

# In defence of the bioethics scoping review: Largely systematic literature reviewing with broad utility

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## Abstract

There is growing interest in the possible role of systematic methods of reviewing literature in bioethics. This has arisen alongside the growth of empirical bioethics and a general push towards introducing some level of rigour and reproducibility into scholarship in the field. However, there remain a range of approaches to reviewing literature utilized in bioethics, which vary significantly in their 'systematicness' and suitability for different purposes. In this article, we first detail a taxonomy of various existing reviews used in bioethics and how scholars have defended and critiqued them, presenting them relationally along axes of 'systematic' and 'critical'. Considering the suitability of these reviews, we then explore the inherent differences between normative and empirical literature in relation to *how* they can be reviewed. In particular, we highlight the challenges in reviewing both normative and empirical literature in a single review. As something of an answer to these challenges, we introduce and defend the scoping review as, in many ways, a method of reviewing literature with wide-ranging utility in bioethics. Demonstrating the many benefits of the scoping review, we then position it within the existing taxonomy of reviews, ultimately arguing that its combination of systematic and critical, inclusive of a reasonable degree of flexibility, makes it deserving of increased attention and use in bioethics.

## KEYWORDS

empirical bioethics, literature review, methodology, methods, scoping review, systematic review

## 1 | INTRODUCTION

Of late, there has been a rise in discourse around the utility of systematic approaches to reviewing bioethics literature. Scholars have considered what role such approaches should, can, and do have in bioethics, largely reaching the common conclusion that *some* level of rigour is needed in literature reviews in the field.<sup>1</sup>

At least in part, this can be considered attributable to bioethics' positioning as a field.<sup>2</sup> Bioethics has its roots in disciplines such as theology, philosophy, and law,<sup>3</sup> in which systematic approaches to reviewing scholarship are by no means the norm. However, by virtue of its subject matter, bioethics operates close to (and sometimes within) the biomedical sciences, in which systematic reviews as a type of literature review are viewed with esteem. The preoccupation with

<sup>1</sup>Sofaer, N., & Strech, D. (2012). The need for systematic reviews of reasons. *Bioethics*, 26(6), 315–328; McDougall, R. (2014). Systematic reviews in bioethics: Types, challenges, and value. *Journal of Medicine and Philosophy*, 39, 89–97.

<sup>2</sup>We acknowledge that it is a point of contention whether bioethics is rightly described as a field (as opposed to, say, a discipline), but this is not central to our discussion.

<sup>3</sup>Callahan, D. (1974). Bioethics as a discipline. *The Hastings Center Studies*, 1(1), 66–73.

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systematically reviewing bioethics literature, then, may be considered a result of the company the field keeps. Bioethics scholars working in medical schools may especially fall into a situation of keeping up with the methodological Joneses, particularly in light of the 'empirical turn' in bioethics.<sup>4</sup>

Regardless of how this focus on methods of literature review in bioethics came about, it remains that there are many unanswered questions. Notably, how systematic do we want our reviews? Whereas some scholars appear focused on how the traditional systematic review can be successfully implemented in bioethics,<sup>5</sup> others have explored the potential for increasing rigour in *non*-systematic reviews.<sup>6</sup>

In this article, we examine the existing taxonomy of literature reviews in bioethics and the suitability of each for varying purposes, ultimately advancing the position that scoping reviews ought to be more seriously considered as a useful, largely systematic method. This is based around what we describe as a normative-empirical dilemma in terms of the content of the literature to be reviewed and the corresponding limitations of certain review types. McDougall has made the point that '[t]he type of rigour should match the purpose of the review'<sup>7</sup>—with this we wholeheartedly agree. Hence, our intention in this article is not to hail the scoping review as the sole acceptable approach to reviewing literature in bioethics, but as an option worthy of greater recognition than it appears to have at present. Our discussion in this article largely stems from our reflections on our experiences of having recently conducted a narrative, scoping, and systematic review *in* bioethics.<sup>8</sup>

## 2 | CURRENT TAXONOMY

In considering the role of *non*-systematic literature reviews in bioethics, McDougall<sup>9</sup> provides a useful taxonomy of several options available to researchers in the field. She distinguishes between three types of review: 'introductory', 'systematic', and 'critical interpretive'. The review types discussed here do not represent an exhaustive list of options. There are many more, each serving different purposes.<sup>10</sup> However, McDougall singles out the

three she discusses for the reason that she considers each to have a proven place in bioethics scholarship. Incidentally, she dismisses scoping reviews due to a perceived lack of clarity in their definition.<sup>11</sup> This is despite Davis and colleagues having, years earlier, described the scoping review as 'a formative, methodologically rigorous activity in its own right'.<sup>12</sup> Indeed, McDougall mistakenly mentions scoping reviews in her discussion of introductory reviews, which, as will become clear later in this paper, unfairly disregards the rigour of a scoping review. Nonetheless, McDougall's taxonomy provides a useful jumping off point for our discussion, and we will briefly outline the key elements of the three review types she examines and map them in terms of both how systematic and critical they are (see Figure 1). When describing reviews as 'systematic', we are referring to structured processes such as exhaustive searches and quality appraisal that exist for reasons of transparency and reproducibility. By 'critical', we mean the extent to which a review approach goes beyond the descriptive and critically engages with and evaluates the included literature. Essentially, 'systematic' relates to the overall process being followed whilst 'critical' focuses in on the synthesis/analysis stage.

### 2.1 | Introductory review

McDougall first outlines the introductory review as a means of identifying current, prominent ideas and debates in a chosen research area to demonstrate a gap in the literature. She does not consider an introductory review to constitute a form of research in itself, instead suggesting its purpose to be distinguishing important findings and laying the foundations for more detailed research or literature reviews. As such, introductory reviews are particularly important in the identification of research questions. Introductory reviews may, therefore, be conducted during the earliest phases of a bioethics project—for instance, when preparing a research proposal. The introduction or background section(s) of a bioethics paper may also be considered a form of introductory review, as its purpose is to justify the chosen research question.<sup>13</sup> The introductory review is, then, a decidedly casual method; a somewhat cursory glance at prominent ideas to consider where one's own work might contribute.

There is no clearly identified method for conducting introductory reviews. One may approach such a review in all manner of ways: using a research database; some form of snowballing; or even just relying on the extent of one's existing knowledge having read extensively around a topic. This is perhaps why they cannot be

<sup>4</sup>Borry, P., Schotsmans, P., & Dierickx, K. (2005). The birth of the empirical turn in bioethics. *Bioethics*, 19(1), 49–71.

<sup>5</sup>Sofaer & Strech, op. cit. note 1.

<sup>6</sup>McDougall, R. (2015). Reviewing literature in bioethics research: Increasing rigour in non-systematic reviews. *Bioethics*, 29(7), 523–528.

<sup>7</sup>Ibid: 523.

<sup>8</sup>Parsons, J. A., & Ives, J. (2021). Dialysis decisions concerning cognitively impaired adults: A scoping literature review. *BMC Medical Ethics*, 22, 24; Johal, H., Orchard, W., Birchley, G., & Huxtable, R. (2021). A systematic review exploring physician approaches to conflict resolution in end-of-life decisions in the adult intensive care unit. *PROSPERO*, CRD42021193769. We specify *in* bioethics rather than *of* bioethics because the included literature was not all within the field of bioethics. As such, the review concerned a bioethical question so can be considered in bioethics but cannot be considered *of* bioethics due to the nature of the included literature. We will revisit this distinction shortly.

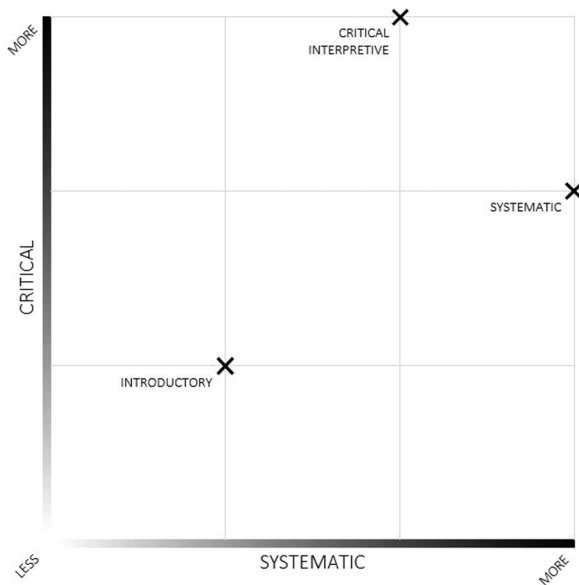
<sup>9</sup>McDougall, op. cit. note 6.

<sup>10</sup>Grant, M. J., & Booth, A. (2009). A typology of reviews: An analysis of 14 review types and associated methodologies. *Health Information and Libraries Journal*, 26, 91–108; Noble, H., & Smith, J. (2018). Reviewing the literature: Choosing a review design. *Evidence Based Nursing*, 21(2), 39–41.

<sup>11</sup>McDougall, op. cit. note 6, p. 524. A similar critique was previously levied against scoping reviews by Anderson and colleagues, who comment that 'their value is increasingly limited by a lack of definition and clarity of purpose' owing to the diversity of objectives set by those conducting such reviews. Anderson, S., Allen, P., Peckham, S., & Goodwin, N. (2008). Asking the right questions: Scoping studies in the commissioning of research on the organisation and delivery of health services. *Health Research Policy and Systems*, 6, 7, pp. 1–2.

<sup>12</sup>Davis, K., Drey, N., & Gould, D. (2009). What are scoping studies? A review of the nursing literature. *International Journal of Nursing Studies*, 46(10), 1386–1400, p. 1386.

<sup>13</sup>McDougall, op. cit. note 6.



**FIGURE 1** Literature reviews in relation (current taxonomy). Review types are plotted in relation to one another rather than against fixed values.

considered to be a form of research in themselves. Though an appraisal of both normative and empirical published literature may be included as part of an introductory review, the process of selecting articles for inclusion is not described. Thus, introductory reviews may be highly subjective and lack reproducibility. They are not dissimilar from 'narrative reviews', which identify a few key studies on a topic of interest without including details of the search strategies employed or criteria for inclusion and exclusion.<sup>14</sup>

Without this methodological rigour, introductory reviews do not achieve the transparency that has been called for in bioethics literature reviews. This is not necessarily problematic, as an introductory review does not claim to be a form of research from which theory is generated or actionable conclusions are drawn. It is, instead, a starting point from which this more substantive—and, indeed, substantial—work can take place. An introductory review does, then, we suggest, hold an important position in bioethics scholarship. This is largely because it would be excessive to suggest that all published papers in bioethics contain a thorough-to-the-point-of-systematic literature review at the start, if for no reason other than the detrimental effect this would likely have on productivity. However, the introductory review must be recognized for what it is, meaning a method that is non-systematic and minimally critical (see Figure 1).

## 2.2 | Systematic review

A systematic review, unlike an introductory review, is considered a form of standalone research, which aims to address a research

question. Typically, systematic reviews are used to synthesize all published studies about the effectiveness of a particular intervention in healthcare.<sup>15</sup> Munn and colleagues note that a systematic review is likely most appropriate if the researchers 'have a question addressing the feasibility, appropriateness, meaningfulness or effectiveness of a certain treatment or practice'.<sup>16</sup> Essentially, a systematic review is suited to projects that have a precise question to which the researchers are seeking a relatively straightforward (and, ideally, somewhat definitive) answer.

Specific guidance on the process and reporting of systematic reviews has also been developed, to uphold consistency in the method.<sup>17</sup> Systematic reviews are considered useful in health policy recommendations because they provide a comprehensive overview of what is known about a particular intervention, which has been reflected in the growth and recognition of the Cochrane Collaboration. Over the last two decades, systematic review methods have been adapted for bioethics literature for a similar purpose: to help guide policymakers in making ethical decisions, by identifying and synthesizing all the published literature on a particular issue. Novel conclusions may also be drawn through the evaluation of this literature.<sup>18</sup>

Both in medical fields and in bioethics, systematic reviews aim to identify all relevant literature through a rigorous and reproducible method. There are, however, several notable differences between systematic reviews in these two contexts. Systematic reviews in medical fields only consider empirical studies. By contrast, both normative and empirical literature could be included in a systematic review in bioethics—although it is usually one or the other. Hence, McDougall identifies three types of systematic review in bioethics, which differ based the *literature* being reviewed (normative or empirical) and on the *question* being asked (ethical or empirical).<sup>19</sup>

The first type is a systematic review of empirical bioethics literature, which is categorized by McDougall as a review that asks an *empirical question of empirical literature*.<sup>20</sup> Strech and colleagues describe a seven-step approach for such a review:

1. Defining a review question;
2. Selecting appropriate databases;
3. Applying ancillary search strategies;
4. Developing search algorithms;
5. Assessing retrieved records for relevance;
6. Assessing quality of included studies; and

<sup>15</sup>Clarke, M. (2018). Partially systematic thoughts on the history of systematic reviews. *Systematic Reviews*, 7, 176.

<sup>16</sup>Munn, Z., Peters, M. D. J., Stern, C., Tufanaru, C., McArthur, A., & Aromataris, E. (2018). Systematic review or scoping review? Guidance for authors when choosing between a systematic or scoping review approach. *BMC Medical Research Methodology*, 18, 143, p. 3.

<sup>17</sup>Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., ... Moher, D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *BMJ*, 372, n71.

<sup>18</sup>McDougall, op. cit. note 1.

<sup>19</sup>Ibid; McDougall, op. cit. note 6.

<sup>20</sup>McDougall, op. cit. note 1, p. 90.

<sup>14</sup>Noble & Smith, op. cit. note 10.

## 7. Data analysis and presentation.<sup>21</sup>

These systematic reviews have similar stages to those conducted in medicine, as they both consider empirical evidence. However, the focus of empirical literature that might be included in a review in bioethics is often qualitative, quantitative, and/or mixed methods research exploring a particular issue, rather than a collection of clinical studies evaluating an intervention. Therefore, Strech and colleagues suggest an alternative model for formulating a review question—Methodology, Issue, Participants (MIP)—rather than the standard Participants, Intervention, Comparisons, Outcome (PICO) format used in medical literature.<sup>22</sup> As systematic reviews of empirical bioethics literature seek to synthesize all published qualitative and/or quantitative data, there are existing methods and tools in place that can be taken from reviews in medicine, and usefully applied to reviews in bioethics. For example, Thomas and Harden's 'thematic synthesis' of qualitative research,<sup>23</sup> or the Mixed Methods Appraisal Tool (MMAT) for quality assessment.<sup>24</sup> The process of appraising qualitative research for inclusion in a systematic review does, however, remain contentious.<sup>25</sup>

Second is a systematic review of normative bioethics literature. McDougall considers this to ask an *ethical question of normative literature*,<sup>26</sup> which may also be described as 'argument-based' or 'reason-based'.<sup>27</sup> The review itself includes four stages, established by McCullough and colleagues:

1. Choosing a focused research question;
2. Searching the literature using key terms related to the research question;
3. Assessing the adequacy of the argument-based methods of included papers; and
4. Identifying the conclusions reached in each paper and their relevance to the focused research question.<sup>28</sup>

These review questions have previously been framed using the PICO format or various other approaches, and McDougall speculates

that an adoption of different approaches may indicate a reluctance to fit bioethical review questions into a highly prescriptive format.<sup>29</sup> Proponents of this type of systematic review argue that these reviews aim, in effect, to achieve the transparency that is arguably needed in bioethics literature reviews.<sup>30</sup> However, there has been no consensus on how to implement certain steps in the systematic review process objectively, namely 'assessing the adequacy of the ethical analysis and argument' and demonstrating minimal bias in the final interpretation and synthesis.<sup>31</sup>

Finally, Strech and Sofaer advocate for a third type of systematic review: a systematic review of reasons.<sup>32</sup> Developed as an alternative to McCullough and colleagues' approach detailed above, McDougall classifies the systematic review of reasons as asking an *empirical question of normative literature*.<sup>33</sup> In these reviews, researchers should aim to identify, quantify, and analyse all the published literature that uses arguments to address ethical questions. Four key stages are identified:

1. Writing the review question and determining the eligibility criteria;
2. Identifying relevant literature;
3. Extracting data on reasons; and
4. Deriving and presenting the results.<sup>34</sup>

There are likely issues, including the resource intensive nature and potential for misinterpretation (whereby a policymaker may misconstrue the most frequently presented reason as being the strongest normative claim). Moreover, steps such as quality assessment of normative literature remain problematic.<sup>35</sup> However, they do have the potential to provide a thorough overview of ethical deliberation and may consequently fulfil the purpose that systematic reviews in bioethics set out to meet: synthesizing all published evidence to help improve ethical discourse in healthcare, research, or policy.<sup>36</sup>

## 2.3 | Critical interpretive review

The final type of literature review identified by McDougall is a critical interpretive review. Like a systematic review, a critical interpretive review is described as a form of research in itself, which aims to answer a specific research question. It does not, however, identify all published literature on the topic. Instead, there is a focus on developing novel conclusions from key concepts and ideas that have emerged from normative and/or empirical literature in the field and informing the debate and discussion around a certain issue to date.<sup>37</sup>

<sup>21</sup>Strech, D., Synofzik, M., & Marckmann, G. (2008). Systematic reviews of empirical bioethics. *Journal of Medical Ethics*, 34(6), 472–477, p. 473.

<sup>22</sup>Ibid.

<sup>23</sup>Thomas, J., & Harden, A. (2008). Methods for the thematic synthesis of qualitative research in systematic reviews. *BMC Medical Research Methodology*, 8, 45.

<sup>24</sup>Hong, Q. N., Pluye, P., Fàbregues, S., Bartlett, G., Boardman, F., Cargo, M., Dagenais, P., Gagnon, M.-P., Griffiths, F., Nicolau, B., O' Cathain, A., Rousseau, M.-C., & Vedel, I. (2018). *Mixed Methods Appraisal Tool (MMAT) version 2018*. [http://mixedmethodsappraisaltoolpublic.pbworks.com/w/file/attach/127916259/MMAT\\_2018\\_criteria-manual\\_2018-08-01\\_ENG.pdf](http://mixedmethodsappraisaltoolpublic.pbworks.com/w/file/attach/127916259/MMAT_2018_criteria-manual_2018-08-01_ENG.pdf)

<sup>25</sup>Dixon-Woods, M., Shaw, R. L., Agarwal, S., & Smith, J. A. (2004). The problem of appraising qualitative research. *Quality and Safety in Health Care*, 13(3), 223–225; Dixon-Woods, M., Sutton, A., Shaw, R., Miller, T., Smith, J., Young, B., Bonas, S., Booth, A., & Jones, D. (2007). Appraising qualitative research for inclusion in systematic reviews: A quantitative and qualitative comparison of three methods. *Journal of Health Services Research & Policy*, 12(1), 42–47.

<sup>26</sup>McDougall, op. cit. note 1, p. 91.

<sup>27</sup>Mertz, M., Kahass, H., & Strech, D. (2016). Current state of ethics literature synthesis: A systematic review of reviews. *BMC Medicine*, 14, 152, p. 2.

<sup>28</sup>McCullough, L. B., Coverdale, J. H., & Chervenak, F. A. (2007). Constructing a systematic review for argument-based clinical ethics literature: The example of concealed medications. *Journal of Medicine and Philosophy*, 32, 65–76, pp. 66–67.

<sup>29</sup>McDougall, op. cit. note 1, p. 92.

<sup>30</sup>McCullough et al., op. cit. note 28.

<sup>31</sup>Ibid: 67.

<sup>32</sup>Strech, D., & Sofaer, N. (2012). How to write a systematic review of reasons. *Journal of Medical Ethics*, 38(2), 121–126.

<sup>33</sup>McDougall, op. cit. note 1, p. 92.

<sup>34</sup>Strech & Sofaer, op. cit. note 32, p. 122.

<sup>35</sup>We will discuss this shortly.

<sup>36</sup>McDougall, op. cit. note 1.

<sup>37</sup>McDougall, op. cit. note 6, p. 525.

McDougall argues that bioethics does not need to utilize the systematic review process to draw new ideas from existing empirical or normative evidence—i.e. identifying every article published around a particular ethical issue is not a necessary measure in addressing a bioethical research question. She argues that the reliance on all existing data in reviews in medicine to justify a health intervention does not translate clearly into bioethics scholarship. In literature reviews in bioethics, it is arguably more important to identify key ideas and arguments when justifying a normative claim, undertaking conceptual analysis, or generating new conclusions. Further, unlike carrying out a systematic review, a critical interpretative review is a method of literature review in which bioethics scholars are historically well-versed. Whilst it may not have the same degree of reproducibility as a systematic review, it does require a thoughtful interpretative lens, comprehensive search strategy, and detailed review of existing literature.<sup>38</sup>

By reflecting on Dixon-Woods and colleagues' method of critical interpretative synthesis,<sup>39</sup> McDougall concludes that a good critical interpretative review should:

1. Answer a specific research question;
2. Analyse both individual arguments in the literature and the entire body of literature;
3. Comment on quality issues Within the review;
4. Generate theory;
5. Capture all key ideas relevant to the research question; and
6. Record and report the search strategy.<sup>40</sup>

However, further indicative of the non-systematic nature of the critical interpretative review, McDougall frames it as a non-linear process whereby the research question itself need not be cemented in advance but can be refined (and possibly even determined) by the findings of the literature search.<sup>41</sup>

### 3 | THE NORMATIVE-EMPIRICAL DILEMMA

As we noted earlier in this article, the type of review chosen ought to reflect the researcher's purpose in conducting it. There is no single review method to fit all needs, and the introductory review is no less deserving of respect than the systematic review, provided it is employed appropriately. The aspect of a review's purpose that we suggest is integral to the choice of method is the type of literature

the researcher intends to include. There are clear differences in the very nature of normative and empirical literature that mean they cannot necessarily be reviewed in the same way—or, at least, that any effort to do so needs to be considerate of these differences. As such, one natural way of distinguishing reviews to consider their suitability for a given project is based on whether the literature to be included is normative, empirical, or a mixture of the two.

Normative literature in bioethics is where the challenges with quality appraisal arise when a researcher is conducting a systematic review.<sup>42</sup> As detailed above, systematic reviews employ some form of quality control to ensure that included studies meet some threshold of quality—the importance of this was stressed back in the 18th century by Lind when he reviewed studies of scurvy, commenting that 'before the subject could be set in a clear and proper light, it was necessary to remove a great deal of rubbish'.<sup>43</sup> This serves to exclude 'low-quality' publications—however that is defined—and produce a reliable synthesis of methodologically sound evidence. However, this is far more challenging when it comes to normative literature as there is no methodological statement to adhere to or openly criticizable methods of argumentation. In the absence of objective standards against which to measure normative work, attempts at quality appraisal would inevitably be affected by the biases of the researcher(s); in effect, subjective judgements would be made about whether an argument is 'good enough', which must raise the concern that some might (whether intentionally or not) characterize arguments they disagree with as poor scholarship. As McDougall notes, 'the criteria for quality are far less concrete and codifiable' in bioethics as compared with the biomedical sciences.<sup>44</sup> This appears to be widely recognized, with a systematic review of literature reviews in normative ethics finding that only 24% addressed the issue of quality appraisal, 25% of which disregarded it as a step on the basis that 'there are no usable or suitable methods or criteria for a quality appraisal of normative literature'.<sup>45</sup>

The difficulties of quality appraisal of normative bioethics scholarship largely come down to the fact that ethics is, at its core, subjective. Any attempt to exclude bioethics scholarship from a literature review based on it being of poor quality is questionable because it runs the risk of making biased value judgements. Rather than excluding papers, 'low quality' *could* simply be factored into the final synthesis. However, it remains that determining 'low quality' and weighting a paper's contribution to the final synthesis accordingly would remain subjective. At the very least, then, there is a strong need for reflexivity where any attempt to do so is included. Take, for example, the suggested

<sup>38</sup>Ibid: 527.

<sup>39</sup>Dixon-Woods, M., Cavers, D., Agarwal, S., Annandale, E., Arthur, A., Harvey, J., Hsu, R., Katbamna, S., Olsen, R., Smith, L., Riley, R., & Sutton, A. J. (2006). Conducting a critical interpretive synthesis of the literature on access to healthcare by vulnerable groups. *BMC Medical Research Methodology*, 6, 35.

<sup>40</sup>McDougall, op. cit. note 6, p. 527.

<sup>41</sup>Ibid: 526. This seemingly owes a lot to a phenomenological epistemology wherein the question is an inevitable function of the answer, which is interesting given that it sits in overt opposition to the empiricist epistemology that underlies systematic reviews. Our thanks to Giles Birchley for this point.

<sup>42</sup>Our focus here on quality appraisal is, as already alluded to, because it is the distinguishing feature of the systematic review relative to the other review types we discuss. We stress, however, that it is not the sole defining feature of a systematic review.

<sup>43</sup>Lind, J. (1753). *A Treatise of the Scurvy. In three parts. Containing An inquiry into the Nature, Causes, and Cure, of that Disease. Together with A Critical and Chronological View of what has been published on the subject.* Edinburgh: Sands, Murray, and Cochran.

<sup>44</sup>McDougall, op. cit. note 1, p. 95.

<sup>45</sup>Mertz, M., Strech, D., & Kahrass, H. (2017). What methods do reviews of normative ethics literature use for search, selection, analysis, and synthesis? In-depth results from a systematic review of reviews. *Systematic Reviews*, 6, 261, p. 5.

approach to bioethics systematic reviews proposed by McCullough and colleagues, which involves a scoring system.<sup>46</sup> One scorable domain included is 'quality of the ethical analysis and argument'.<sup>47</sup> In the absence of clearly defined and widely accepted criteria for high quality ethical analysis and argument—which is, arguably, unrealistic to ever expect—this cannot be considered appropriate. The same authors earlier proposed a formal tool for critically appraising normative bioethics literature, requiring the reviewer to ask of the literature:

1. Does the article address a focused ethics question?
2. Are the arguments that support the results of the article valid?
3. What are the results? What are the conclusions of the paper's ethical analysis and argument? and
4. Will the results help me in clinical practice?<sup>48</sup>

Again, however, the approach does little to effectively dispel subjectivity. Alternative approaches to quality assessment were considered by McDougall and Notini, such as the use of the publishing journal's impact factor as a proxy for quality.<sup>49</sup> They ultimately rejected this approach, which is unsurprising given its inherent flaws.<sup>50</sup>

When it comes to reviewing normative literature, then, it is not appropriate to seek to exclude any publications based on quality.<sup>51</sup> Not only is it unrealistic to think that a suitable way of doing so is feasible, but we suggest it is also undesirable. As such, the use of systematic reviews in this context appears, at best, misguided. Reviews of normative bioethics literature can operate as targeted readers' digests, meaning they require systematic *elements* if scholars are to take them as at all authoritative but need not—and, indeed, *should* not—go to the lengths of a systematic review.

So what of empirical literature? Systematic reviews more traditionally deal with empirical literature. They largely focus on clinical trials, but there are also many systematic reviews engaging with qualitative work. Empirical scholarship is better suited to such review methods due to the feasibility of subjecting it to quality assessment. Whether quantitative or qualitative, the collection and analysis of empirical data should, as a matter of good scholarship, follow defined

methods and conform with accepted ethical and reporting standards. There are myriad ethical protocols, reporting standards, and the like—the many formulations of PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses), for example—which introduce a more objective element that can be assessed for inclusion in reviews more reliably than can normative literature. This is something that clearly differentiates normative and empirical literature and makes the option of a systematic review better suited to the latter.

Within the confines of empirical literature, it is important to distinguish further between that which is qualitative and that which is quantitative. Whereas quantitative work can, where it follows accepted methods, be easily subjected to quality appraisal and other more objective assessments as part of a systematic review, qualitative data may still raise some issues.<sup>52</sup> Accepted methods can be followed and reporting guidelines satisfied, but empirical literature concerning qualitative data inherently entails a level of subjectivity. As Dunn and Ives note, '[e]ngaging with participants can be understood as an intersubjective process of interpretation and re-interpretation, in which meaning is *co-produced* [author emphasis] during the research process itself', thus necessitating reflexivity.<sup>53</sup> A researcher can seek to conduct thematic analysis as objectively as possible, but it is arguably impossible for this to be entirely objective; another researcher with a different disciplinary background may well analyse the same data 'objectively' and produce a different result. That is not to say that analysis of qualitative data is *entirely* subjective, but, rather, that it is not, nor does it set out to be, *entirely* objective and reflection on any possible subjectivity is important. The researcher is to be recognized as a co-producer, but steps in the direction of methodological rigour can be taken to avoid them being the sole producer—for example, triangulation in data analysis to reduce subjectivity. As such, an attempt to synthesize qualitative studies runs the risk of compounding subjectivity; the researcher of the original work will have introduced a level of subjectivity before the researcher conducting the literature review introduces additional subjectivity, potentially resulting in erosion of the original meaning intended by the research participant. That being said, qualitative empirical work *can* still be appraised for quality, using tools such as the CASP (Critical Appraisal Skills Programme) Qualitative Checklist<sup>54</sup> and the MMAT.<sup>55</sup> It is just that further difficulties may arise in synthesizing such work, which the researcher should be conscious of when starting. Similarly, where empirical work has employed mixed methods, it may be less straightforward at the point of evidence synthesis.

Within the constraints of contemporary academic publishing, limited word counts may also restrict description of methodological

<sup>46</sup>McCullough et al., op. cit. note 28.

<sup>47</sup>Ibid: 69.

<sup>48</sup>McCullough, L. B., Coverdale, J. H., & Chervenak, F. A. (2004). Argument-based medical ethics: A formal tool for critically appraising the normative medical ethics literature. *American Journal of Obstetrics and Gynecology*, 191(4), 1097–1102, p. 1099.

<sup>49</sup>McDougall, R. J., & Notini, L. (2014). Overriding parents' medical decisions for their children: A systematic review of normative literature. *Journal of Medical Ethics*, 40, 448–452. Referred to by McDougall, op. cit. note 1, p. 95.

<sup>50</sup>For example, some bioethics journals use an article commentary model whereby some articles are published with several citations in tow. One must also consider that publishing in bioethics is more debate driven than biomedical sciences, and response articles may, in some cases, be more an indication of poor-quality work than anything else. In sum, what contributes to a high impact factor is not always indicative of quality.

<sup>51</sup>One might suggest that exclusion based on quality is more straightforward—or, at the very least, more appropriate—in the case of blogs or journalistic content. However, we remain sceptical that this can be done with bioethics literature in a suitably objective manner. Further, it is somewhat common practice for such content to be excluded from reviews (in part because it is, on balance, more likely to be of questionable quality in the absence of peer review). Thanks to Jonathan Ives for pushing us to address this point.

<sup>52</sup>Dixon-Woods et al. (2004), op. cit. note 25.

<sup>53</sup>Dunn, M., & Ives, J. (2009). Methodology, epistemology, and empirical bioethics research: A constructive/ist commentary. *American Journal of Bioethics*, 9(6–7), 93–95, pp. 93–94.

<sup>54</sup>Critical Appraisal Skills Programme. (2018). *CASP qualitative checklist*. [https://casp-uk.b-cdn.net/wp-content/uploads/2018/03/CASP-Qualitative-Checklist-2018\\_fillable\\_form.pdf](https://casp-uk.b-cdn.net/wp-content/uploads/2018/03/CASP-Qualitative-Checklist-2018_fillable_form.pdf)

<sup>55</sup>Hong et al., op. cit. note 24.

details. Authors understandably want to utilize the majority of any word count on the findings of the review and discussion, but this may result in sacrificing a nuanced description of the steps taken in data analysis, including reflection on what was done to maintain 'objectivity' (or, at the very least, reproducibility). A recent synthesis of ethics literature reviews conducted by Mertz and colleagues found an increasing publication rate of systematic reviews. Overall, however, they called for improvement in the reporting quality for analysis and synthesis of normative information.<sup>56</sup>

The situation is further complicated when considering quality appraisal of empirical bioethics studies. Relevant literature identified as part of a review may include empirical studies, and empirical *bioethics* studies. Whilst the former ask only empirical questions, the latter ask empirical and normative questions in tandem. This raises the question of whether both ought to be treated the same. Our feeling is that they should not. Whilst quality appraisal tools such as CASP and MMAT may be useful in evaluating the qualitative methods used in both types of studies (e.g. thematic analysis or grounded theory), a further tool would be needed to appraise the quality of the empirical *bioethics* method (e.g. reflective equilibrium or reflexive balancing) that is used to integrate empirical findings and ethical analysis to generate normative conclusions. Ives and colleagues identified 15 standards of practice that could be utilized to both identify and appraise the quality of empirical bioethics research.<sup>57</sup> However, it remains unclear whether this framework would be used in addition to, or in place of, an existing tool for qualitative methods appraisal. Either way, empirical bioethics studies present a combination of empirical and normative that might be challenging to appraise in a literature review setting.

Given the clear differences between normative and empirical literature—and the murky in-between—it makes sense that each suits a different approach to reviewing. However, in many circumstances it may be that a review is wanted to combine normative and empirical literature. Considering both is arguably essential in any bioethics project that seeks to provide recommendations intended to in some way guide policy or practice for the simple reason of being comprehensive in one's review—though, of course, it may not all be brought together in a single review. With the exception of the introductory review, the review types thus far present challenges in combining different types of data. Further, whilst an introductory review can include both normative and empirical literature, this is done in a rather simplistic manner that is not a substantive piece of research in itself. As such, there is an apparent need for a review method that can combine both normative and empirical literature in a more robust manner that goes beyond the introductory review. We suggest that the scoping review fills this gap.

## 4 | DEFENDING THE BIOETHICS SCOPING REVIEW

Scoping reviews are still, in the grand scheme of things, a fairly recent (though not the *most* recent) addition to the literature review space. What is, arguably, the most recognized methodological framework for conducting scoping reviews (and certainly the first) is that of Arksey and O'Malley, published as recently as 2005.<sup>58</sup> It was something of a slow burner in terms of uptake, with Google Scholar showing just 161 citations in its first 5 years. However, it has since established itself as a recognizable methodology, with well over 13,000 citations on Google Scholar as of October 2021. As noted by Munn and colleagues, '[t]here now exists clear guidance regarding the definition of scoping reviews, how to conduct scoping reviews and the steps involved in the scoping review process'.<sup>59</sup> In 2010, Levac and colleagues proposed clarificatory and enhancement recommendations to improve the methodological quality of scoping reviews.<sup>60</sup> More recently, The Joanna Briggs Institute has even produced a handbook for reviewers.<sup>61</sup> We earlier noted McDougall's dismissal of scoping reviews on the basis of a lack of definitional clarity.<sup>62</sup> Whereas we still consider her to have been premature in the offhand comment made, it must at least be acknowledged that scoping reviews were far less established at the time McDougall was writing. Here, then, we are suggesting that scoping reviews ought *now* to be suitably acknowledged and embraced in the bioethics literature review space.

To demonstrate the utility of the scoping review methodology, let us briefly outline it as proposed by Arksey and O'Malley.<sup>63</sup> They detail a six-stage process for conducting a scoping review:

1. Identifying the research question;
2. Identifying relevant studies;
3. Study selection;
4. Charting the data;
5. Collating, summarizing, and reporting the results; and
6. Consultation with practitioners/consumers.<sup>64</sup>

<sup>58</sup>Arksey, H., & O'Malley, L. (2005). Scoping studies: Towards a methodological framework. *International Journal of Social Research Methodology*, 8(1), 19–32. Arksey and O'Malley proposed the first recognizable methodology, but it can be said to have predecessors. Enrich and colleagues, for example, conducted an earlier project about continuity of care, which they described as a scoping exercise 'to map a wide range of literature, and to envisage where gaps and innovative approaches may lie'. Enrich, K., Freeman, G. K., Richards, S. C., Robinson, I. C., & Shepperd, S. (2002). How to do a scoping exercise: Continuity of care. *Research Policy and Planning*, 20(1), 25–29, p. 28.

<sup>59</sup>Munn et al., op. cit. note 16, p. 1.

<sup>60</sup>Levac, D., Colquhoun, H., & O'Brien, K. K. (2010). Scoping studies: Advancing the methodology. *Implementation Science*, 5, 69.

<sup>61</sup>The Joanna Briggs Institute. (2015). *The Joanna Briggs Institute reviewers' manual 2015: Methodology for JBI scoping reviews*. <https://nursing.lsuhscc.edu/JBI/docs/ReviewersManuals/Scoping-.pdf>

<sup>62</sup>McDougall, op. cit. note 6, pp. 524–525.

<sup>63</sup>Whilst Levac and colleagues and The Joanna Briggs Institute have published more recent outlines that clarify and refine the methodology, Arksey and O'Malley's paper is still regarded as the central methodology. Hence our proceeding with a focus on Arksey and O'Malley—though with mention, where appropriate, of the others.

<sup>64</sup>Arksey & O'Malley, op. cit. note 58, pp. 22–23.

<sup>56</sup>Mertz et al., op. cit. note 27.

<sup>57</sup>Ives, J., Dunn, M., Moleijk, B., Schildmann, J., Bærøe, K., Frith, L., Huxtable, R., Landeweer, E., Mertz, M., Provoost, V., Rid, A., Salloch, S., Sheehan, M., Strech, D., de Vries, M., & Widdershoven, G. (2018). Standard of practice in empirical bioethics research: Towards a consensus. *BMC Medical Ethics*, 19, 68.

Whilst a researcher generally follows the steps in order, Arksey and O'Malley stress that it should be viewed as an iterative rather than linear process, and that one should 'engage with each stage in a reflexive way and, where necessary, repeat steps to ensure that the literature is covered in a comprehensive way'.<sup>65</sup>

The sixth stage—consultation with practitioners/consumers—is considered optional. Arksey and O'Malley recommend it in line with Oliver's suggestion that systematic reviews—and, by extension, scoping reviews—can be enhanced in terms of utility if both practitioners and consumers contribute to the work.<sup>66</sup> This is very much in keeping with the broader shift in healthcare towards co-production, and we consider it true of all bioethics scholarship, even purely normative, desk-based research; it improves the applicability of any resulting recommendations if they have been developed with an eye on lived experiences of that issue. This stage, then, might be considered appropriate across all review methods, including introductory and narrative reviews. In their advancement of the scoping review methodology, Levac and colleagues argue, in departure from Arksey and O'Malley, that this consultation stage 'should be an essential component of scoping study methodology'.<sup>67</sup> We suggest that something of a middle ground is preferable—whether the consultation stage takes place as part of the scoping review itself ought to be based on the scoping review's positioning in the researcher's overall research project. We will revisit this shortly.

Setting aside the sixth stage for now, it is clear to see from the first five that there is some level of influence from systematic reviews. There is an evident intention to introduce methodological rigour, potentially even aiming for reproducibility. Indeed, in recent years a PRISMA extension for scoping reviews has been developed to assist in methodological standardization.<sup>68</sup> Equally, however, it lacks the quality appraisal stage that is integral to systematic reviews,<sup>69</sup> making the scoping review *less* systematic than a systematic review but still *largely* systematic. Borrowing from the non-systematic end of the spectrum, scoping reviews do allow for more critical engagement and the addition of an interpretive lens. Stages 4 and 5 might seek to be as objective as possible in providing something of a readers' digest, or one might be approaching the literature from a clear theoretical perspective. Whereas a systematic review calls for total objectivity (as far as that is possible, which is a discussion in itself), a scoping review permits the researcher to take a more critical stance on the included literature and potentially map it onto an existing theoretical understanding. Regardless of one's approach to these

stages of analysis, we suggest that methodological transparency and reflexivity is important. Even if a researcher is seeking to maintain a level of objectivity when conducting thematic analysis, their background in terms of education, research record, and even life experience will all have some bearing on how information is processed. On this point it is worth noting that The Joanna Briggs Institute's manual is very clear that '[a]ll [Joanna Briggs Institute] reviews require at least two reviewers in order to minimize reporting bias'.<sup>70</sup> Thus, whilst thematic analysis is inherently subjective, the researcher can edge in the direction of objectivity with transparency, reflexivity, and the resulting possibility of reproducibility.

As earlier discussed, McDougall described the aim of an introductory review as '[t]o show a gap in the literature, justifying a research project' and the aim of both the systematic and critical interpretive reviews as '[t]o answer a research question'.<sup>71</sup> As such, the introductory review is *not* considered research in itself whereas the other two review types are. A scoping review, by contrast, can be used for both purposes. The first stage of a scoping review, much like a systematic review, is to identify the research question. Departing from the PICO model, The Joanna Briggs Institute instead proposes that the question be formulated in terms of Population, Concept, Context.<sup>72</sup> The aim, then, is to answer this research question. Equally, however, the scoping review may be conducted early in a research project as a means of, per Huxtable and Ives' framework, 'mapping' the existing literature.<sup>73</sup> This analysis of previous scholarship should consider both empirical and normative studies, and thus the scoping review seemingly fits in well at the outset of an empirical bioethics project.

Regardless of its aim, a scoping review ought to be considered research in itself. It follows a largely systematic method that requires significant commitment from the researcher(s) and produces an independently useful and publishable output, which may generate new knowledge or theoretical understanding of the topic of interest. Reflecting on a scoping review recently conducted by one of us, its underlying purpose was, ultimately, to illustrate a gap in the literature as a first stage in a larger body of work (much like an introductory review), though it resulted in a standalone publication<sup>74</sup> that may now prove useful for other researchers exploring similar questions (much like a systematic or critical interpretive review). To that end, the scoping review is

an ideal tool to determine the scope and coverage of a body of literature on a given topic and give clear indication of the volume of literature and studies available as well as an overview (broad or detailed) of its focus.<sup>75</sup>

<sup>65</sup>Ibid: 22.

<sup>66</sup>Oliver, S. (2001). Making research more useful: Integrating different perspective and different methods. In S. Oliver & G. Peersman (Eds.), *Using research for effective health promotion* (pp. 167-179). Open University Press.

<sup>67</sup>Levac et al., op. cit. note 60, p. 4.

<sup>68</sup>Tricco, A. C., Lillie, E., Zarin, W., O'Brien, K. K., Colquhoun, H., Levac, D., Moher, D., Peters, M. D. J., Horsley, T., Weeks, L., Hempel, S., Akh, E. A., Chang, C., McGowan, J., Stewart, L., Hartling, L., Aldcroft, A., Wilson, M. G., Garrity, C., ... Straus, S. E. (2018). PRISMA extension for scoping reviews (PRISMA-ScR): Checklist and explanation. *Annals of Internal Medicine*, 169(7), 467-473.

<sup>69</sup>Again, we stress that quality appraisal is the distinguishing feature of a systematic review in our discussion but is not the sole defining feature.

<sup>70</sup>The Joanna Briggs Institute, op. cit. note 61, p. 10.

<sup>71</sup>McDougall, op. cit. note 6, p. 524.

<sup>72</sup>The Joanna Briggs Institute, op. cit. note 61, p. 5.

<sup>73</sup>Huxtable, R., & Ives, J. (2019). Mapping, framing, shaping: A framework for empirical bioethics research projects. *BMC Medical Ethics*, 20, 86.

<sup>74</sup>Parsons & Ives, op. cit. note 8.

<sup>75</sup>Munn et al., op. cit. note 16, p. 2.



To briefly return to the sixth stage of Arksey and O'Malley's outline, consultation with practitioners/consumers may or may not be included as a step in the scoping review itself. Whether it does will most likely depend on whether the scoping review is intended as an early stage in a wider project or is being conducted as a project in itself. If the latter, then it would be appropriate to carry out this stage as a clear part of the scoping review to maximize the project's grounding in reality. For example, you might consult with (or even co-author with) a healthcare professional working in the area you are researching, seeking their on-the-ground understanding of the area being researched and their perspective on both the accuracy and utility of the work.<sup>76</sup> Where the scoping review is part of a wider project, this stage of consultation is more likely to be conducted more broadly—i.e. as part of the whole project rather than with a focus on the review itself. For example, a larger empirical bioethics project may have a PPI (patient and public involvement) group to afford this important perspective or be devised in discussion with pertinent healthcare professionals. Regardless of which of these two situations applies, the researcher should not—despite Arksey and O'Malley listing this stage as the sixth of six—wait until the rest is done to engage with practitioners/consumers. Indeed, it is important to do so at the project's conception, not least because it may save time in developing the most accurate search string.

The scoping review is, then, a useful addition to the bioethics researcher's arsenal. To the researcher who wants the rigour and reproducibility of a systematic review but without the challenging (and perhaps questionable) process of formalized quality appraisal, it offers a largely systematic approach that removes the need to adapt the systematic review method. To the researcher who wants to identify key ideas in a particular area and critically engage with them, it offers a robust method of doing so without limiting their ability to apply an interpretive lens of their choice. Provided researchers are reflexive about their aim(s) in carrying out the review and how they have applied Arksey and O'Malley's methodology, the scoping review is a clear yet flexible approach to reviewing literature in bioethics that, we suggest, is deserving of greater recognition.

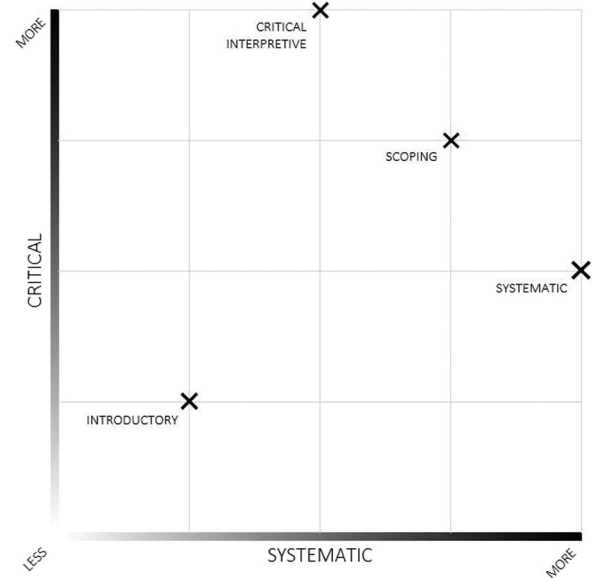
## 5 | A NEW TAXONOMY

We have thus far alluded to the suitability of different literature review types for different purposes. Here, we will provide some clarification and propose a new taxonomy (see Figure 2).

### 5.1 | Normative literature only

Where the literature that is intended to be included in the review is purely normative in nature, the systematic review is inappropriate.

<sup>76</sup>Of course, where just one or two professionals are being consulted this will ultimately come down to their subjective experience which may not be representative. However, this remains better than no consultation at all, and on a particularly tricky issue it may be considered appropriate to engage several professionals at this stage.



**FIGURE 2** Literature reviews in relation (proposed taxonomy). Review types are plotted in relation to one another rather than against fixed values.

One of the key reasons for the suitability of a non-systematic (or at least *less* systematic) review in the case of normative literature, as already discussed, relates to quality appraisal. Assessing the quality of normative literature—whether as an element of inclusion/exclusion criteria or during evidence synthesis—is a significant obstacle. Here, then, we suggest the options of critical interpretive review and narrative review come to the fore as well suited to the job.

McDougall describes the critical interpretive review as somewhat occupying a space between introductory reviews and systematic reviews, in that it is 'thoughtfully-designed and thorough, but not systematic in the sense of aiming to assemble every article relevant to the research question'.<sup>77</sup> In that sense, then, a scoping review would also be appropriate for a review of purely normative literature (and would provide a more robust, reproducible method to the researcher who seeks that than would a critical interpretive review).

### 5.2 | Empirical literature only

Where the included literature is intended to be only empirical in nature, a more stringent method may be appropriate for the reasons earlier discussed—largely because of the possibility of quality appraisal, although the practicalities of quality appraisal remain contentious. It is with such literature that a systematic review is likely to be most appropriate. It is, nonetheless, important to acknowledge the distinction between qualitative and quantitative data in empirical

<sup>77</sup>McDougall, op. cit. note 6, p. 525.

studies—the latter being the more natural fit with a systematic review. Systematic reviews are possible with qualitative data but may present more challenges if the researcher is seeking to report objectively, or if studies asking both empirical and normative research questions are included.

However, as much as a systematic review is appropriate when only empirical literature is to be included, that is not to say that other review methods are *not* appropriate. Our point is more that it is only in the context of solely empirical literature that a systematic review is appropriate. A scoping review, for example, might be chosen to synthesize purely empirical literature. Where the topic being researched is relatively novel, the scoping review may in fact prove better for the task than a systematic review. If it is not anticipated that the search will return many results, a full systematic review might be considered overkill—systematic reviews are certainly conducted (and prove useful) with few included studies, but this is more understandable in the context of clinical research where the goal is to highlight the state of knowledge in relation to a particular intervention. Furthermore, resource constraints and feasibility should be kept in mind. Systematic reviews are resource intensive and may be difficult to undertake within the time and funding available as part of a research grant—a scoping review can be completed in a comparatively short space of time.<sup>78</sup>

### 5.3 | Mixed normative and empirical literature

Given the reasons why the critical interpretive review is better suited to normative literature and the systematic review to empirical literature, it appears that neither method is particularly well placed to review a combination. The researcher who wants to explore both normative and empirical literature could conduct two separate reviews with a clear normative-empirical distinction, but it is generally preferable to conduct a combined review where both types of literature are of interest (even if just as a matter of pragmatic use of resources). Indeed, the personal experience of one of the authors in having conducted separate normative and empirical reviews is testament to this. We posit that the scoping review is an appropriate choice in such circumstances.

Scoping reviews are, as earlier suggested, largely systematic. The stages outlined by Arksey and O'Malley reflect some of the robustness of the systematic review whilst removing the quality appraisal element. Equally, they introduce a level of flexibility so that the researcher can adapt their approach to suit their more specific purposes. For example, the 'charting the data' stage might be completed through use of thematic analysis and/or (depending on the specific project) some form of descriptive statistics. We would, however, caution that descriptive statistics ought to be considered the upper quantitative limit in a scoping review. The use of empirical studies in literature reviews in bioethics tends towards qualitative work. Where deeper engagement with

statistical data is needed, it may not be appropriate to combine this with normative scholarship in a single review—in such circumstances, we would suggest a separate systematic review of the heavily quantitative literature. Given this increased systematism and flexibility in terms of critical engagement, the scoping review can be considered as occupying something of a middle ground between systematic reviews and critical interpretive reviews (see Figure 2)—the best of both worlds, almost.

Introductory (or narrative) reviews are also an appropriate way of combining normative and empirical studies. However, they are rather more simplistic and, as discussed above, largely an introductory element in a larger piece of work. Introductory and narrative reviews still serve a useful purpose, but where a researcher is combining normative and empirical scholarship and wants a more comprehensive review, the scoping review should be favoured.

## 6 | CONCLUSION

What is clear is that the inherent differences in normative and empirical literature mean that a one-size-fits-all literature review method in bioethics is not only unrealistic, but unnecessary. It is important to recognize the spectrum of purposes behind the reviewing of bioethics literature and map the range of review methods onto this spectrum.

We have demonstrated the important space that the scoping review fills, enabling researchers to synthesize both normative and empirical scholarship in a single literature review. In a sense, then, the scoping review offers a particularly useful middle-ground option for when a systematic review is too systematic and the alternatives (such as the critical interpretive review and narrative review) are not systematic enough.

It must be acknowledged that a scoping review is limited in terms of providing concrete guidance regarding its subject matter.<sup>79</sup> Systematic reviews are ordinarily conducted with a view to providing a useful tool in the development of policy and practice, which is enabled by the methodological rigour and assessment of bias—one can take the results as a comprehensive and objective account of the state of knowledge. With a scoping review being only largely (but not entirely) systematic, the level of subjectivity precludes the result of clear guidance. Indeed, in the field of bioethics, a literature review is most often an early stage in a larger project that will aim at making recommendations at a later stage, following more normative work. It seems unlikely, then, that a bioethics scholar would see a scoping review as policy guiding in itself. Nonetheless, we highlight this limitation for completeness—and the fact that this may be worth making clear in a published scoping review for the benefit of any readers unfamiliar with bioethics scholarship who may take it as policy guiding.

Whilst not the best option for all purposes, we suggest that the scoping review is the most versatile option for the bioethics researcher looking to map the literature in their area of interest. It introduces much of the methodological rigour of a systematic review, comprehensively identifying literature for inclusion and enabling, for

<sup>78</sup>Arksey & O'Malley, op. cit. note 58, p. 30.

<sup>79</sup>Munn et al., op. cit. note 16, p. 3.

the most part, reproducibility. It simultaneously permits the introduction of an interpretive lens of the researcher's choice, allowing for analysis that is as broad or detailed as desired. Given these clear benefits, the bioethics scoping review is deserving of greater recognition and, we suggest, ought to be embraced by the field.

#### CONFLICT OF INTEREST

The authors declare no conflict of interest.

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