Measuring Impact, Uncovering Bias? Citation Analysis of Literature on Women in Terrorism

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by Jessica Davis, Leah West, and Amarnath Amarasingam

Abstract

This article examines the research literature on women and terrorism and tries to determine whether there is a lack of research on women and terrorism, and whether this research is well-integrated into the broader research literature in terrorism studies. Literature on women and terrorism was identified using citation chaining and Google Scholar. From there, we categorized this scholarship to evaluate the breadth of the subjects under study. We also counted the citations that each publication received. Our findings suggest that there is a tendency for the literature on women in terrorism to be well cited within the subfield, but that the topic is much less well referenced in other parts of the literature, and is thus poorly integrated into the broader terrorism literature.

Keywords: Women and terrorism, terrorism studies, gender and political violence, literature review

Introduction

Year after year, conflict after conflict, members of the public and the media greet the phenomenon of women engaging in terrorism with surprise, concern, and in some cases, denial.[1] To a lesser extent, counterterrorism practitioners and scholars also view female terrorism as novel.[2] And yet, women have engaged in political violence and specifically terrorism for decades, if not centuries.[3] What accounts for this persistent surprise? Some have argued that there is a lack of research on the topic of women engaging in terrorism, and that is why it is a surprise every time there is a new iteration of it.[4] Or perhaps the surprise relates to the ongoing shock of women breaking traditional gender roles, demonstrating how entrenched those roles are. Of course, men are far more likely to perpetrate acts of terrorist violence and support terrorist groups, although, as more research is done on the role of women, they are being found to be involved in terrorism and violent extremism in numbers and roles that have previously been overlooked.[5] Alternatively, the surprise may be related to another issue, which is the focus of this article: a lack of integration of the literature on women and gender into the broader research on terrorism and political violence.[6] This possible lack of integration has the potential to significantly impact how we understand terrorism and extremism, and how we counter it. Practitioners rely on academic literature to provide a foundation for their counterterrorism and counter-extremism activities. As a result, a lack of integration of this literature into the main terrorism literature may influence how practitioners interpret women as potential perpetrators of violence.

A robust body of literature on women's involvement in terrorism and political violence exists, some of which predates the terrorist attacks of September 11, 2001 and the subsequent explosion in terrorism studies. Particularly notable are the works by Sjoberg & Gentry,[7] Cunningham,[8] Alison,[9] Nacos,[10] and McKay[11] (the most-cited works on the subject). The subfield of women in terrorism has also been studied by Jacques and Taylor.[12] This research article aims to update and expand existing research and demonstrate the depth and breadth of research on women in terrorism, and investigate whether it is indeed a neglected field, or perhaps one that is only ignored.

The Problem

The state of terrorism studies has been written about at some length, notably and recently by Schuurman[13] and Silke and Schmidt-Petersen.[14] However, few systematic reviews have been conducted on the subfield of women and terrorism, and none have measured the impact or influence of the subfield. While some might argue that this is a peripheral issue, noting that terrorism is largely dominated by men, recent research demonstrates

that women play a role in most terrorist groups and that their participation is likely under-reported.[15] As a result, the study of women in terrorism is an increasingly relevant field, and worthy of its own review as a subfield within terrorism studies. Building on earlier meta studies of terrorism literature, this review seeks to track changes in debates on women's roles in terrorism, and understand how research on women in terrorism has been integrated (or not) into the broader terrorism literature. Identifying how women's roles in terrorism have changed (or how our understanding has changed) is important for better understanding and countering terrorism in general, as women's participation can influence terrorist tactics (women are often deployed as suicide bombers), terrorist recruitment, and propaganda, and organizational structures and support roles (such as financing and logistics, areas where women make contributions to terrorist groups), to name a few areas of potential impact.

Methods

In order to understand the state of the subfield on women in terrorism, we undertook a literature review[16] and citation-counting exercise of terrorism research that engages with gender, focusing specifically on the role of women in terrorist groups. We sought to determine if there was: a) an actual lack of research on the topic of women and terrorism, b) what the breadth of that existing research is, and c) whether or not it is integrated into the broader literature on terrorism. We conceptualize the literature on women in terrorism as a subfield of terrorism studies,[17] and one that has considerable overlap with other areas such as studies on masculinities and femininities, as well as other forms of political violence such as civil war. Some of the works included in this study also deal with broader gender issues, and in some cases, women as victims of political violence, but to be included the works had to have a clear nexus to women as perpetrators or supporters of violence.

We identified literature in the subfield on women in terrorism using citation chaining and Google Scholar. From there, we categorized this scholarship to evaluate the breadth of the subjects under study. We also counted the citations that each publication received, focusing on citations within the broader literature on terrorism. We then compared these findings to extant research on the state of the literature on terrorism and women, notably articles by Schuurman,[18] Silke and Schmidt-Petersen,[19] and Jacques and Taylor.[20]

Given our collective familiarity with both the field and subfield, we suspected that the limited consideration of women in the broader literature was not due to a lack of research on the topic, but rather that the subject of women in terrorism is generally excluded from the main field of study, broadly defined as any literature dealing with terrorism. This issue has considerable overlap with other literature on conflict/civil war that has terrorism as a component. The broader field of political violence (particularly in civil wars) also considers the effects of political violence on women. This literature was excluded from this analysis if it only dealt with women as victims of violence (and not as perpetrators). To explore this topic, we hypothesized that:

1)   The broader literature does not integrate research on women in terrorism.

2)   A few thematic and topical issues dominate research in this subfield, which therefore lacks breadth (and potentially explains the lack of integration).

To explore these hypotheses, we sought to measure the integration and breadth of the literature on women in terrorism. To measure integration, we undertook a citation analysis for publications pertaining to women in terrorism. To measure breadth, we categorized those publications by topic, group/ideology, and region of study.

Ultimately, one of the main questions we sought to answer is how influential the scholarly literature on women in terrorism is in relation to the broader literature on terrorism. In seeking out empirical measures of influence, we chose citation counts as opposed to surveys of influence or other potential impact measures.[21] While citations are an imperfect measure, they are critical in terms of understanding and measuring the impact and importance of a topic, and specific scholarly work. As Ponce and Lozano argue, the number of times an article is cited provides a measure of its impact.[22] Citation analysis is important as a scientific, objective, quantitative technique, and is used to evaluate the state of a field or subfield of research.[23]

Defining Scholarship

This article examines the body of scholarly literature about women in terrorism. In our analysis, we focused on books, articles, and papers published in journals, or through academic or semi-academic publishers, both within the core terrorism journals and more broadly. Publications in French, English, and Spanish were considered—those in other languages were excluded from this study due to the first author's linguistic capabilities (or lack thereof).

There is a significant body of more popular literature, as well as grey literature and unpublished theses and dissertations that form the broader literature on women in terrorism. However, the research questions in this study are concerned with scholarly influence, and therefore necessitated a focus on the scholarly literature. As such, popular accounts and narratives were excluded from this study. Excluding some of these works creates a smaller range of literature to review, which is both a detraction and benefit of this study.

Moreover, as the main focus of this research is a concern about citations, and by extension influence, we decided that theses and dissertations would have little of either. Excluding theses and dissertations also significantly reduced the data that needed to be collected to cover a small (and, we assume) less influential body of work.

Defining the Subfield of Women in Terrorism

This research is primarily concerned with literature that deals with women in terrorism. However, because that literature often deals with more than one topic per publication, this subfield also includes a wider variety of topics, including gendered experiences in terrorism and political violence. Some of this literature also includes the role of masculinities and femininities in terrorist groups (and recruitment) and the manipulation of gender roles. However, to be included in our characterization of the "women in terrorism" subfield, the publication had to incorporate at least some data or analysis on women in terrorism. The bulk of this literature deals with women's roles, involvement, and participation in terrorist activity.

We conceive of terrorism as any tactic that meets the definition of terrorism developed for the first author's book[24] which draws heavily on the work of Crenshaw[25], Hoffman[26], and other work.[27] Thus, for this study, we define terrorism as "an act, tactical in nature, that targets civilians, infrastructure, and sometimes military forces." Military targets are included in this definition because the psychological target of these attacks can be the civilian population and because in the modern age of terrorism, military targets are also attacked in their home countries in acts of "domestic" or homegrown terrorism. Groups that employ terrorism as a tactic are not exclusively terrorist groups, however. These groups may fall into the category of insurgent or guerrilla groups, even though they commit acts that are widely perceived as terrorist in nature.[28] As a result, this definition also incorporates work on insurgent or guerrilla groups. While this definition may be overly broad for some forms of research on terrorism, creating significant (and perhaps unhelpful) overlap with insurgencies and civil wars, our intention was to use a broad definition to capture the full extent of the literature on women in terrorism, and to broadly conceive of the field of terrorism studies in order to accurately capture and reflect the influence and impact that the subfield has within the broader field, regardless of how specific authors define terrorism.

A critical emphasis in this research is on the use of violence and support for violence. To maintain methodological clarity and a link to terrorism, this research excludes other forms of nonviolent extremism. Of course, this is not to suggest that gender aspects of non-violent extremism are not important—this definition simply bounds the research conducted at this time.

While defining terrorism helps shape our understanding of what we might be looking for, in practice, most scholars use other definitions of terrorism, so this cannot be the sole criteria for identifying the literature on women in terrorism. Instead, we consider literature part of this subfield if it is research about women in terrorist groups, or about women in insurgent groups that use or have used terrorism as a tactic, research about gender and the role of masculinity in terrorism/insurgency, and women in other forms of political violence (with an emphasis on violence). It specifically excluded research on women in conventional militaries and

conventional armed conflicts.

Identifying the Relevant Literature

Determining the influence of scholarly contributions is difficult—influence can be subtle and diffuse. One measure of this is citation counts, a bibliometric indicator of influence. Citation counts can provide an overview of the influence of particular research or the subfield writ large; in this case, terrorism literature. This exercise focused on our definition of scholarly contributions, meaning books, articles, and papers published in journals, or through academic or semi-academic publishers.

To identify relevant scholarly works, we began with a preliminary search in Google Scholar for terms such as "women and terrorism," "female terrorist," and "female and suicide and bomber." These search terms yielded more than 100 references that we analyzed to determine whether these fit into the criteria of being both scholarly and part of the literature. This search did not capture some of what constitutes the main literature in this field, which was quickly identified as missing due to the authors' existing familiarity with the field, or through additional group/ideology–specific search terms. Once deemed to meet the criteria, we undertook citation tracing:[29] we examined the references in the works for potential inclusion into the data set. All of the identified works were again searched in Google Scholar to determine who had cited it, and we once again examined the generated list for additional works for inclusion.

Once we generated this literature list, we collected additional variables, such as year of publication, author, full reference, and what other publications cited the original publication. We then categorized the publications for further analysis (see findings section for a discussion on the categorizations). The publication's citations were then also categorized as being part of the women in terrorism literature, the main terrorism literature, or something else (other).

To illustrate any potential gaps in integration of the subfield into the main terrorism literature, this study employed three core categories to capture citations. The first category outlined the publications that form the subfield of women in terrorism, described above. The second categorization captures literature on terrorism/political violence that cites these works yet is not gender focused. The third captures citations of the women in terrorism subfield found in literature outside of those categories. While it was beyond the scope of this research article to examine this outside category in depth, there was significant breadth in the literature pulling from the study of women in terrorism that spanned a wide variety of scholarly disciplines.

The citation chaining, data collection, and categorizations took place between September 2019 and March 2020; it does not account for anything published after this date, representing a snapshot in time. While this snapshot may quickly become dated, the data nevertheless allows us to draw some conclusions about the state of the literature on women in terrorism in the near term, as well as the broader research question that deals with the issue of whether or not the main terrorism studies literature integrates this scholarship.

We decided on Google Scholar as our primary tool for data collection. The merits of Google Scholar are well articulated by Martín-Martín et al:

> "Web of Science and Scopus rely on a set of source selection criteria, applied by expert editors, to decide which journals, conference proceedings, and books the database should index…Google Scholar follows an inclusive and automated approach, indexing any (apparently) scholarly document that its robot crawlers are able to find on the academic web."[30]

For thoroughness, Google Scholar is also superior to Web of Science and Scopus. According to those same authors, "Google Scholar was able to find most of the citations to Social Sciences articles (94%), while Web of Science and Scopus found 35% and 43%, respectively."[31] Indeed, we verified this finding by looking at a selection of articles and books and what works they cited, and comparing that selection to the citations found in Web of Science and Scopus. These tools indexed few of the publications. Because a primary driver of this research was to evaluate the breadth of influence of the women in terrorism subfield, use of the most inclusive tool is necessary. Google Scholar was particularly useful for "sectors of scholarly communication that were

previously hidden from view,"[32] a particular area of concern for this literature review.

Web of Science and Scopus provides curated collections, but is sensitive to bias in selection criteria, and in particular, these databases have limited coverage in social sciences and humanities.[33] For its part, Google Scholar provides inclusive and unsupervised citations but is also prone to technical errors such as duplicate entries, incorrect/incomplete information, and non-scholarly references.[34] Indeed, these were the exact challenges encountered in this research. To overcome them, we undertook a manual verification of the references and citations. We searched each contribution to the field in Google Scholar; we then examined the works that reference it to determine:

> a) if these were scholarly;

> b) that these had full and accurate references; and

> c) the field or subfield to which these belong.

As noted, citation analysis is an imperfect measure of influence and importance, and is susceptible to biases. Some of these biases include powerful person bias (as when a powerful academic is most likely to be cited more than less well-known scholars), in-house or journal bias, as well as bias towards publications in the English language.[35] Indeed, French or Spanish publications received far fewer citations (almost none) than publications in English. Some of these other biases may also be present in the citations of particular publications despite the work being dated or lacking conventional or identifiable research methods. For instance, Bloom's publication *Bombshell: The Many Faces of Women Terrorists*[36] offers a possible demonstration of powerful-person bias. This work is well cited (the 10th–most cited publication in scholarly work in the field of women in terrorism), despite the fact that this text does not provide a robust description of the author's research methods. These citations may also demonstrate a reluctance to delve deeper into the academic literature on women in terrorism, including into Bloom's more scholarly work.[37]

Another bias that may exist in this literature is a bias against citing women or people from nonwhite ethnic and racial groups. While beyond the scope of this research (which only captured the names of the authors), an anecdotal review of the topics suggests that this potential bias is worth investigating. Indeed, prior research in this area suggests that women are generally cited less than men[38] and that nonwhite academics are also cited less frequently in academic work.[39] Given the extensive additional research that would be required to explore this possibility, the authors wish to offer the data set compiled for this study to any scholar interested in exploring that question.

Findings

Literature Development

There has been tremendous growth in research on women and gender in terrorism and political violence over the last two and a half decades. Much of that growth coincided with the overall growth in the terrorism literature following the terrorist attacks of 9/11. It also mirrors the increasingly visible role of women in terrorism.

Between 1983 and 2000, Jacques and Taylor identified a handful of publications about women in terrorism. On average, less than one publication was produced in the subfield every year.[40] From 1996 to 2004, the subfield's rate of production increased to approximately one piece of research per year, with foundational publications from Talbot,[41] Cunningham,[42], Patkin,[43] Gentry,[44] and West.[45] From 2005 onward, there was a significant increase in the amount of research done on women in terrorism every year, illustrated in Figure 1. The year 2005 also coincided with the publication of a seminal journal edition of *Studies in Conflict in Terrorism* dedicated to the phenomenon of women in terrorism, edited by Cindy Ness.[46] The increase also closely followed the 2003 spike in female engagement in terrorist activity in Iraq, in which over 20 women engaged in suicide attacks.[47] It is interesting to note, however, that similar spikes in scholarship did not occur with the rise of female terrorism related to the Syrian Socialist Nationalist Party (1985–1987)

and the Liberation Tigers of Tamil Eelam (1991–1999 and onward).[48] This difference may be due to these conflicts largely predating the explosion of terrorism studies following the September 11th, 2001 terrorist attacks. Alternatively, it may also demonstrate a distinct lack of interest in the topic of women in terrorism at that time.

Figure 1: Literature Development, 1996–2019
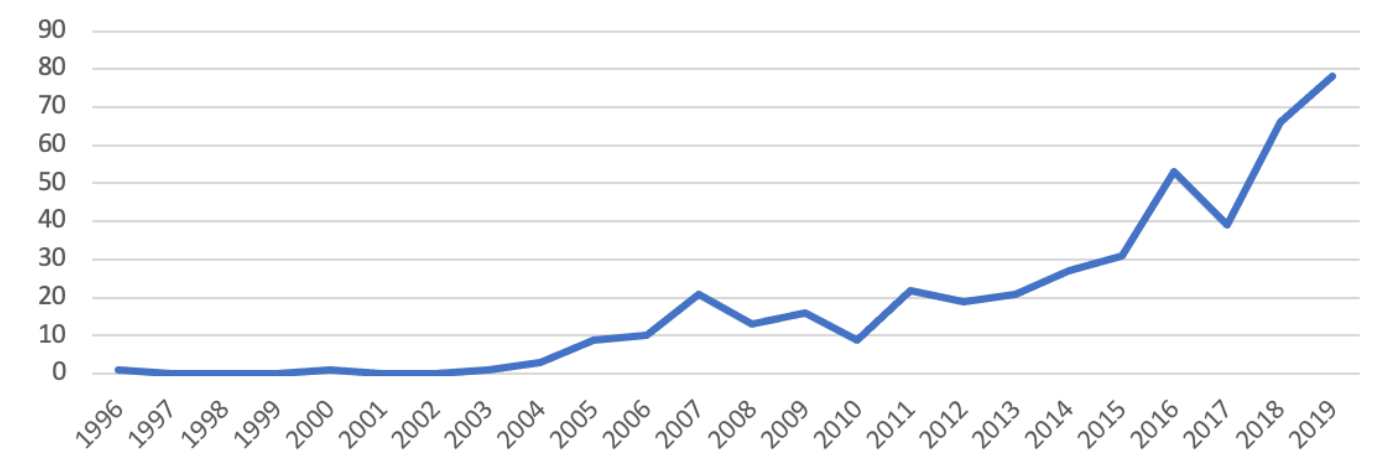
Note: The data for this chart are drawn from the citation collection data used for this research. The data cover 1996–March 2020 and illustrate an increase in scholarly research on the topic of women in terrorism. The Y-axis denotes the number of publications produced, while the X-axis indicates time. (year).

Significant spikes in research also occurred in 2007, 2011, and 2016, reflecting the overall increased visibility of women in terrorist activities, but specifically women's role as suicide bombers in a variety of conflicts, including the Israel-Palestinian conflict, Iraq, and Nigeria. The most significant development to affect the literature is the rise of the IS/Daesh. Because of the length of time it takes to publish scholarly literature, the effect of increased terrorist attacks perpetrated by women (or a visible increase in their role in terrorist groups) often lags the actual phenomenon by 1–3 years.

To further understand the development of the subfield of women in terrorism in relation to the broader field of terrorism studies, it is useful to compare these data with other studies. For instance, between 2007 and 2016, Schuurman identified 3,442 articles on terrorism.[49] For the same period, 232 publications on women in terrorism were produced (including but not limited to articles). While the subfield represents a small part of the terrorism literature (about 7%), the true figure is likely smaller when accounting for books and other categories of publications not included in Schuurman's survey. Regardless, these data illustrate that the subfield is far from the neglected area of study that some suggest it is.

Our own survey identified 448 unique pieces of scholarly research in the subfield of women in terrorism produced between 1996 and 2020. Growth has been significant, particularly following the attacks of 9/11, and mirrors the developments of the broader field. Of course, quantity is not everything. Understanding the breadth of the literature is also crucial in terms of addressing its impact and influence within the terrorism field.

Breadth of Study

The quantity of scholarly publications dealing with the subfield of women in terrorism has increased dramatically over the last two decades, demonstrating interest and uptake in the topic. However, this study is also concerned with how broad the subfield is, and particularly with potential oversaturation of certain topics or gaps that may exist in the women-in-terrorism literature.

To determine how the field has advanced, we looked at the Jacques and Taylor study that covered the period from 1983–2006.[50] This study looked at 54 publications on female terrorism and used qualitative and quantitative analysis to examine a range of theoretical and methodological approaches in the literature. Their work identified six research foci: portrayal in the media, feminism, interviews with terrorists, group roles, motivation and recruitment, and environmental enablers.[51] These categorizations reflect analytic and research methods, general research topics, as well as group and individual motivations for joining a terrorist group. Their categorizations also included article focus.[52]

Figure 2: Topics in the Subfield
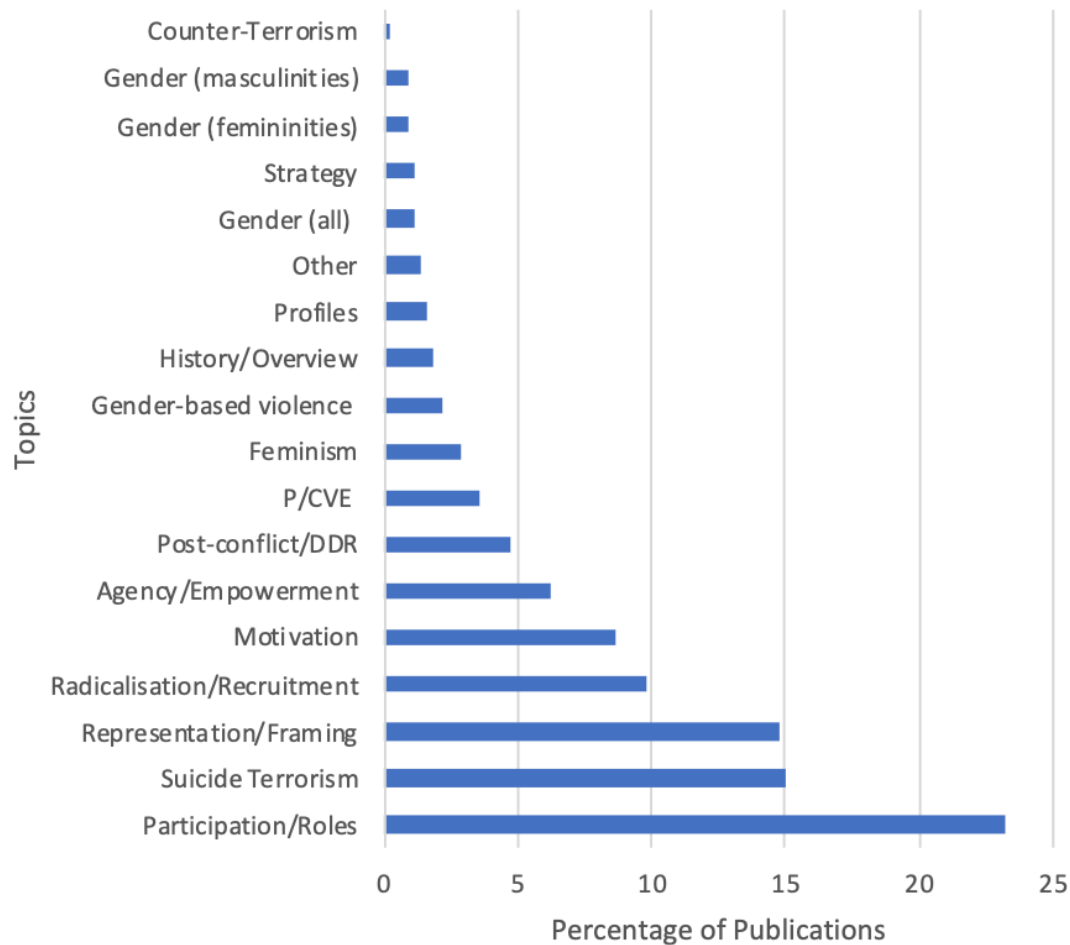
Note: The data for this chart are drawn from the citation collection data used for this research. Each publication was categorized according to its main topic. The topics themselves were developed through categorization and recategorization of various themes and issues that arose in the literature, and ultimately refined. The Y-axis denotes the categories, while the X-axis denotes the percentage of publications in each category.

This study categorized the 448 publications into 18 subcategories. Categorizations began with the main

themes in the extant literature, then subdivided those themes into 18 categories, specifically looking for areas that may be over- or under-researched. As with the Jacques and Taylor study, this exercise revealed that participation / roles and representation / framing of women in the media were common subjects of research. Feminism has become a more marginal subject in the subfield (as an explicit and main area of focus), while motivation and recruitment have both increased as subjects of study. Other new topics of study in the subfield include prevention and countering violent extremism (P/CVE), as well as agency and empowerment.

The distribution of topics studied in the subfield may be, in part, the result of the availability of information. This distribution also likely reflects broader terrorism studies areas of interest and where research funding is allocated. In other cases, ease of access to primary-source material may frame research approaches. For instance, examining media representations allows for primary-source research on women in terrorism, while tactics and roles of women in terrorism are also observable phenomena. The distribution of these topics demonstrates the dominance of the positivist approach in much of this literature.

Each publication in this study was also categorized by group or ideology, followed by geographic location. When classified in this way, the most-studied topic in the subfield is IS/Daesh (47% of publications dealt with this topic), followed by LTTE, jihad (general), Boko Haram, FARC, IRA/PIRA, and Al Qaeda. There are significant gaps in terms of studying the role of women in other terrorist organizations such as Hizballah, some of the Al Qaeda or Daesh-affiliated groups particularly in North Africa, and groups in South East Asia. Some of these topics have been covered to some extent in more thematic and comparative work, but were not the main focus of the work and were therefore not captured in these categorizations. In many cases, some of these neglected topics only received a few paragraphs of exposition in a small fraction of the literature. The limited number of topics covered in the women-in-terrorism literature also reflects similar trends in the broader field of terrorism studies.

Possible explanations for the lack of analysis on the aforementioned topics include a lack of visibility of women in combat/kinetic roles within these specific groups or conflicts, a lack of field research that could potentially identify women embedded with, or supporting, terrorist groups in these regions, as well as a lack of study of these regions in the overall terrorism studies field. Figure 3 illustrates the uneven distribution of scholarship across groups/ideologies and women. Notably, there is little scholarship on groups like the Syrian Socialist Nationalist Party (SSNP) that had a significant female component, at least in terms of terrorist operations. [53] As scholarly work in the subfield tends to focus on operational roles for women (which are typically more visible) rather than support roles, some groups and ideologies may also be ignored because women lack visibility within the organizations.

Figure 3: Publications by Group/Ideology
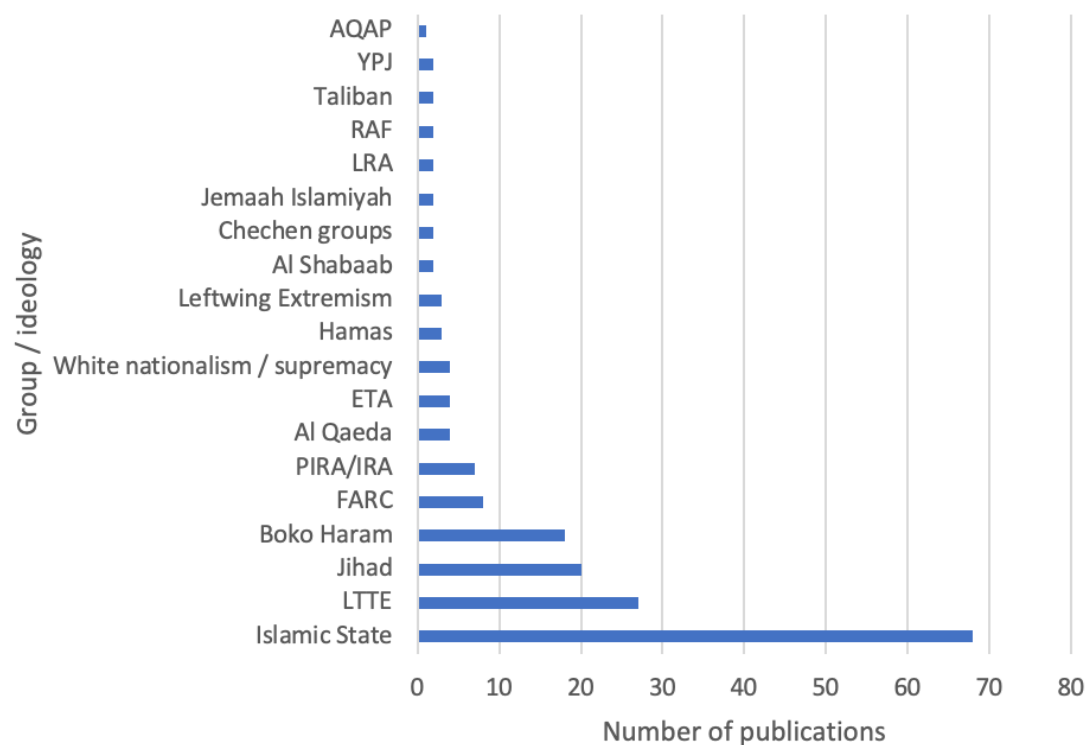
Note: The data for this chart are drawn from the citation collection data used for this research. Each publication was categorized according to the main group under study. The groups represent an exhaustive list of the subjects of the publications.

In Figure 3, some works are included in two (or more) categories because the publication involved comparative work. Other works did not focus on a particular group or ideology, but instead adopted a regional focus. For this reason, the number of publications depicted in Figure 3 does not represent every publication identified in this study, and in some cases overlap exists.

The most-studied regions in the sub-field of women in terrorism include Israel/Palestine, Chechnya, and the West (writ large), as well as Northern Ireland, Iraq, and Nigeria. The numerous groups operating in some of these regions makes identifying a single group under study challenging from a methodological perspective. Unsurprisingly, when examining South East Asia and Africa and comparing it to our findings on group/ideology, it is clear that there is a lack of research on terrorism in these regions. There has been little (if any) academic literature on women's roles in terrorism in Tunisia, or in Algeria, which also reflects a lack of research on this topic more broadly within the main terrorism literature. This lacuna exists despite women's role in terrorism in both countries, including as suicide bombers.[54]

While researchers have studied women's roles in extreme right-wing violence, including in white supremacist and neo-Nazi organizations and movements,[55] this also represents a significant gap in the literature. Popular media accounts of this type of violence regularly discount women's roles due to the inherent misogyny in groups adopting this ideology.[56] Discounting women's involvement in extreme-right groups demonstrates an analytic blind spot, which we have also seen with other types of terrorism such as Al Qaeda. Women's participation has been under-studied or ignored due to assumptions about women's desire to participate in a particular group/movement and the organization's willingness to include women.

While the breadth of the women in terrorism subfield has increased significantly since the mid 2000s, there is still much work to be done. There are many under-studied conflicts, and most notably, conflicts that do not seem to involve women. However, as Schmidt reminds us, everyone has a gender[57]; as such, studying every

conflict with an eye to gender, even to note the absence of women, is a useful endeavour and will enhance our understanding of the role of women in terrorism, but also of gender more broadly in terrorism and political violence of all types.

Measuring Impact

Impact and importance of scholarly work are difficult concepts to measure objectively, but one tool that we have at our disposal is citation counts. While imperfect, the frequency of citation can begin to demonstrate what publications are most relevant and influential. This accounting can also attune us to possible gaps in terms of integration of a subfield into a broader field, which is what this study aims to understand.

What Are the Most Cited Works on Women in Terrorism?

In their research, Silke and Schmidt-Petersen identified the 100 most-cited articles in terrorism studies, some of which had thousands of citations,[58] although their work did not explicitly exclude non-scholarly citations. The literature on women in terrorism is much less well cited than the 100 most-cited articles in the Silke and Schmidt-Petersen study, which, given its relatively niche topic area, is unsurprising. There are only three publications with more than 100 scholarly citations: Sjoberg & Gentry,[59] Cunningham,[60] and Alison. [61] While the least influential article in the Silke and Schmidt-Petersen study had 177 citations,[62] only Sjoberg & Gentry's article met or exceeded that number of citations. However, directly comparing these two measures does not produce an accurate evaluation because of methodological differences between the Silke and Schmidt-Petersen study and our own. Silke and Schmidt-Petersen did not validate the citations for each of the articles in their study to exclude citations that were not scholarly, including dissertations, theses, popular accounts, etc. They also only considered articles, while we also include books and edited volumes. Despite these methodological differences, comparing these two studies demonstrates the "niche" status of research on women in terrorism, even when that work is foundational or relatively well cited outside of terrorism studies. It is also worth noting that none of the top 100 articles on terrorism in the Silke and Schmidt-Petersen article dealt with women in terrorism as their primary subject.[63]

Indeed, the literature on women in terrorism is more well cited outside of the main field of terrorism studies than within it, although many publications remain uncited (which may also be true for the terrorism field writ large). Breaking down the literature roughly into thirds yields interesting results. Approximately 31% of all the publications on women in terrorism had no scholarly citations at all. It is worth noting that many of these works were published relatively recently (2018—2020), which may explain a lack of citations. Thirty-five percent of the publications in the subfield had between one and five scholarly citations, while 34% had between six and 437 citations, the majority of which had between 15 and 80 citations. The mean number of citations of women in terrorism literature in all fields is 10.2 citations, with a median of two, which illustrates that a few highly cited publications skew the number of citations upwards, but that the majority of publications in the subfield receive few citations. Only four publications in this tier had more than 100 citations, illustrated in Figure 4:

Figure 4: Citation Analysis of the Most Well-Cited Articles (All Fields), by Citation Bracket (Increments of Five Citations)
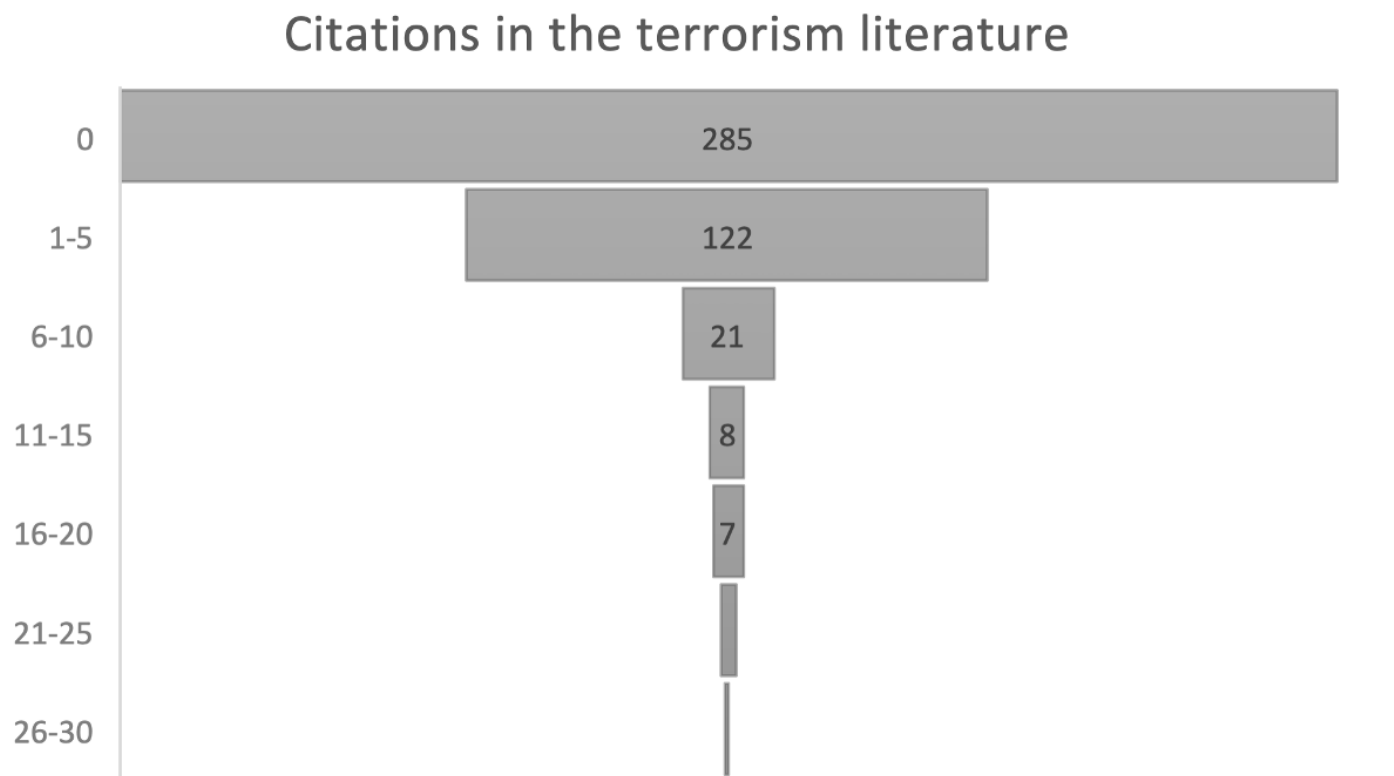

Note: Figure 4 illustrates the number of citations that every publication on women in terrorism has received, regardless of the field in which it was cited.

Figure 4 illustrates the number of citations for each bracket (i.e., grouping of citation counts by increments of five), demonstrating how few of the publications in the field of women in terrorism achieve "top" status of influence. Comparing these citation counts to the work of Silke and Schmidt-Petersen, where the "top" publications all had over 100 citations, it becomes clear that very few of these publications achieve similar influence. Figure 4 illustrates that only three publications have received more than 100 citations (in all fields of literature). Instead, most of the publications are uncited or lightly cited within scholarly literature.

Paradoxically, the more citations an article in the subfield had, the less likely those citations were to be in the field of terrorism studies. The middle tier of publications (those with 1–5 citations) generally had 21% of their citations within the broader literature on terrorism and political violence. The more influential publications (those in the top tier, with more than six citations), had only 18% of their citations in the main field. While this difference is not particularly significant, it does demonstrate that the study of women in terrorism has purchase outside the main field of study (terrorism studies), but also that it may be perceived as quite separate from the main field, and better suited to incorporation in women's studies or feminist studies fields of research.

The literature on women in terrorism is less well cited within terrorism studies itself. Only 13% of citations of women in terrorism publications were in the main terrorism literature, as is illustrated in Figure 5. The mean number of citations within terrorism literature was 1.7, with a median of zero. Removing the publications that had yet to receive any citations, the average rate of citation in the main terrorism literature was only three citations per publication.

Figure 5: Citations of Works on Women in Terrorism within Broader Terrorism Literature

Citations in the terrorism literature

Note: Figure 5 illustrates the lack of citations of the sub-field of studies on women in terrorism within the broader field of terrorism studies. The vast majority of research on women in terrorism (285 publications) has never been cited in terrorism research. Only a very small proportion of the research in the subfield is cited more than 10 times.

Without a direct comparison between all the publications in the terrorism field, and without understanding how many citations these receive, it is difficult to draw firm conclusions about bias or lack of influence of the subfield of research. However, given the breadth of the literature on women in terrorism, it is surprising that the main body of terrorism literature cites so little of it.

What Works Get Cited?

The publications with the most citations in terrorism literature were those that address women's participation and roles in terrorism, which is also one of the most-studied subfields. The citations for this topic accounted for 25% of all the citations interrorism literature. Other topics with significant numbers of citations include representation/framing of women in terrorism in the media (17%), and suicide terrorism (15%).

Publications on the IS/Daesh are by far some of the most-cited texts in terrorism literature, accounting for almost 39% of all the citations. Studies on Boko Haram are also well-cited in terrorism literature, with 16% of the citations. Broader topics like jihad also account for a significant number of citations (14%). Other relatively well-cited topics include the LTTE, Chechen terrorism, and Al Qaeda. In essence, the citations of particular topics are those where it is difficult, if not impossible, to ignore the role of women in terrorism.

Publications in our subfield data set that were less likely to be cited in terrorism literature but more likely to be cited in other scholarly literature include works that include feminism or feminist analysis of terrorism and political violence. These publications likely had significant crossover with other fields (namely: feminist studies) but may have also used language or systems of analysis that were unfamiliar to terrorism studies scholars.

It is also useful to note that while most recent works in the subfield reference much of the preexisting work on women in terrorism, there does seem to be a lack of knowledge about the depth of the subfield. This deficiency exists even amongst those working on women in terrorism, demonstrated through the repetitive nature of

dissertations and theses exploring the subject and the justifications frequently offered for this work.[64] The repetitive nature of some of this research may also be a symptom of the lack of integration into the main terrorism literature. If the main field does not cite the extant research, new scholars may suffer from the illusion that little work has been done on the topic. It is difficult to accurately reflect the subfield literature when that literature is not accurately reflected in the broader field.

Conclusion

The study of women in terrorism is a growing subfield of terrorism studies as evidenced by the increasing number of publications each year. This literature makes important contributions to a holistic understanding of terrorism at various levels of analysis such as the organizational, cell, and individual level. The subfield examines factors such as radicalization and recruitment, roles for women, media representation and framing of women/gender, agency and empowerment of women, and of course suicide terrorism, amongst other topics. Despite the breadth of study of the subfield (an area that still requires some improvement for it to be truly exhaustive and authoritative), it is poorly cited in the main literature.

At the same time, the literature may well have more influence than mere citation counts can demonstrate. In some cases, the topic of women in terrorism is discussed in studies on terrorism, but is not referenced.[65] Unfortunately, when this occurs, it does a disservice to both the subfield of study as well as the authors of these publications who are not engaging with the broader field in a meaningful way.

The state of the terrorism studies field, and how well it is integrating all types of information and analysis, is of interest not just from an academic perspective. Practitioners rely on this literature to provide context and information for their counterterrorism and counter-extremism activities. Indeed, a lack of information within this main literature on gender may influence how practitioners interpret women in acts of terrorism. Preliminary research suggests that there is a bias in counterterrorism practice at least in Canada,[66] the US,[67] and Europe.[68] Initial research undertaken by the second author demonstrates that in Canada, the few women who have been charged with terrorism offenses came to the attention of authorities alongside their male partners. The sole woman not tried alongside her partner was only arrested after having committed a terrorist attack in Canada, despite family members reporting her previous attempt to travel to Syria to join ISIS to law enforcement.[69] The number of Canadian women who, for example, traveled to Syria in apparent support of ISIS versus the number of women arrested for terrorism seems to indicate some level of oversight at the investigative level.[70]

It is clear that counterterrorism practitioners consult terrorism literature,[71] so any bias in this literature may influence practitioners. Of course, demonstrating a causal relationship between the literature (and omissions therein) and bias in counterterrorism is not possible due to the many factors that influence the work of practitioners. However, a relationship may be possible to establish, laying the foundation for future empirical studies on the impact of scholarly research on terrorism and its influence on practitioners.

Throughout the course of this research, we came across a significant number of theses and dissertations on the topic of women in terrorism. Much of this remains unpublished. A cursory review of these works also reflects the common assumption that little has been written on women in terrorism. This is not to say that these works did not do a sufficient literature review, but rather to point out that this assumption is commonplace. It is also critical to note that much of the literature in this subfield has been published outside the main terrorism studies journals, which means that a review of the literature needs to survey well beyond the most influential terrorism studies journals. This issue also reflects another possibility: because of a potential lack of integration of this subfield into the primary literature, students and their advisors think there is more of a gap than there is. A consequence of this presumption may be that the field is not advancing to the extent that it could. If the main field of terrorism studies better reflected the literature in the subfield of women in terrorism, students and their supervisors would be more aware of the breadth and depth of the literature.

Our initial suspicion was that the research in this subfield was poorly cited in the main literature. Indeed, insights on gender dynamics likely remain largely peripheral to ongoing conversations about terrorist violence. The lack of citation (and by extension, integration) of the subfield into the main field of terrorism studies is detrimental to the scholarship on terrorism because similar research topics are examined over and over again, while other forms of analysis are incomplete without the integration of gender analysis (incorporating discussion of women in terrorism, but also topics well beyond that). This exclusion is also detrimental to practitioners seeking to understand the phenomenon of terrorism, or grappling with the issue of women in terrorism. A few key areas where this impacts our understanding of terrorism includes terrorist tactics, organizational effectiveness, and bureaucracy, as well as terrorist recruitment and propaganda. The lack of integration of the study of women in terrorism into the broader field of terrorism studies may represent a pervasive conceptual and methodological problem.[72] By our count, the 450 scholarly works on the subject of women in terrorism demonstrate that this subfield is an area of interest for many scholars. Yet the main scholarly literature excludes the role of women in terrorism, a lacuna that may well have significant repercussions for counterterrorism practitioners.

When we began this research, we hypothesized that the subfield of women in terrorism was held separately from that of the rest of the literature and lacked integration. Bearing in mind the limitations of citation counting, our analysis proved that hypothesis. The reason for this segregation within the literature may be due to what one of Schmidt's interview subjects referred to as the "gender ghetto" in a recent analysis of practitioner responses to women in terrorism.[73] Greater integration of the literature on women in terrorism is required to advance the field of terrorism studies. Ignoring this research, and the role and impact of gender roles and identities in terrorist recruitment, operations, and propaganda leaves significant gaps in our understanding of terrorism as well as our abilities to counter and prevent terrorist activity.

About the Authors

Jessica Davis *is an international consultant on terrorism and illicit financing and a Ph.D. student at Carleton University (NPSIA). Jessica began her career in intelligence analysis with the Canadian Military, took on a policy role at Global Affairs Canada before becoming a team leader with Canada's financial intelligence unit, FINTRAC. Her last role in government was as senior strategic analyst at the Canadian Security Intelligence Service. Jessica has taken on a number of training and consulting projects, and has also worked as a war crimes investigator. Jessica is the author of Women in Modern Terrorism: From Liberations Wars to Global Jihad and the Islamic State and the forthcoming book Illicit Money: Financing Terrorism in the 21st Century (2021).*

Leah West *is an assistant professor of international affairs (National Security and Intelligence) at the Norman Paterson School of International Affairs, Carleton University, where she teaches national security law, counterterrorism, and public international law. She is the coauthor of National Security Law, 2nd Ed. published by Irwin Law (2020).*

Amarnath Amarasingam *is an assistant professor in the School of Religion, and is cross-appointed to the Department of Political Studies at Queen's University in Ontario, Canada. He is also a senior research fellow at the Institute for Strategic Dialogue, an associate fellow at the International Centre for the Study of Radicalisation, and an associate fellow at the Global Network on Extremism and Technology. His research interests are in terrorism, radicalization and extremism, diaspora politics, post-war reconstruction, and the sociology of religion. He is the author of Pain, Pride, and Politics: Sri Lankan Tamil Activism in Canada (2015), and the co-editor of Sri Lanka: The Struggle for Peace in the Aftermath of War (2016). He has also written several peer-reviewed articles and book chapters, has presented papers at more than 100 national and international conferences, and has written for The New York Times, The Monkey Case, The Washington Post, CNN, Politico, The Atlantic, and Foreign Affairs.*

Notes

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Appendix

Directions for Future Research

The subfield of women in terrorism is, despite the increasing number of publications, still developing, and is overly focused on particular subjects. Significant gaps exist in the subfield, and the main terrorism literature has yet to integrate this work in any meaningful way. This section highlights some areas of potential research that could enhance the subfield and encourage fuller integration of this work into the main literature.

Male-only Case Studies: While much is written about groups that employ women in operational roles, groups that exclude women, or that women themselves refuse to join, are just as intriguing. Studying why and under which conditions terrorist groups choose not to include women, and similarly the conditions under which women do not join or support particular groups could add useful context for understanding some elements of gender dynamics within terrorist groups. This work could also help to articulate a theory of women's involvement in future terrorist groups or movements.

Enhanced Focus on Non-kinetic Roles: Women engaging in violence has attracted significant attention over the last several decades. This trend is likely to continue, as shifting popular opinion about women's participation in violence as relatively normal (rather than aberrant) behavior will take time. Thus, it is perhaps unsurprising that this work is overemphasized in the subfield of study regarding women in terrorism. Equally important but under-studied is the role of women in support/non-kinetic roles in organizations and movements that employ terrorism as a tactic. The role of women as radicalizers, recruiters, financiers, logisticians, intelligence operatives,[A1] etc., are all areas where more research could be done.

Research on Nonbinary Gender: To date, the study of women in terrorism treats gender as binary (male or female). Research into how recruitment and radicalization practices appeal to or impact nonbinary individuals would be a welcome addition to the study of terrorist and political violence. Additional research in this area could potentially identify how and why terrorists address nonbinary individuals (if at all), and which groups are likely to appeal to individuals with nonbinary identities.

Research on Masculinities and Femininities: The study of masculinities and femininities within terrorist groups, and their influence on terrorist recruitment and ideology, is a nascent subfield of study.[A2] Increasingly, and particularly with the rise of extreme-right groups, the role of masculinities and femininities is receiving increased attention. Broadening this study across the ideological spectrum is crucial to furthering our understanding of why and how different genders engage in terrorist activity.

Other Measures of Impact: This study is limited to a single measure of impact and influence with regards to the subfield of women in terrorism. Other measures exist that could yield different results. For instance, a study of syllabi on terrorism might reveal different results in terms of how terrorism and political violence are taught, a significantly different measure of influence and impact than citation counts. An analysis of major conferences that have a terrorism or political violence panel, such as the International Studies Association, and panels that have a women/gender component to their terrorism/political violence panels could also provide additional insights.[A3]

Comparison with Other Subfields: While the subfield of women in terrorism is relatively under-cited within terrorism literature (although conversely, well cited outside of it), other subfields are also worth studying, and would provide a useful comparison. For instance, studying the subfield of suicide bombings, terrorist financing, or terrorist propaganda, and seeing how well cited and integrated these are into the main terrorism literature would be a useful point of comparison. This could help to determine if the subfield of women in terrorism is actually neglected and poorly integrated, or if many subfields suffer from this same lack of integration.

Notes

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