*},34]). Representations of the outgroup as being 'ignorant' of key facts [35], uneducated or untrained [36] are also delegitimizing. These semantic

Table 1

The method of dialogical analysis [adapted from Ref. [21^{*}]]

Analytic step	1) What is the perspective of the self?	2) What perspectives are attributed to others?	3) How does the Self react to the perspectives attributed to others?
Explanation	Identify sentences and phrases that reveal the beliefs and views of the self (direct perspectives).	Identify sentences and phrases that reveal the beliefs and views attributed to others (metaperspectives).	Identify reactions to the sentences and phrases attributed to others.
Operationalization	Explicit espousals ('I think X') and indirect assumptions ('X').	Reported speech and beliefs; direct quotations ('they said 'X') and indirect quotations ('they think X').	Any framing of or reactions to the words and beliefs attributed to others
Example from Le Bon [1]	'In practice the most unjust [law] may be best for the masses' (p. xiv)	'The equal distribution of all products, the elimination of all the upper classes for the benefit of the popular classes, and so on, such are [their] claims' (p. xi)	'Logical argumentation is totally incomprehensible to crowds, and for this reason it is permissible to say that they do not reason' (p. 34)

Table 2

Three layers of semantic barriers [adapted from Ref. [27]]

	Layers of semantic barriers		
	Avoiding	Delegitimizing	Limiting
Definition	The outgroup perspective is not acknowledged	The outgroup perspective is acknowledged, but dismissed as invalid	The outgroup perspective is not dismissed, but its impact is limited
Focus	The outgroup is an 'it' without any disruptive ideas	The messenger of the disruptive ideas	The disruptive ideas
Illustrative semantic barriers	Silencing, for example, not attributing any reasons or feelings to the outgroup [28*]	Discrediting by arguing the outgroup is untrained [36] or ignorant [35]	Isolating events as one-off [41] or in the past [45]
	Creating taboos, for example, against criticizing war heroes [30]	Stigmatizing outgroup members and thus dismissing their point of view [37,38]	Dichotomizing with East/West [42] and true/false [24*] oppositions
	Dehumanizing outgroups, for example, as vermin [32] or talking about pork instead of pigs [25*]	Distrusting and doubting the motives and intentions of the outgroup [40]	Rationalizing, for example, describing people in poverty as lazy [44]
Example from Le Bon [1]	Le Bon never mentions the hunger or hardship of the protestors of his day	Crowds are irrational and thus they don't have reasons that warrant consideration	Universal education and suffrage would encourage revolutions

barriers weaken the logical force of disruptive meanings so that they can be 'brushed off' with phrases such as 'who cares?' [26]. Stigmatizing is a more direct attack on legitimacy [37,38] that devalues the outgroup and makes any engagement with their point of view also open to stigma [39]. Finally, attributing an ulterior motive to the outgroup frames their perspective as insincere or even manipulative, thus sowing distrust and making any engagement with their perspective appear dangerous [40].

The final layer of semantic barriers acknowledging (to some extent) the legitimacy of the outgroup perspective, but work to limit its destabilizing impact. These semantic barriers often take the verbal form of 'yes . . . but' [11]. Limiting can be done by arguing that the disruptive perspective is no longer valid, such as when the police in the UK resist allegations of racism by arguing that such critiques are outdated [41]. Another limiting semantic barrier is to dichotomize the semantic field into rigid binaries (e.g. trust/distrust, rational/irrational, informed/ignorant [24*,35,36]) that set the ingroup and outgroup perspectives apart, for example, Muslim immigrants to the UK insisting on a rigid opposition between East and West [42] or people conceptualizing their favorite meat dishes as far removed from the animal welfare issues associated with their production [25*]. Finally, there are many semantic barriers that rationalize the status quo. Reactionaries often argue that proposed changes would cause unintended consequences, be futile or risk undermining another valued goal [43]. Another rationalization is when those who have benefited from institutional arrangements that intensify social inequality argue that those who have not thus benefited are 'lazily scrounging from the rest' [44] or suffer some individual defect [29]. Rationalizations are diverse; for example, Estonians may explain away the feelings of discrimination experienced by Russians in Estonia by arguing that the Russians have become used to privilege [34].

These three layers of semantic barriers are evident in Le Bon's [1] book *The Crowd*. Le Bon's own direct

perspective is that crowds are dangerous and need to be controlled. The metaperspective that he attributes to the masses is thin: he briefly acknowledges that they want 'limitations of the hours of labour, the nationalization of mines, railways, factories, and the soil, the equal distribution of all products, the elimination of all the upper classes for the benefit of the popular classes' (p. xi). These views, attributed to the crowd, are an anathema to Le Bon, who uses semantic barriers to protect his worldview.

First, in terms of avoidance, he never mentions the material motivators of 19th-century riots: poverty, hunger or hardship. Moreover, his whole framing of the protestors as 'guided almost exclusively by unconscious motives' (p. 11) enables him to conclude that 'it is permissible to say that they do not reason' (p. 34). In short, the crowd has no perspective to take.

Second, he delegitimizes the epistemic authority of the crowd. In contrast to his 'purely scientific' (p. iii) approach, crowds are characterized as 'destructive instincts' (p. 27) guided by 'collective hallucinations' (p. 15). They are to be distrusted because their trajectory is 'to utterly destroy society as it now exists' (p. xi).

Finally, he tries to limit the impact of progressive ideas. For example, he argues that education is dangerous because it 'creates an army of proletarians discontented with their lot and always ready to revolt' (p. 54). So powerful is Le Bon's web of semantic distortions that he feels justified in comforting the establishment by stating that 'justice' is not applicable to 'the crowd' and that 'the most unjust may be best for the masses' (p. xiv).

Discussion

Semantic contact provides a novel lens through which to understand and study the clash of perspectives between self and other, ingroup and outgroup. It shifts attention

from the dermatological separation of self and other toward the semantic boundary that separates the ideas of self and other. Studies of semantic contact reveal that the other is active within the self's talk, and reactions to this alterity provide insight into the semantic processes that undermine social change.

Research on semantic barriers explains why, in the clash of ideas, being aware of potentially disruptive ideas does not necessarily lead to cognitive dissonance. Research has shown that when cognitions are dissonant, people are motivated to change their behavior, cognitions or environment [46,47]. But, research has also shown that people are often committed to logically incompatible ideas that do not cause cognitive dissonance [48,49]. The research on semantic barriers explains these contradictory findings with an account of how people can twist and stretch the semantic field so as to remain unperturbed by incompatible perspectives. For example, the semantic magic that turns 'pigs' into 'pork' enables meat-eaters to simultaneously declare a love of animals while eating them [25^{*}]. Similarly, semantic barriers enable politicians to acknowledge people's right to protest while simultaneously instigating laws that transform 'protestors' into 'illegal protestors' or even 'criminals'.

Although semantic barriers ostensibly inhibit dialogue between perspectives, they also paradoxically enable people to begin to acknowledge and talk about disruptive outgroup perspectives. For example, analyses of intragroup communication about the tensions between Greek and Turkish Cypriots have found all three broad types of semantic barriers: avoiding is evident in the taboo against criticizing ingroup war heroes; delegitimizing is evident in accusations of betrayal and foreign influence; and implications are limited by rigid oppositions between perpetrator and victim [24^{*},45]. Together, these semantic barriers inhibit the possibility of dialogue. Yet, as Psaltis [50] argues, these semantic barriers also enable each side to talk about the perspective of the other (otherwise, it would be too threatening). Paradoxically, therefore, by blocking substantive semantic engagement, these barriers also enable some minimal semantic contact.

Researchers have long returned to the classic work of Le Bon to gain insight into the crowd. But, the crowd is only a problem for the establishment. By contrast, for the crowd, the problem is the establishment. Accordingly, I have returned to Le Bon to illustrate how the establishment (represented by Le Bon) avoids, undermines and limits the potential of transformative ideas.

A social psychology of reactionary responses to disruptive ideas has two defining features. First, it takes the establishment, not the crowd, as its object of study. Second, it shifts focus from the dermatological self–other boundary (e.g. the contact hypothesis) to the semantic boundaries that

demarcate disruptive ideas (e.g. the contact of meanings). This semantic level of analysis reveals a battle being waged over what will be heard. When protestors are described in dehumanizing terms, their ideas are being avoided. When they are described as criminals, their ideas are being delegitimized. When their actions are described as futile, the disruptive potential of their ideas is being limited. Each semantic barrier in isolation might seem innocuous, but, when widespread, these barriers can drain the lifeblood, and thus the transformative potential, out of any revolutionary idea. The conceptual framework of semantic contact combined with the method of dialogical analysis aims to make visible this battle of ideas that Le Bon, self-servingly, described as invisible.

Credit author statement

Alex Gillespie is the sole author of the manuscript.

Conflicts of interest statement

Nothing declared.

References and recommended reading

Papers of particular interest, published within the period of review, have been highlighted as:

- of special interest

1. Le Bon G: *The Crowd: a Study of the Popular Mind*. Mineola, NY: Dover; 1896.
2. Reicher S: **'The crowd' century: reconciling practical success with theoretical failure**. *Br J Soc Psychol* 1996, **35**:535-553 <http://dx.doi.org/10.1111/j.2044-8309.1996.tb01113.x>.
3. Stott C, Drury J: **Contemporary understanding of riots: classical crowd psychology, ideology and the social identity approach**. *Public Underst Sci* 2017, **26**:2-14 <http://dx.doi.org/10.1177/0963662516639872>.
4. Farr R: **The significance of the skin as a natural boundary in the sub-division of psychology**. *J Theory Soc Behav* 1997, **27**:305-323.
5. Vogeley K: **Two social brains: neural mechanisms of intersubjectivity**. *Philos Trans R Soc B Biol Sci* 2017, **372**:20160245 <http://dx.doi.org/10.1098/rstb.2016.0245>.
6. Gillespie A, Cornish F: **Intersubjectivity: towards a dialogical analysis**. *J Theory Soc Behav* 2010, **40**:19-46 <http://dx.doi.org/10.1111/j.1468-5914.2009.00419.x>.
7. Livingstone AG, Fernández LR, Rothers A: **"They just don't understand us": the role of felt understanding in intergroup relations**. *J Pers Soc Psychol* 2020 <http://dx.doi.org/10.1037/pspi0000221>. Advance online publication.
8. Marková I: *The Dialogical Mind*. Cambridge, UK: Cambridge University Press; 2016.
9. Bakhtin M: *Speech Genres & Other Late Essays*. Austin, TX: University of Texas Press; 1986.
10. Holt E: **Indirect reported speech in storytelling: its position, design, and uses**. *Res Lang Soc Interact* 2017, **50**:171-187.
11. Castro P, Santos TR: **Dialogues with the absent other: using reported speech and the vocabulary of citizenship for contesting ecological laws and institutions**. *Discourse Soc* 2019 <http://dx.doi.org/10.1177/0957926519889126>.
12. O'Dwyer E, Lyons E, Cohrs JC: **How Irish citizens negotiate foreign policy: a social representations approach to neutrality**. *Political Psychol* 2016, **37**:165-181 <http://dx.doi.org/10.1111/pops.12242>.

13. Gamsakhurdia VL: **Making identity, proculturation in-between Georgianness and Westernness.** *Hum Arenas* 2019, **2**:356-377.
14. Mead GH: *The Philosophy of the Present.* Chicago, IL: Open Court; 1932.
15. Gillespie A, Zittoun T: **Using resources: conceptualizing the mediation and reflective use of tools and signs.** *Cult Psychol* 2010, **16**:37-62 <http://dx.doi.org/10.1177/1354067X09344888>.
16. Wells G: **Semiotic mediation, dialogue and the construction of knowledge.** *Hum Dev* 2007, **50**:244-274 <http://dx.doi.org/10.1159/000106414>.
17. Wagoner B, Gillespie A: **Sociocultural mediators of remembering: an extension of Bartlett's method of repeated reproduction.** *Br J Soc Psychol* 2014, **53**:622-639 <http://dx.doi.org/10.1111/bjso.12059>.
18. Zittoun T, Gillespie A: **A sociocultural approach to identity through diary studies.** In *Cambridge Handbook of Identity.* Edited by Bamberg M, Demuth C, Watzlawick M. Cambridge, UK: Cambridge University Press; 2020.
19. Valsiner J: **Beyond social representations: a theory of enablement.** *Papers on Social Representations* 2003, **12**:7.1-7.16 (<http://www.psr.jku.at/>).
20. Gillespie A, Zittoun T: **Studying the movement of thought.** In *Methodological Thinking in Psychology.* Edited by Toomela A, Valsiner J. Charlotte, NC: Information Age Publishing; 2010:69-88.
21. Aveling E-L, Gillespie A, Cornish F: **A qualitative method for analysing multivoicedness.** *Qual Res* 2015, **15**:670-687 <http://dx.doi.org/10.1177/1468794114557991>.
This methodological article presents a three-step method for identifying semantic contact and semantic barriers.
22. Gillespie A: **Social representations, alternative representations and semantic barriers.** *J Theory Soc Behav* 2008, **38**:375-391 <http://dx.doi.org/10.1111/j.1468-5914.2008.00376.x>.
This theoretical article introduces the idea of semantic barriers.
23. Moscovici S: *Psychoanalysis: its Image and its Public.* Cambridge, UK: Polity; 2008.
24. Avraamidou M, Psaltis C: **Blocking the solution: social representations of threats and (non) dialogue with alternative representations in Greek-Cypriot newspapers during peace negotiations.** *J Theory Soc Behav* 2019, **49**:460-479 <http://dx.doi.org/10.1111/jtsb.12222>.
This empirical article shows how semantic barriers operate in a context of historical conflict.
25. Panagiotou E, Kadianaki I: **From cognitive dissonance to cognitive polyphasia: a sociocultural approach to understanding meat-paradox.** *J Theory Soc Behav* 2019, **49**:235-253 <http://dx.doi.org/10.1111/jtsb.12201>.
This empirical article shows how people separate and neutralize potentially disruptive ideas.
26. Sammut G, Clark M, Kissaun GD: **Dialogue, linguistic hinges and semantic barriers: social psychological uses and functions of a vulgar term.** *J Theory Soc Behav* 2013, **44**:326-346 <http://dx.doi.org/10.1111/jtsb.12045>.
27. Gillespie A: **Disruption, self-presentation and defensive tactics at the threshold of learning.** *Rev Gen Psychol* 2020.
28. veanu VP, de Saint-Laurent C, Literat I: **Making sense of refugees online: perspective taking, political imagination, and internet memes.** *Am Behav Sci* 2018, **62**:440-457 <http://dx.doi.org/10.1177/0002764218765060>.
This empirical article shows how ideas can block perspective-taking online.
29. Vinaya H: **Ideas, narratives and representations of poverty amongst the urban middle class in India.** *J Poverty* 2020, **24**:113-129 <http://dx.doi.org/10.1080/10875549.2019.1668897>.
30. Psaltis C, Beydola T, Filippou G, Vrachimis N: **Contested symbols as social representations: the case of Cyprus.** In *Symbols That Bind, Symbols That Divide.* Edited by Moeschberger SL, Phillips de Zalla RA. Cham, Switzerland: Springer; 2014:61-89.
31. Buber M: *I and Thou.* Edinburgh, UK: T & T Clark; 1958.
32. Haslam N, Loughnan S: **Dehumanization and infrahumanization.** *Annu Rev Psychol* 2014, **65**:399-423.
33. Aune JA: **The argument from evil in the rhetoric of reaction.** *Rhetor Public Aff* 2003, **6**:518-522 <http://dx.doi.org/10.1353/rap.2003.0052>.
34. Kus L, Liu J, Ward C: **Relative deprivation versus system justification: polemical social representations and identity positioning in a post-Soviet society.** *Eur J Soc Psychol* 2013, **43**:423-437 <http://dx.doi.org/10.1002/ejsp.1958>.
35. Sammut G, Sartawi M: **Perspective-taking and the attribution of ignorance.** *J Theory Soc Behav* 2012, **42**:181-200 <http://dx.doi.org/10.1111/j.1468-5914.2011.00485.x>.
36. Batel S, Castro P: **A social representations approach to the communication between different spheres: an analysis of the impacts of two discursive formats.** *J Theory Soc Behav* 2009, **39**:415-433 <http://dx.doi.org/10.1111/j.1468-5914.2009.00412.x>.
37. Kadianaki I, Andreouli E: **Essentialism in social representations of citizenship: an analysis of Greeks' and migrants' discourse.** *Political Psychol* 2017, **38**:833-848.
38. Kadianaki I, Avraamidou M, Ioannou M, Panagiotou E: **Understanding media debate around migration: the relation between favorable and unfavorable representations of migration in the Greek Cypriot press.** *Peace Confl J Peace Psychol* 2018, **24**:407.
39. Goffman E: *The Presentation of Self in Everyday Life.* London, UK: Penguin; 1959.
40. Jovchelovitch S: *Knowledge in Context: Representations, Community and Culture.* London, UK: Routledge; 2019.
41. Morant N, Edwards E: **Police responses to diversity: a social representational study of rural British policing in a changing representational context.** *J Community Appl Soc Psychol* 2011, **21**:281-296 <http://dx.doi.org/10.1002/casp.1074>.
42. Andreouli E: **Identity and acculturation: the case of naturalised citizens in Britain.** *Cult Psychol* 2013, **19**:165-183 <http://dx.doi.org/10.1177/1354067X13478984>.
43. Hirschman AO: *The Rhetoric of Reaction.* Cambridge, MA: Harvard University Press; 1991.
44. Staerklé C: **Social order and political legitimacy.** In *The Cambridge Handbook of Social Representations.* Edited by Sammut G, Andreouli E, Gaskell G. Cambridge, UK: Cambridge University Press; 2015:280-294.
45. Barreiro A, Wainryb C, Carretero M: **Power struggles in the remembering of historical intergroup conflict: hegemonic and counter-narratives about the Argentine "Conquest of the desert."** In *History Education and Conflict Transformation.* Edited by Psaltis C, Carretero M, Cehajic-Clancy S. London, UK: Palgrave Macmillan; 2017:125-145.
46. Festinger L: *A Theory of Cognitive Dissonance.* Stanford, CA: Stanford University Press; 1957.
47. McGrath A: **Dealing with dissonance: a review of cognitive dissonance reduction.** *Soc Pers Psychol Compass* 2017, **11**: e12362 <http://dx.doi.org/10.1111/spc3.12362>.
48. Falade BA, Bauer MW: **'I have faith in science and in god': common sense, cognitive polyphasia and attitudes to science in Nigeria.** *Public Underst Sci* 2018, **27**:29-46 <http://dx.doi.org/10.1177/0963662517690293>.
49. Jovchelovitch S, Priego-Hernandez J: **Cognitive polyphasia, knowledge encounters and public spheres.** In *The Cambridge Handbook of Social Representations.* Edited by Sammut G, Andreouli E, Gaskell G, Valsiner J. Cambridge, UK: Cambridge University Press; 2015:163-178.
50. Psaltis C: **Collective memory, social representations of intercommunal relations, and conflict transformation in divided Cyprus.** *Peace Confl J Peace Psychol* 2016, **22**:19.