Study Protocol for a Systematic Review of Conceptual Approaches and

Operationalizations of Radicalization Facets

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Abstract

Background

This protocol outlines the process for a systematic review with: a) identifying definitions and conceptualizations of radicalization and its determinants paired with b) investigating respectively, valid measures, quantitative empirical research has brought up to capture the phenomenon in question. Determinants of radicalization (comprising psychological, social-psychological or environmental dimensions), as well as outcomes, along the axis of violent, non-violent radicalization, besides non-radicalization are considered eligible. Furthermore, this review attempts to c) characterize how well the identified instruments capture radicalization and d) discern future avenues via an evidence gap map. In addition, as an exploratory part, a co-citation network, investigating the stability and size of schools of thought in the light of radicalization concepts will be conducted.

Methodology

Empirical articles will be screened (first based on title and abstract and then full-text screening) according to inclusion and exclusion criteria relating to the relevance, population, setting and availability of research. Instruments identified will be appraised to establish their reliability and validity. Thereby, extracted data of concepts and operationalizations will inform an evidence structure regarding self-reported, experimental and unobtrusive trace data and reveal gaps in evidence.

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## Introduction

The popularity of the term 'radical' and its derivates bears no relation to its actual explanatory value (Mandel, 2009). A circular argument appears to prevail by which individuals are regarded as radical when they come to hold radical dispositions by the process of radicalization. As a matter of fact, the term taken for itself does not bear any useful meaning, unlike deliberated in the historical and social context of what is considered 'mainstream' or 'normal' in society (Bartlett, Birdwell, & King, 2010; Mandel, 2010). Along these lines, Rabasa and Benard (2014) take this aspect vaguely up as the: "rejection of key dimensions of modern democratic culture of the European value system" (p. 3).

Departing from a conceptual understanding of radicalization the literature proves to be relatively young (Schmid, 2013). Starting with 2004/05 the term has risen to importance in academia and policy-making, offering in particular a lens on 'home-grown' Islamist political violence and investigating root causes, whilst epitomizing the war against terrorism (ibid.). As much as terrorism is oftentimes conceptualized as the outcome of a socialization to extremism in the realms of radicalization (Expert Group, 2008), no consensus as to what constitutes the final state of radicalisation exists. That is to say, the question begs whether cognitive dimensions suffice or the willingness to engage and ultimately extrapolate to violent means is necessary and beyond this, where the line of extremist positions or legitimate opinion on a continuum can be drawn (Horgan, 2008; Neumann, 2013; Vergani et al., 2018).

Notably, Githens-Mazer (2010: 9) further illustrate, in the realm of political science that radicalization serves as a container term:

- "[...] forms of populism related to revolutionary opportunity (Ellner, 2005),

- a revolutionary act in response to declining power (and used interchangeably with 'fundamentalism') (Ferrero, 2005),

- an 'ultra' form, or intensification of existing political orientations and behaviors often typified by a shift from peaceful activity to (ever more) violent 'extremism' (Jenne, 2004) [. . . ]

- the process by which political moderates become militant or increasingly support extremists and their positions, as well as a related sense of reaction to catalyst occasionally described as recruitment (Saad-Ghorayeb, 2003) [...],

- and finally an individual sense of becoming hyper-aware of critical issues, resulting in a 'radical irrationality' and a subsequent willingness to violently act on this awareness (Simon, 1985) [. . . ]"

The latter definitions point to varying degrees of attitudinal and behavioral dimensions supporting violent means. Venturing further, though individuals might hold radical beliefs or for an instance exhibit "online disinhibition" (Suler, 2005), that is to say in the "toxic" manifestation, uninhibitedly express threats of violence and troll in the guise of anonymity, this is neither necessary nor sufficient for embracing violence. On the other hand, though people might engage in violent action, an association to radical frames of reference is not an imperative, as behavior might as well be the product of group dynamics and loyalties (Dzhekova et al., 2016). Therefore, the distinction of individual level radicalization, group and institutional processes, embedded in a complicit environment is rehearsed to capture different levels of explanation (i.e. relating to the micro-, meso- and macro-level) (see Schmid, 2013; Vergani et al., 2018).

Coming to speak of modelling the aforementioned levels of determinants, multiple disciplines have attempted to capture the relationship such as theories stemming from: (a) rational-choice, (b) psychology (psychopathology, social learning, identity theory, paranoia, narcissistic personality, quest for significance) and social-psychological studies (social learning, terror management theory), (c) social-structural theories (social movements, social network theory, relative deprivation), to name a few (see Dzhekova et al., 2016). However, eventually the "specificity" problem as Sageman (2014, p. 11)

coined it, i.e. why a set of individuals get immersed into radical, militant mindsets and embrace violent change whereas others, experiencing similar grievances do not radicalize, particularly with a focus across different radical doctrines, still remains unsolved.

Thus, firstly, it is necessary to conduct a succinct review of how the term is defined in relation to, and distinguished from other related constructs and operationalized. Hence, an exclusive reasoning backward solely from the positive radicalization case and deriving putative trajectories is not apt for deducing, or testing hypotheses of causal mechanisms. It is useful in this review to consider multiple variations of the dependent variable (Githens-Mazer, 2012; LaFree et al., 2018). That being so, it is vital to heed counter-intuitive outcomes, i.e. observations of non-radicalization trajectories, as well as non-violent radicalization and to compare these empirical conditions (Baier, Manzoni & Bergmann, 2016; Githens-Mazer, 2012).

Secondly, determinants of radicalization need to be identified and their respective operationalization to lay the ground to thirdly, examine how well established instruments capture radicalization and further guide the selection of measurement instruments for subsequent research. Though, projects such as the meta-analysis of the EU project Proton (Savona, 2017) on risk factors of radicalization and terrorism, identified potential determinants and their effect sizes, detailed information on the conceptualization and operationalization is beyond the scope. Likewise, systematic reviews that appraise the psychometric soundness of instruments exist, such as the work by Scarcella and colleagues (2016) which investigated risk assessment tools. Their focus rests mainly on self-reported tools assessing attitudes towards terrorism, extremism or radicalization.

This leads to a further rational for a systematic review, relating to a lack in rigorous overviews of modes of data collection comprising: non-obtrusive approaches (such as the usage of trace data or open source data which establish a relation to a theoretical model), self-reporting (e.g. surveys) or experimental endeavors. The overview from Parekh et al. (2018), yields insights into the quality of data collection strategies from social networks concerning jihadist online radicalization.

Notwithstanding, the emphasis has been laid on religious, ideologically motivated radicalization and an integrated view on the relationship of how radicalization has been conceptualized and operationalized is not subject to the inquiry. Adopting a comprehensive overview toward the quantity and quality of evidence on conceptualizations and operationalizations of determinants and outcomes of radicalization, with respect to different sampling modes, offers lenses on clusters of evidence, as well as under-researched areas, which lays the ground for reasoned, evidence-informed choice for further empirical investigation.

## Objectives

The specific research questions present themselves as follows:

a) How is radicalization conceptually defined and operationalized in past studies?

b) How are determinants of radicalization defined and operationalized?

c) How well is radicalization explained based on determinants considered?

d) Which gaps in past research and avenues for the future can be identified?

Additionally, a part for exploratory analysis comprises:

e) Which citation networks can be identified, exploring the stability and size of schools of thought in the light of their respective association with radicalization concepts?

## Method

### Inclusion and Exclusion Criteria

The following inclusion and exclusion criteria lay the rules for the evidence considered admissible.

The first criterion for inclusion into the review is **relevance** of studies comprising:

1. Definitions and conceptual frameworks of radicalization spanning dimensions such as: violently radical, non-violently radical and non-radical manifestations, thus excluding general violence research

2. Conceptualizations of determinants, meaning psychological, social-psychological or conducive environmental dimensions (e.g. respectively: psychological vulnerabilities such as depression or personality traits such as narcissism, cognitive factors such as self-efficacy, or affective factors; group affordances such as identity fusion; or structural conditions such as relative deprivation)

3. Operationalizations of radicalization and determinants: meaning quantitative methods that measure, observe or manipulate the constructs, thus excluding solely theoretical or opinion pieces

The second discriminatory criterion refers to the general **population** comprising:

1. Individuals with radical beliefs, who support terrorist groupings or actions, are in the process of radicalization, are vulnerable to recruitment

2. Individuals who have been radicalized, have been recruited to terrorism, who are in the process of recruitment, who carried out/attempted an act of terrorism

3. Across the spectrum of doctrines (extreme right-wing, extreme left-wing, single issue, religious or ideological extremism)

The third determining factor is the **setting**:

1. The offline and online environment

2. Settings situated exclusively in western democracies (as they are more comparable in macro-level aspects for instance relating to socio-economic factors)

Fourthly, the **availability** of articles is considered in terms of:

1. Peer-reviewed published articles

2. Published in German or English

Lastly, a **date restriction** serves a discriminatory criterion:

1. Following Pape's (2009) argument of the second wave of terrorism studies and the genesis of more methodologies and theoretical foundations starting with 2005, radicalization as a term became more widely used. Therefore, the date restriction was set to: 2005-2018.

**Information Sources**

**Electronic Search Strategy.** The PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) reporting standards are adopted to record the subsequent results of the literature searches and selection decisions in a flow diagram. For the sake of transparency, any changes to the search strategy will be detailed and justified. Retrieved search results will also be saved for subsequent re-analysis (if applicable). A two-stage search strategy was adopted to capture the very core and periphery of radicalization research. The first comprising central databases and journals stemming mainly from terrorism research, psychology, criminology, computer science, sociology and political sciences, whereas the latter comprises the ScienceDirect, Google Scholar, dblp or reference lists, to minimize the risk of excluding relevant studies. An external consultation in optimizing the study eligibility criteria and list of bibliographic databases to be searched will further feed into improving the search strategy.

**Databases** (see Table 1) include (a) PubMed Central (b) dblp (c) PubPsych (d) SSRN (e) arXiv.org (f) IEEE Xplore (g) ScienceDirect (h) ISI Web of Knowledge (i) Google Scholar (j) ACM Digital Library (k) Sociological Abstracts

**Websites** (a) Vox-Pol Network of Excellence (b) ICCT (International Center for Counter-Terrorism) (c) START (National Consortium for the Study of Terrorism and Responses to Terrorism)

**Specific journals**: (a) Perspectives on Terrorism (PT) (b) Journal for De-radicalization (JD) (c) Journal EXIT-Deutschland (JEX) (d) Homeland Security Affairs (e) International Journal of Conflict and Violence (IJCV) (f) Journal of Social and Political Psychology (JSPP) (g) Journal of Strategic Security (JSS) (h) Journal of Human Security (JoHS) (i) Behavioral Sciences of Terrorism and Political Aggression

**Other sources for study identification**: (a) citation list of included studies

(snowball search) (b) citation list of relevant systematic reviews (e.g. Hassan et al., 2018; Scarcella, Page & Furtado, 2016; Vergani et al., 2018) (c) S & T Terrorism Prevention Literature Dashboard (Mendeley)

## Study Selection

**Screening**: After an initial broad single coder screening and exclusion of studies (based on titles and abstracts) with the software Rayyan, further professional multi-coder classification of articles (title and abstracts) is conducted based on the eligibility criteria. As a next step the remaining full-text citations are screened by a single coder for eligibility. In the case of multiple studies reporting results from the same population, precedence is given to the study reporting the main outcomes, further studies are used as supplementary material.

## Data Collection

A general summary of study details is first provided comprising 8 variables (*study ID, author and year, title, discipline, journal, abstract, funding*), these information lay the ground for later exploratory co-citation networks.

Secondly, population characteristics relating to the *country, setting, sample size, gender distribution, and age characteristics*, alongside *the sources of data* are coded.

A further coding sheet differentiates: self-reported data (see Scarcella, Page & Furtado, 2016), experimental manipulations and trace data to inspect their respective general study characteristics. The latter comprise the *study and sample ID, domains, violent/ non-violent radicalization, individual/ group/ environmental level or a combination, conceptualizations of radicalization and determinants, objectives/hypotheses and items/measures.* Domains include (violent, non-violent radicalization, non-radicalization and, among them, the whole dogmatic spectrum). Conceptualizations cover explicit definitions of radicalization and/or its determinants, followed by delineating items if applicable. Characteristics are further enriched for experimental studies through details of experimental manipulations (content, exposure or control groups). Lastly, baring on trace data features touching upon text, link or

metadata categories are added.

Lastly, a fourth coding sheet appraises psychometric properties of the research instruments including: (a) *validity (content, criterion, construct)*, (b) *cultural translation*, (c) *reliability (interrater, test-retest and internal consistency)* (see Appelbaum et al, 2018; Scarcella, Page & Furtado, 2016). For trace data an emphasis is put on accuracy, precision and recall (see Agarwal & Sureka, 2015).

**Method of Synthesis**

First a descriptive overview will be performed comprising an in-depth characterization of: a) concepts, determinants and outcomes of radicalization that emerged, b) limitations of research and relevant research gaps with respect to sampling modes, visualized in an evidence gap map. Lastly, this is followed by a co-citation network as part of an exploratory data analysis.

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Table 1

*Search Queries for Data Bases*

| Data Bases | Hits | Search Queries |
|---|---|---|
| PubMed Central | 8220 | ((((((radicali*) AND extremism) OR terrori*) AND (trait OR profile OR criteria OR scale OR assess* OR "risk factor" OR propensity))) OR radicali*) AND terrori* Filters: Publication date from 2005/01/01 to 2018/12/31 |
| dblp | 38 | radicali |
| PubPsych | 61 | radicalization LA="English" PY>=2005 PY<=2018 radicalization PY>=2005 PY<=2018 LA="German" |
| SSRN | 146 | radicalization |
| arXiv.org | 206 | date_range: from 2005-01-01 to 2018-12-31; all=radicali*; OR all=extrem*; AND all=radicali*; OR all=terror* |
| IEEE Xplore | 53 | (radicali*) filters applied: 2005-2019 |
| ScienceDirect | 378 | terrorism radicalization |
| ISI Web of Knowledge | 462 | TOPIC: (radicali*) AND TOPIC: (extremism) OR TOPIC: (radicali*) AND TOPIC: (terrori*) AND LANGUAGE: (English OR German) Timespan: 2005-2018. Indexes: SCI-EXPANDED, SSCI. |
| Google Scholar | 10 700 | (radicalization extremism terrorism measure instrument determinants outcomes) filter: 2005-2018 |
| ACM Digital Library | 156 | "query": (radicali terror) "filter": "publicationYear":"gte":2005 , owners.owner=HOSTED |
| Sociological Abstracts | 1 772 | search terms: (radicali* AND extrem* OR terror* AND radicali*) filters: NOT (democracy AND feminism AND colonialism AND book reviews AND philosophy AND 20th century AND african americans AND marxism AND sexuality) 2005-2018 |