## A Systematic Review of Policy Learning: Tiptoeing through a Conceptual Minefield

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Policy learning is an increasingly salient concept in public policy research and practice. With growing theoretical advancements, it offers substantial value for policy analysis. However, the field's conceptual state calls for refinement, and its burgeoning literature calls for a much-needed synthesis. We address these calls by conducting a systematic literature review of empirical policy learning articles with a focus on synthesizing a growing, yet relatively fragmented, body of research and addressing inherent conceptual clarity issues. In total, 147 articles were analyzed and integrated into an overarching framework offering a background conceptualization of policy learning that complements and supplements existing conceptual approaches. This conceptualization is centered on understanding the interplay between policy issues, information and knowledge, systems and structures, and context. In conclusion, an extensive research agenda on policy learning is proposed to help advance public policy theory, research, and practice.

**Keywords:** Policy Learning, Systematic Literature Review, Public Policy, Public Administration, Policy Analysis, Concept Formation, Conceptual Clarity, Conceptualization in Policy Studies, Research Agenda.

<sup>\*</sup> Acknowledgements: The first author would like to extend sincere thanks to Professor Claudio Radaelli, the School of Transnational Governance, European University Institute for the many interesting conversations, insights, and debates on policy learning over the past two years. Sincere thanks are also due to Professor Mike Jones, University of Tennessee Knoxville for the many stimulating reflections and debates on Policy Learning during several meetings in 2020. The authors would like to sincerely thank Professor Emma R. Norman and our anonymous reviewers at the *Policy Studies Yearbook* for their constructive feedback and support.

## Una revisión sistemática del aprendizaje de políticas: Caminando de puntillas por un campo minado conceptual

El aprendizaje de políticas es un concepto cada vez más destacado en la investigación y la práctica de políticas públicas. Con crecientes avances teóricos, ofrece un valor sustancial para el análisis de políticas. Sin embargo, el estado conceptual del campo requiere refinamiento y su floreciente literatura requiere una síntesis muy necesaria. Abordamos estos llamados mediante la realización de una revisión bibliográfica sistemática de artículos de aprendizaje de políticas empíricas con un enfoque en sintetizar un cuerpo de investigación creciente, aunque relativamente fragmentado, y abordar cuestiones de claridad conceptual inherentes. En total, 147 artículos fueron analizados e integrados en un marco general que ofrece una conceptualización básica del aprendizaje de políticas que complementa y complementa los enfoques conceptuales existentes. Esta conceptualización se centra en comprender la interacción entre cuestiones de política, información y conocimiento, sistemas y estructuras, y contexto. En conclusión, se propone una amplia agenda de investigación sobre el aprendizaje de políticas para ayudar a promover la teoría, la investigación y la práctica de las políticas públicas.

**Palabras clave:** Aprendizaje de políticas, Revisión sistemática de la literatura, Políticas públicas, Formación de conceptos, Conceptualización en estudios de políticas, Agenda de investigación.

政策學習的系統回顧: 通過概念雷區踮起腳尖

政策學習是公共政策研究和實踐中越來越突出的概念。隨著 理論的不斷進步,它為政策分析提供了巨大的價值。然而, 該領域的概念狀態需要完善,其蓬勃發展的文獻需要急需的 綜合。我們通過對實證政策學習文章進行系統的文獻綜述來 應對這些呼籲,重點是綜合不斷增長但相對分散的研究主 體,並解決固有的概念清晰度問題。總共有 147 篇文章被分 析並整合到一個總體框架中,提供了政策學習的背景概念, 補充和補充了現有的概念方法。這種概念化的核心是理解政 策問題、信息和知識、系統和結構以及背景之間的相互作 用。總之,提出了關於政策學習的廣泛研究議程,以幫助推 進公共政策理論、研究和實踐。

關鍵詞: 政策學習,系統文獻回顧,公共政策,概念形成, 政策研究中的概念化,研究議程。

Decades ago, leading scholars such as Karl Deutsch (1966) and John Dewey (1938) rejuvenated the discussion on learning as a form of context adaption and a supplementary understanding to power-based politics in public administration. In doing so, they laid a foundation for what we now know as "policy learning." From there on, championed by leading scholars, interest in policy learning has flourished (e.g., Sabatier 1988; Rose 1991; Bennett and Howlett 1992; Dunlop and Radaelli 2018). The allure of policy learning is undeniable as it yields instrumental transformations, from achieving policy objectives to improving public service performance and disaster management (see e.g., Wai Yip So 2012; O'Donovan 2017). The salience of learning is emphasized by the very nature of public administration and its longstanding tradition of responding to new challenges and shortcomings, particularly in an era of wicked and complex policy problems where varieties of learning can empower sense making and enable better responses to pressing challenges (Peters 2017; George et al. 2020; Zaki and Wayenberg 2021; Zaki and George 2021). The importance of learning has been further accentuated by relatively recent paradigmatic transformations such as Public Value and Digital Era Governance, which focus on continuous improvements with an orientation toward collaborative learning among actors, knowledge sharing, and engaging with new technology (see e.g., Bryson, Crosby, and Bloomberg 2014; Dunleavy et al. 2006).

With these foundational influences, interest in policy learning permeated the realms of theory, research, and practice. Scholars continuously engage in theory development and extension to enhance the yield of policy learning for public administration (see e.g., Dunlop and Radaelli 2018; Heikkila and Gerlak 20013). In a discursive process, theoretical contributions are rapidly employed to refine theory and garner insights for practice in critical areas from governance to disaster response and recovery (see e.g., O'Donovan 2017; Weissert and Scheller 2008; Zaki and Wayenberg 2021). With the growing role of Public International Organizations and transnational networks, policy learning also serves as a practice-oriented framework across the supra/subnational spectrum. Examples include large-scale efforts such as the European Union's Open Method of Coordination (OMC) (Tamtik 2016) and the OECD's transnational governance focus (Porter and Webb 2008). On the subnational and municipal levels, policy learning is key in in trans-municipal networks and local partnerships formed to foster learning and exchange of experiences (see e.g., Lee and Van de Meene 2012; Kern and Bulkeley 2009).

Ontologically, policy learning literature and theory have remarkably matured over the years. Robust theoretical refinements have emerged to illuminate various facets of policy learning, policy making, and their intersections. This included (among many others) refining our understanding of the interactions between individual and collective learning (see e.g., Heikkila and Gerlak 2013), systematizing different modes of policy learning and their boundary conditions (see e.g., Dunlop and Radaelli 2013), the operationalization of policy learning across multiple levels of analysis (see e.g., Dunlop and Radaelli 2017, 2020), and theorizing key relationships between policy learning and policy change (see e.g., Moyson, Scholten, and Weible 2017). This led to policy learning theoretically crystallizing at the heart of different theories of the policy process—such as the Narrative Policy or Institutional Analysis Development Frameworks, among others (see e.g., Jones and Radaelli 2015; Heikkila and Andersson 2018).

Despite this progress, several calls still echo the need for enhancing the conceptual and thus analytical value of policy learning (see e.g., Radaelli 2009; Dunlop and Radaelli 2018; Goyal and Howlett 2018). Policy learning literature still endures an array of interwoven theoretical, empirical, and practical challenges, mostly of a conceptual stemming. First: theoretically, the concept of policy learning remains shrouded in ambiguity and still warrants more clarity (Karlsen and Larrea 2016; Dunlop, Radaelli, and Trein 2018). It also endures conceptual fragmentation and stretching (Goyal and Howlett 2018). Thus, it comes as no surprise that research on policy learning is sometimes deemed synonymous with sweeping a "conceptual minefield" (Levy 1994) or treading a jungle with overlapping definitional contours and a dizzying array of definitions (Borrás 2011; Stark 2019). As conceptual clarity influences theory development (Gerring 1999; Alvesson and Blom 2021), such issues can also contribute to the relatively slowed theoretical development of policy learning (Gerlak et al. 2018). Second: empirically, conceptual, and definitional clarity issues have spill-over effects as they undermine research-based knowledge creation. Without some convergence on fundamentals, scientists face difficulties building on the work of each other (Kaplan and Haenlein 2006; Cole 1983). This can explain the relatively reduced cohesion and knowledge production and accumulation somewhat observable in policy learning and some of its subfields (see e.g., Stark 2019; Maggetti and Gilardi 2016). Consequently, with limited conceptual cohesion, attempts to operationalize learning have not been frequently tied to clear definitions (Pattison 2018). Third: practically, though highly encouraged, frameworks fostering policy learning rarely define it or agree how it can be identified and streamlined. Given those issues, practitioners and researchers can struggle to identify when learning takes place and discern its role in affecting change (Knoepfel and Kissling-Näf 1998; Dunlop and Radaelli 2016). Put together, this can render policy learning a "hembig," as such; a concept that is hegemonic, yet ambiguous and excessively scoped (Alvesson and Blom 2021). Furthermore, the burgeoning interest in policy learning has caused a notable growth of literature, with the concept being utilized across a variety of disciplines, policy areas, and using different approaches. As the literature grows, the need for synthesizing this sprouting body of knowledge becomes more pressing, particularly with concerns over body of knowledge fragmentation (Bennett and Howlett 1992; Bakır 2017).

As demonstrated, conceptual clarity, fragmentation, and knowledge accumulation issues underpin the field's trichotomy *of theoretical*, *empirical*, and *practical* challenges. Additionally, there is a growing need to synthesize this growing body of literature. Driven by this problematization, in this article we utilize a systematic literature review as a method for crafting state of the art field syntheses to support knowledge accumulation and reduce fragmentation. We employ the review results to propose a background conceptualization of policy learning and a future research agenda that builds on recent conceptual and theoretical refinements in emerging policy learning research (see e.g., Heikkila and Gerlak 2013; Moyson, Scholten, and Weible 2017; Dunlop and Radaelli 2013). In doing so, we are guided by the following pressing research questions:

- 1. What is the current landscape of policy learning literature?
- 2. What is the current definitional state of policy learning in that literature?
- 3. How can policy learning be better conceptualized?
- 4. How can the answers to the above questions inform a future research agenda?

In this review, we analyzed a total of 147 empirical articles published in journals included in the public administration category of the Web-of-Science Social Sciences Citation Index (SSCI). Following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) outlined by Moher and others (2009), we offer results using a replicable and transparent process aimed at taking stock of the field's empirical state of the art.

The contribution of this article is threefold. Theoretically, we employ theoretical triangulation by drawing on theories of the policy process, the policy learning literature, and our review findings to propose a conceptual framework of policy learning grounded in structural dimensions salient in extant literature. Thus, we contribute to addressing persistent fragmentation, cohesion, and conceptual clarity issues (see e.g., Dunlop and Radaelli 2018; Stark 2019). Methodologically, we use an innovative approach that first utilizes an integrative review to synthesize the body of literature. Then, we carry our empirically grounded findings into a problematized review that draws on interdisciplinary resources to scrutinize and reimagine literature toward a theoretically coherent background conceptualization of policy learning. Thus, we contribute to knowledge production and accumulation while avoiding a priori assumptions and yielding replicable and comparable results to inform future research agendas (see e.g., De Vries, Bekkers, and Tummers 2015; Pickering et al. 2014). To our current knowledge, there have been no full-fledged systematic literature reviews focusing on the conceptualization of policy learning to date. Our third contribution bridges the theoretical-practical divide. With ontology often being a dividing line in landscaping policy learning (Dunlop and Radaelli 2017), we argue that the field's currently dominant ontological position contributes to the field's conceptual challenges. We postulate that an ontological re-alignment toward an integrated, policy systems-grounded, multidimensional perspective can better leverage policy learning research and practice.

Hence, we elaborate on a proposed framework that sets to achieve such endeavor, thus meeting the two chief criteria for solid theoretical contributions: originality and utility (Corley and Gioia 2011).

This article proceeds as follows—we next elaborate on the methodological framework before providing a synthesis of the review findings; we then propose a background conceptualization for policy learning along with a future research agenda.

## Methods and Research Design

## Methodological Approach

Systematic literature reviews (SLRs) are ideally suited to synthesize a large body of literature, enhance the accumulation of knowledge, integrate insights, and inform future research agendas (Pickering *et al.* 2014; Post *et al.* 2020). In this review, we hybridize two relevant, yet seemingly opposing, approaches to SLRs: the integrative SLR (Elsbach and van Knippenberg 2020) and the problematizing SLR (Alvesson and Sandberg 2020). Integrative reviews lead to synthesis that lays the foundation for the creation of new frameworks and perspectives (Callahan 2014; Torraco 2005). Such reviews are highly justified when reconceptualization is needed in mature, yet fragmented, literatures. Hence, they are of value given the fragmented nature of the policy learning literature as they allow taking a full-stock inventory approach. On the other hand, problematized systematic reviews take a narrower approach aiming to reimagine literature through focused critical interrogation. This leads to enhanced perspectives on particular phenomena based on reflexivity, broad reading, focused selection, and problematizing, especially where conceptualization is sought (Alvesson and Sandberg 2020).



Figure 1: Methodological Overview

This inherently implies the potential for ontological re-alignment, thus is of value given the established influence of ontological positions in policy learning research. This problem-driven strand of SLRs also allows us to openly draw on a set of interdisciplinary intellectual resources otherwise not viable in integrative approaches (which is highly suited for our research objectives).

As the policy learning literature can be highly fragmented, heterogenous, yet also underpinned by a salient conceptual challenge, we find that an innovative phased hybridization of the two approaches (as demonstrated in Figure 1) to be

valuable. An integrative approach to certain aspects of literature (e.g., research methods, regions of study, policy domains, definitions used, potential catalysts, outcomes, and barriers) can yield in-depth insights and for necessary synthesis. A problematized focus on the salient conceptual issue at hand is best suited for building a coherent background conceptualization of policy learning. Hence, after conducting a full-fledged integrative review, we identify and problematize the key results of our integrative review (the most frequently used definitions of policy learning) to critically interrogate underlying challenges and propose a conceptualization of policy learning. In this case, focused problematization allows analytical scrutiny of concepts and the identification of knowledge gaps. Thus, we "open up" the conceptualization of learning to insights from policy process, policy learning theory, and cognitive psychology literature.

#### Data Collection and Analysis

In addition to following Moher and others' (2009) PRISMA, we closely observe four key criteria of robust systematic approaches to literature reviews: *problem definitions* (as outlined in the introduction section), *search strategy*, *evaluation criteria*, and *data extraction and analysis* (Badger *et al.* 2000).

## Search Strategy and Evaluation Criteria

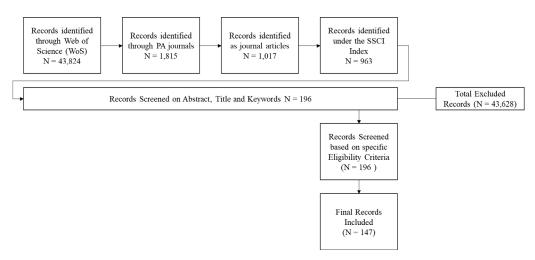


Figure 2: Data Collection Process

As illustrated in Figure 2, first, we conducted an electronic search in the Web of Science (WoS) database with "policy learning" as the keyword in the topic field (title, abstract, and keywords). Second, results were refined to include articles under the Public Administration category. Third, results were narrowed down to only include journal articles. The fourth step was identifying articles under the Web of Science Social Citation Index (SSCI) as a recognized benchmark for rigorous, high quality peer reviewed publications (Huijbregts, George, and Bekkers

2021; Bakır 2017). To ensure including all potentially relevant articles, no time constraint on publications was imposed. The last search update was conducted on September 23, 2020.

To evaluate articles for inclusion in the final dataset for coding, three steps were followed: First, non-English articles were excluded. Second, abstracts were screened to exclude non-empirical articles (in some cases, full article reads were required). Non-empirical articles (N = 21) were excluded from coding yet are used to enrich our discussion and analysis. We view non-empirical articles as purely conceptual or theoretical contributions that do not include an empirical case analysis.<sup>1</sup> Third, articles were fully read to exclude those with no tangible focus on, or implications for, policy learning. No removal of duplicates was necessary as the search was comprehensively conducted through the Web of Science (WoS) database. A final set of 147 articles was included for coding. A chronologically ordered list of included articles is available in Appendix I.

## Data Extraction and Analysis

Developing coding categories was centered on linking research design with research questions and reducing the complexity of the coded attributes for meaningful insights and higher face validity. For that purpose, we developed two main coding categories allowing for the integration and problematization of our findings:

- Field synthesis attributes: A set of attributes focused on answering our first research question aimed at synthesizing the policy learning literature landscape. This category includes key identifiers of regions of study, policy domains, methodological approaches, novel conceptual/theoretical contributions, theoretical lenses used, types of policy learning, and instances of individual versus collective learning focus.
- Conceptual attributes: A set of attributes focused on answering our second research question aimed at identifying the current definitional state of policy learning by distilling key conceptual dimensions. This includes definitions used, potential catalysts, outcomes, and barriers. Selection of these attributes draws on the need to consider key bounding dimensions, characteristics, and entailments for conceptualizations in social sciences, particularly within issues of conceptual pluralism (Ansell 2019; Gerring 1999). Consistently, such attributes were used for similar purposes in earlier systematic reviews (see e.g., De Vries, Bekkers, and Tummers 2015).

<sup>1</sup> Non-empirical (yet relevant) articles were excluded from the formal coding process to avoid introducing inconsistencies and imbalances in coding outputs given that several coding items do not necessarily apply to non-empirical/theoretical contributions (e.g., this includes regional jurisdiction of analysis and theoretical lens used). However, as above indicated these valuable and seminal contributions were still consistently used throughout the article. Examples include Bennett and Howlett (1992) and Dunlop and Radaelli (2017, 2018).

Using an integrative approach, results from the two coding categories are synthesized to showcase the empirical and conceptual landscape of policy learning research. This is followed by a problematized focus—through which conceptual attributes are triangulated with policy process, policy learning, and cognitive psychology literature (as a theoretical inspiration for widely used definitions of policy learning)—to scrutinize existing conceptualizations and propose a background conceptualization of policy learning. This addresses our third research question: how can policy learning be conceptualized? Finally, results from both coding items and the proposed conceptualization are used to formulate a future research agenda, thus addressing our fourth research question.

Coding was independently conducted by the first author to ensure uniformity. Iterative consultation, calibration, and alignment with co-authors was undertaken through regular meetings to ensure consistency. Coding was done over two stages to strengthen reliability. At the first stage, 20 percent of eligible articles were coded, then coding categories were refined and revisited. At the second stage, the remaining 80 percent of eligible articles were coded. All coded articles were then revisited to ensure uniformity. In the next section, we provide the results of our systematic review.

#### Results

In this section we present the results of the field synthesis attributes followed by the results of the conceptual attributes analysis.

#### **Field Synthesis**

#### **Regions of Study**

Coded articles represented empirical contributions from 29 regions of study (including cities, countries, local, national, and international collaborative/ transnational frameworks). The five most frequently researched regions were: the United States (12 instances, 16.4 percent), the European Union (8 instances, 10.9 percent), the United Kingdom (8 instances, 10.9 percent), Australia (7 instances, 9.5 percent), and Canada and New Zealand (4 instances each, 5.48 percent). While several factors can contribute to region selection for empirical research, the existence of each of the most researched regions within some form of collaborative or federal governance arrangement can somewhat substantiate such configurations' role in catalyzing policy learning (see e.g., Kerber and Eckardt 2007; Weissert and Scheller 2008; Tamtik 2016). Consistently, regions within established networks or collaboration frameworks have been frequently studied in conjunction. For example, several studies with combinations of the United Kingdom, Canada, Australia, and New Zealand (see e.g., Legrand 2016; Stark 2019) or the European Union (see e.g., Bomberg 2007). Furthermore, 79 articles (53 percent) were presented within a comparative framework of more than one region or within a collaborative framework of multiple regions. This echoes findings by Dunlop and Radaelli (2020) on the instrumentality of comparative approaches for policy learning research and the value of policy learning as a theoretical lens for comparative policy analysis.

#### **Policy Areas**

We identified and grouped studies in 13 main policy areas. To facilitate analysis, each policy area has sub-categories of specific policy issues (see Appendix I for a full list of categories). The top five areas were consistent with the Primary Substantive Focus Areas" identified in the *Policy Studies Journal* public policy yearbook (Jenkins-Smith *et al.* 2020). Policy learning was most frequently studied in areas of: Environment (26 instances, 17.7 percent), Governance (23 instances, 15.6 percent), Economy (21 instances, 14.3 percent), Healthcare and Welfare (16 instances, 10.9 percent each).

## Methodological Approaches

Our analysis shows that 125 articles (85 percent) used qualitative research methods, while 20 articles (13.6 percent) used quantitative methods, and two articles (1.4 percent) used mixed methods. Consistently, we observe a diverse set of data collection methods and sources. There is wide use of in-depth interviews (see e.g., Raudla et al. 2018; Dunlop, James, and Radaelli 2019), particularly semi-structured ones (see e.g., Thunus and Schoenaers 2017). This is methodologically known to allow for the exploration of expert and key informant insights. Given that most interviews are focused on experts and high-level officials, the number of interviewees was usually small, ranging from around 7-13 (see e.g., Marshall and Béland 2019; Dunlop, James, and Radaelli 2019) and going up to larger sets of around of 100 informants in exceptional cases (see e.g., Stark 2019). Additionally, there is consistent supplementary use of public documents and statements (see e.g., Crow et al. 2018), surveys and questionnaires ranging from 38 up to 666 respondents (see e.g., Lee and Van de Meene 2012; Pattison 2018; Montpetit 2009), and direct observations (see e.g., Thunus and Schoenaers 2017). Given these methodological choices, the case study form is most prominent (see e.g., Tavits 2003). This is consistent with what we know about policy learning research in terms of using multiple supplementary sources and thick descriptions to account for contextual factors (Moyson, Scholten, and Weible 2017). As for analytical methods, in addition to narrative case studies, there is some use of Process Tracing (see e.g., Motta 2018; Wilson 2019), and Qualitative Comparative Analysis (see e.g., Bandelow et al. 2017).

For quantitative studies, we observe the use of regressions and factor analysis, particularly with surveys and questionnaires (see e.g., Moyson, Scholten, and Weible 2017; Pattison 2018; Montpetit and Lachapelle 2017), multivariate regression analysis for historical data (see e.g., Lee 2017), and social Network Analysis (see e.g., Howlett, Mukherjee, and Koppenjan 2017; Lee and Van de Meene 2012). Two articles using mixed methods adopted quantitative content and survey analyses with interviews and narrative case studies (Mossberger and Hale 2002; Baekkeskov and Öberg 2016).

#### Novel Conceptual and Theoretical Contributions

While most empirical articles naturally contribute to some refinement of theoretical understandings, we elect to focus on salient, clearly pronounced conceptual/theoretical contributions. Here, we identified 21 articles (14.2 percent) making both salient theoretical propositions grounded in empirical research. This closely converges with the 18 percent observed by Gerlak and others (2018) in the field of environmental research. Such contributions are usually in the form of new interdisciplinary theoretical propositions aimed at refining understandings of policy learning dynamics. For example, Kamkhaji and Radaelli (2017) reconceptualize causal mechanisms of policy change in crisis, and Nowlin (2020) offers a model of disproportionate information processing in policy-oriented learning. This also includes constructing analytical frameworks to streamline policy learning modalities such as Dunlop's (2009) typology of policy maker-expert exchanges in epistemic policy learning. Notably, 11 out of the 21 articles identified use multiple regions in their empirical analyses, thus substantiating the leverage of compar-ative approaches in conceptual synthesis and theory extension.

#### Theoretical Lenses Used

Our findings show that in 37 instances (25 percent), articles did not clearly establish a theoretical lens of inquiry. In the remaining set of articles, we observe the use of single and multiple theoretical lenses amounting to a total of 141 instances. Within this set, "policy learning" as an overarching (yet largely ambiguous lens) was employed in 32 instances (22.6 percent), the advocacy coalition framework (ACF) at 24 instances (17 percent), policy transfer at 17 instances (12 percent), policy diffusion at 8 instances (5.6 percent), epistemic communities, network theory, and organizational learning at 7 instances each (4.9 percent), social learning, lesson drawing, and policy convergence at 5 (3.5 percent), 4 (2.83 percent), and 3 (2.1 percent) instances, respectively.

#### Types of Policy Learning

Consistent with proliferating fragmentation, we observe a substantial set of policy learning types. In 48 instances (32.6 percent), there was no clearly articulated type or label for the policy learning variant studied. For the remaining instances, we identified a staggering set of 61 different policy learning types. Though these types of learning could be conceptually similar, they can be presented under different labels (seldom defined). Hence, it becomes highly subjective to discern whether they can be amalgamated, combined, or taxonomized. The ten most observed types of learning are presented in Table 1.

Rank	Learning Type	Frequency	Percentage (%)	Examples
1	Instrumental Learning	26	14.86	(Lee and Van de Meene 2012)
2	Social Learning	25	14.29	(Mooney and Lee 1999)
3	Organizational and Institutional Learning	17	9.71	(Stark and Head 2019; Nilsson 2006)
4	Political Learning	14	8	(Jenkins-Smith 1988)
5	Individual Learning	8	4.57	(Dudley 2007)
6	Epistemic Learning	7	4	(Baekkeskov 2016)
7	Network Learning	5	2.86	(Tamtik 2016)
8	Lesson Drawing	4	2.29	(Klochikhin 2013)
9	Reflexive Learning	4	2.29	(Dunlop 2015)
10	Single Loop Learning	4	2.29	(Di Mascio <i>et al</i> . 2016)

Table 1: Most Observed Policy Learning Types

The remaining types of learning were observed in very low frequencies: conceptual learning at three instances (1.71 percent), diffusion, governance learning, government learning, policy transfer, positive learning, self-directed learning, strategic learning, thick and thin learning at two instances each (1.14 percent) while the 40 remaining types each at one instance (0.57 percent). The findings on frequently used types of learning draw parallels with a recent review of learning in the environmental policy domain where social and organizational learning were also observed to be some of the most frequently used (see Gerlak *et al.* 2018).

#### Individual versus Collective Learning

In our dataset, 117 out of 147 articles (79.5 percent) discussed policy learning on the collective level (e.g., institutions, organizations, government, governance, coalitions, etc.). This included the use of theoretical frameworks such as the ACF (see e.g., Bandelow *et al.* 2017), Institutional and Organizational Learning (see e.g., Dunlop 2015), or networks (see e.g., Malkamäki *et al.* 2019). Eleven articles (7.5 percent) discussed policy learning on the individual level (offering a model of individual learning or studying—in some degree—the determinants or facets of learning behavior on the individual level). This also featured theoretical frameworks including the ACF (see e.g., Dudley 2007), and information processing theory (see e.g., Nowlin 2020). Nineteen articles (13 percent) discussed learning on both the individual and collective levels (e.g., focused on the relationships between levels, relationships between individual learning and collective learning outcomes, etc.). Those also featured a tangible use of the ACF as a theoretical framework (see e.g., Nedergaard 2009).

## **Conceptual Attributes**

In this section, we elaborate on the synthesis of salient conceptual dimensions of policy learning by showcasing its potential catalysts, outcomes, barriers, and different definitions employed in literature. This is aimed at addressing our second research question on the current definitional state of policy learning.

#### Potential Catalysts, Outcomes, and Barriers

Given the field's established inclination toward qualitative methods, identifying such attributes from a causal or correlative standpoint can be challenging. Hence, we present a non-exhaustive set of potential catalysts, outcomes, and barriers associated with policy learning identified through an in-depth second cycle inductive coding (Miles and Huberman 1994). By drawing on policy process theory and policy learning literature, we find that potential catalysts, outcomes, and barriers fall under one of four distinct categories: Information and Knowledge-related, Systems and Structures-related, Actor-related, and Context-related. To ensure rigor and consistency, the inductively identified attributes (potential catalysts, outcomes, barriers) are vetted against an understanding of different theories of policy learning and the policy process. For example, the role of politically adversarial attitudes in light of Sabatier's ACF, or the certification of actors in light of Dunlop and Radaelli's (2013) scope conditions for the genera of learning, etc.

Tables 2, 3, and 4 list the main catalysts, outcomes, and barriers we collated.

Levels	Examples
Information and Knowledge	Information flow and communication, and transparency. Access to clear evidence and information, evaluations, and impact assessments, nature and analytical tractability of problems, framing, discourse, and narratives.
Systems and Structures	Networks and coordination frameworks, institutional structures, mandates and capacities, government structures and systems, political support, structured engagement with expertise, and learning governance, leadership support.
Actors	Actor learning and legal abilities, policy brokers and entrepreneurs, advocacy coalitions and lobbying, individual preferences, experiences and ties, engagement of stakeholders, and scope of affected groups.
Context	Public pressure, exogenous shocks, and intensity of focusing events, contextual factors and context similarities, level of political contestation, and conflict.

2 In this context, potential catalysts are viewed as conditions that can facilitate engaging in policy learning whether as preconditions, antecedents, or moderators (depending on the configuration of context).

Levels	Examples
Information and Knowledge	Cognitive updates, changes of beliefs and attitudes.
Systems and Structures	Establishing new structures and systems, institutional change, discourse and policy institutionalization, administrative and general reforms, enhanced accountability, policy change and adoption, new legislation, policy failure, new policy initiatives.
Actors	Coalition formation, growth of collective intelligence, convergence for collective action, updated understanding of policy instruments, goal transformation, policy coordination and convergence.
Context	Adaptability to contexts and policy adaption.

#### Table 3: Outcomes Associated with Policy Learning

#### Table 4: Potential Barriers to Policy Learning

Levels	Examples
Information and Knowledge	Issue complexity, diverging paradigms and ontological assumptions, echo chambers, belief entrenchments, lack of clear and reliable knowledge, lack of openness and transparency.
Systems and Structures	Lack of government support, rigid hierarchies with specific varieties of learning, lack and distortion of incentives, limited political and institutional capacity, absence of debate platforms, weak learning governance, institutional and policy amnesia, budgetary constraints.
Actors	Low certification of teaching actors, ambivalence toward expertise, policy makers' lack of time and attention, lack of influential interest groups, adversarial attitudes.
Context	Partisanship, and high political contestation, context dissimilarities, lack of scope conditions for proper learning typologies, conflict between learning outcomes and established norms.

Two necessary nuances exist here. First, the above tables should be viewed as guiding and overarching logical frames encompassing different parameters within commonly permeable dimensions. For example, parameters such as adversarial attitudes or contexts can be studied as internal properties of actors or as external properties of a policy environment (see e.g., Karlsen and Larrea 2016). Thus, the dimensions (and parameters therein) identified should be not viewed as rigid or non-permeable structures. Second, given the established features of policy learning research and the conceptual pluralism (and often ambiguity) of policy learning types in the above tables, we treat different types of policy learning as one in terms of their association to certain potential catalysts, outcomes, and barriers. Thus, we do not create tightly coupled associations between varieties of learning (e.g., social learning, single loop learning, instrumental learning, etc.) and certain potential catalysts, outcomes, and barriers. Table 5: Frequently Used Definitions of Policy Learning

3	Definitions 5 and 5.1 were both of the same frequency; given that this list is ordered by frequencies,
	we have listed both definitions at the 5 <sup>th</sup> rank.

	(	2011)	017;	007)	<b>)16</b> )	10)
Examples	(Raudla <i>et al.</i> 2018)	18; Rough	(Newman and Bird 2017; Bomberg 2007)	d Eckardt 2	(Karlsen and Larrea 2016)	(Yackee and Palus 2010)
Ex	(Raudla	(Pattison 2018; Rough 2011)	(Newman Boml	(Kerber and Eckardt 2007)	(Karlsen aı	(Yackee a
Percentage (%)	18.9	17.6	10.8	9.5	2.7	2.7
Frequency	14	13	8	7	2	2
Definition	Policy learning is understood as the updating of policy beliefs based on knowledge and information on the policy problem at hand.	Relatively enduring alterations of thought or behavioral intentions that result from experience and are concerned with the attainment or revision of policy objectives.	A process in which knowledge about policies, administrative arrangements, institutions etc. in one time and/or place is used in the development of policies, administrative arrangements, and institutions in another time and/or place.	A deliberate attempt to adjust the goals or techniques of policy in response to past experience and new information.	The commonly described tendency for some policy decisions to be made on the basis of knowledge and past experiences and knowledge-based judgments as to future expectations.	Learning is associated with the "viability of policy interventions or implementation designs." <sup>3</sup>
Sn.	1	5	3	4	5	5.1

#### Definitions: A Definitional State of the Art

An analysis of policy learning definitions substantiates endemic conceptual ambiguity and fragmentation issues. Lending substantiation to claims of conceptual ambiguity, 81 (51 percent) articles identified provided no definition for policy learning. This also aligns with findings from Gerlak and others (2018), indicating that in their dataset on learning in environmental studies, 58 percent of articles did not provide a definition of policy learning. Lending substantiation to claims of conceptual fragmentation, we identified 34 distinct definitions in the remaining 66 articles. In Table 5, we list the most frequent approaches to defining policy learning (used for more than one instance each).

#### Discussion

In this article, we set out to conduct a systematic review of policy learning research driven by the need to address conceptual ambiguity, fragmentation, and cohesion issues. This is in addition to synthesizing the field's growing body of literature. In doing so, we aimed to answer four central questions:

#### What is the Current Landscape of Policy Learning Research?

Piecing together the results of our field synthesis attributes indeed confirms that policy learning is blossoming with scholarly and practical interest (Bakır 2017). Yet the debate around conceptual advancement has been often Sisyphean. On one hand, a scholarly stream calls for organizing research within existing frameworks and stepping back from adding new concepts to avoid further splintering (see e.g., Goyal and Howlett 2018), while another stream sees room for conceptual innovation and new approaches, yet grounded in existing categories (see e.g., Maggetti and Gilardi 2016; Dunlop and Radaelli 2018). There is a steady flow of theoretical and conceptual contributions (both offering new angles and re-organizing within existing literature) employed to address critical contemporary issues such as the environment, the economy, healthcare, and governance. Methodologically, the field is largely inclined toward qualitative research designs, particularly given their ability to consider contextual factors and elucidate underlying relationships. Consequently, there is significant reliance on data source triangulation from public documents and expert interviews. There is also a tendency to utilize comparative and multiple case studies. Most cases lie within collaborative governance/policy arrangements (e.g., the European Union, Commonwealth, etc.). Interestingly, though policy learning is known to positively influence governance and policy outcomes, research within developing economies and the global south is relatively scarce.

Theoretically, multiple theoretical lenses can elucidate novel aspects. However, their fragmentation and ambiguity can pose challenges for homogeneity, consistency, and knowledge accumulation, thus potentially obscuring causal relationships and inducing discrepancies in empirical findings (Garcia and Calantone 2002; Harmancioglu, Droge, and Calantone 2009). Similar findings on theoretical and analytical lens fragmentation and ambiguity have been observed within some sub-domains of policy learning literature (see e.g., Gerlak *et al.* 2018). Our results here show an obvious case of theoretical lens ambiguity and fragmentation. This can partly explain the field's restricted ability to organize, systematize, and taxonomize findings, particularly given its qualitative inclinations (see Collins and Stockton 2018).

# What is the Current Definitional State of Policy Learning in Said Literature?

Piecing together our conceptual synthesis attributes creates a high-resolution image of the field's conceptual ambiguity and fragmentation. Our data shows that 51 percent of the articles did not offer a definition of policy learning, while the remaining 49 percent employed 34 different definitions. The most frequently employed definitions are based on the seminal ACF's definition of policy-oriented learning, largely centered on policy learning being an update of beliefs and behaviors (attitudes, positions, and actions) toward policy issues. This is consistent with our findings indicating that the ACF is one of the most frequently employed theoretical lenses of inquiry. We observe 61 different labels (indicating types of learning) that are seldom defined, and hence discerning their conceptual proximity to one another remains a challenging endeavor.

However, amid fragmentation and ambiguity, there are semblances of consistency. As key conceptual entailments: potential catalysts, outcomes, and barriers to policy learning can be viewed within four distinct categories highly consistent with our understanding of the policy process and policy learning theory. These are: knowledge, actors, systems and structures, and context. Thus, we postulate that drawing on the problematic issues of commonly used definitions, while leveraging underlying consistencies in the extant literature, can assist in offering a coherent background conceptualization of policy learning.

## Implications for Theory: How Can Policy Learning be Better Conceptualized and Defined?

In this section, we conceptualize policy learning by adopting a three-stage process. First, we engaged in critical interrogation of the most frequently used definitions using a problematized approach. At this stage, we critically reflect on frequently used definitions in terms of their ability to act as background or overarching conceptualizations of policy learning while fully acknowledging their merits and appropriateness in their specific contexts. Second, we leveraged the results of this systematic review along with the extant policy learning and policy process literature to propose a conceptualization of policy learning. Third, we scrutinized our proposed conceptualization against the criteria of conceptual goodness by Gerring (1999).

#### A Problematized View

#### A Critical Interrogation of Definitions

An analysis of the most frequently used definitions shows two sets of epistemological issues (see Table 5): first, the underpinnings of ACF-driven definitions of policy learning (particularly definitions 1 and 2); and second, relatively limited acknowledgement of other frequently used definitions of the embeddedness of said learning within a nuanced policy process with salient structural dimensions (particularly definitions 3, 4, 5, and 5.1). Furthermore, a persisting issue among the most frequently used definitions is the conflation between the processual nature of policy learning and the outcomes of such a process. In this section, we elaborate on the implications of such issues and draw on an interdisciplinary set of resources to propose a conceptualization of policy learning.

#### ACF-Inspired Definitions

This set of definitions is centered on the notion of "policy-oriented learning" proposed by Sabatier (1988) in his seminal ACF, thus conceptualizing policy learning mainly as changes in beliefs sometimes leading to changes in behaviors. This is with the caveat of contingent learning highlighted by Kamkhaji and Radaelli (2017), indicating that genuine processes of learning can follow (and not precede) observable behavioral changes under certain conditions. While this approach can be suited for the adversarial nature of the ACF, its underlying hypotheses, and its micro foundational cognitive model of learning, we put forward two main critiques. First, it highlights the inherent limitations of this approach in capturing the nuances and complexity of individual learning in its discipline of origin (cognitive functional psychology), and how these limitations are exacerbated when this approach is used in the complex multilevel, multi-actor study of public policy. Second, it illuminates the relatively limited ability of this approach to function as an overarching definition or a background conceptualization that is able to capture the diverse meanings associated with the complex and diverse phenomena of policy learning, especially beyond the specific micro foundational approach it utilizes (for a discussion on background concepts, see Adcock and Collier 2001; Maggetti and Gilardi 2016).

ACF-inspired definitions draw on cognitive and functional definitions of learning nested in the creases of psychological studies. Thus, they view learning as an impact of experience on behavior or as "enduring changes in mechanisms of behavior" (Lachman 1997; Domjan 2010). Indeed, learning is an inherently cognitive process—this has been asserted through policy learning literature. However, an almost exclusive reliance on this approach to defining learning can be conceptually and empirically challenging, mainly due to the conflation between learning as a mechanistic or organic process and the outcomes or products of such learning (expressed as changes of thoughts or behaviors) (Ormrod 2008). This is given the commonly obscured causal pathways between experience, behavioral change, and learning on one hand, and the latencies between cues and perceived outcomes on the other (De Houwer, Barnes-Holmes, and Moors 2013). In a public policy environment, these issues become even more perplexing, particularly with the temporal space and causal relationships between learning and behavioral change being far more complex, obscured (and often delayed) given the density, diversity, and interconnectedness within modern policy systems (see Borrás 2011). Such approaches to learning (even in the less dense contexts of individual learning psychology) make it "unlikely that one can find an observable change in behavior that provides a proxy for the change in the organism that is assumed to define learning" and renders such functional definitions "overinclusive" (De Houwer, Barnes-Holmes, and Moors 2013; De Houwer 2011).

Overreliance on functional definitions has had evident implications for policy learning research. This manifests in policy learning being dubbed a "black box" (Lee and Van de Meene 2012), with researchers facing challenges ascertaining the learning inspirations of actors (Legrand 2012), identifying when learning has taken place, potentially confusing learning, and the products of learning as Malkamäki and others (2019) warn, or elucidating causal pathways between learning, the update of policy beliefs, and behavioral change or change in action (Leifeld 2013).

Another issue pertinent to such definitions is the conflation of policy learning as a multidimensional practice embedded within the policy process and a densely populated policy universe, with policy learning as a micro-foundational cognitive component process or "learning about policy." In that sense, we see a manifestation of how policy learning can become conceptually "overinclusive." This issue is exacerbated with the growing complexities of the "policy universe" as an aggregation of a vast array of interconnected private, public, social, local actors involved in the policy process where policy making spans multiple stakeholders (Howlett, Mukherjee, and Koppenjan 2017). Here, an ontological disconnect can be observed in using functional micro foundational conceptualizations of learning to research causal relationships in complex policy systems, which literature already shows has micro-meso-macro interactions as demonstrated by Dunlop and Radaelli (2017). Last, but not least, solely utilizing the ACF's approach to conceptualizing policy learning can somewhat mute the learning process. This is particularly so, given that the ACF's view of learning-driven policy change is mainly due to exogenous shocks or pressures. This constricts the space for other drivers and modes of learning such as experimental governance or reflexive learning (see e.g., Dunlop and Radaelli 2013). It is important to emphasize that our critique of this approach to conceptualizing policy learning does not argue against the inherent micro-foundational cognitive nature of learning. However, it pertains to the ability of such an approach to account for the complexity of learning in the policy process at the individual level, and to provide an overarching background concept that is able to capture the complexity and multi-levelness of such learning process.

#### Other Frequently Used Definitions

As background concepts, other frequently used definitions (3, 4, 5, and 5.1) draw relatively limited relevance to the structural dimensions salient in extant policy learning and policy process literatures. Thus, they risk empirical myopia or oversight of potentially relevant and central influences on learning. Furthermore, they also conflate the process of learning, with its products or outcomes. Thus, they do not offer an entirely internally consistent conceptual framework over which empirical designs can be built, and where knowledge can be streamlined. This can partly explain the field's limited conceptual cohesion, and restrained ability to systemize and cultivate findings across research lines (see e.g., Stark 2019; Maggetti and Gilardi 2016). These issues articulate the need for an internally consistent conceptualization of policy learning that is grounded in empirical realities of public policy and policy learning literature, while maneuvering shortcomings of existing conceptualizations.

## **Conceptualizing Policy Learning**

Given our findings, we argue that an ontological re-alignment toward a policy-theory grounded conceptualization of learning can alleviate some of the field's conceptual burdens. This nudges the concept into "policy-embedded learning," where learning is submerged within the fabric and context of the policy process, rather than policy-oriented learning where overinclusive and cognitively functional phenomena of learning about policies occur. To do so, we leverage two main inputs, first: our findings on main conceptual dimensions of policy learning (i.e., potential catalysts, barriers, outcomes, and definitional themes), second: structural dimensions of conjointly governing literatures of the policy process and policy learning.

#### Structural Conceptual Dimensions

Drawing on our review results, we find that an inductive categorization of potential catalysts, outcomes, and barriers for policy learning into actors, systems and structures, information and knowledge, and context is consistent with key elements salient in major theories of the policy process and policy learning (even when expressed with occasionally varying labels). This, for example, includes the multiple streams framework (Kingdon 1984), the policy systems approach (Easton 1965), the Institutional Analysis Development Framework (Ostrom 2007), and the collective learning theory (Heikkila and Gerlak 2013). Policy learning literature also acknowledges the salience of these dimensions as inherent core features as we highlight below:

- *Information and Knowledge*: policy-related information and knowledge are the raw material for learning, thus they played a foundational role in the emergence of policy learning as a supplemental understanding to power-based policy making (Bennett and Howlett 1992; Heclo 1974). The role of information and knowledge has been salient in various conceptualizations under the umbrella of policy learning such as policy transfer and convergence among other theoretical approaches (see e.g., Casey and Gold 2006; Heikkila and Gerlak 2013; Nilsson 2006). Policy learning literature acknowledges that knowledge is highly interactive across various dimensions, actors, and contexts, and thus its presence permeates the structural dimensions of what constitutes a policy system (Montpetit and Lachapelle 2017).
- *Context Submergence*: policy learning is entwined with its context (Karlsen and Larrea 2016). The relationship between learning and its context is both dialectic and discursive and moves beyond sensitivity to full context submergence. In many cases, policy-making contexts provide conditions that significantly shape pathologies and outcomes of learning (see e.g., Dunlop 2017; Dunlop, James, and Radaelli 2019). Contextual factors can influence how policy learning is used, whether as means for political assertion, legitimization, or even survival (Toens and Landwehr 2009; Weiss 1986). Thus, policy makers also grapple with the political and power ramifications of learning outcomes within highly contested issues and contexts (Laffin and Ormston 2013). It follows that influences of power, political, and contextual factors are inseparable from policy learning, particularly given that learning emerged as a supplemental (and not a substitute) explanation for power-based politics.
- Actor Centrality: Agency perspectives have started taking some initial steps in the policy learning literature (see e.g., Borrás 2011; Zhang and Yu 2019). Various types of actors play central roles in shaping and directing learning. For example, the role of individual actors is critical to policy learning, not only as constructors and re-constructors of policy issues, but as cross-pollinators shaping issues across organizations and coalitions. This brings micro foundational cognitive biases, perceptions, and issue constructions to the forefront (see e.g., Dudley 2007; Heikkila and Gerlak 2013). Additionally, within policy learning, organizational actors interact with other individual and organizational actors, institutional norms, and discursive structures, in a manner that shapes and directs learning as well across policy contexts and Head 2019).
- *Systems and Structures*: as the literature shows, policy learning does not occur in a vacuum, rather within institutional systems and structures (Moyson, Scholten, and Weible 2017). Such structures (organizational, institutional, or otherwise) have norms, tendencies, and preferences that can largely shape

policy learning by interacting with various elements of policy systems (see e.g., Checkel 2001, 2009; Lee, Hwang, and Moon 2020). However, the embeddedness and interaction of policy learning within structures in policy systems still requires more emphasis (Bomberg 2007).

Based on the findings of our review of the extant policy learning and policy process literature, and the above identified dimensions distilled from empirical works, we offer an overarching and background conceptualization that can be used to supplement and complement existing definitions of particular modes of policy learning. Thus, we conceptualize policy learning as *the circulation and consumption of policy issue-related information and knowledge among actors in a policy system and structure, within a policy* context (see Figure 3).

## **Policy Context**

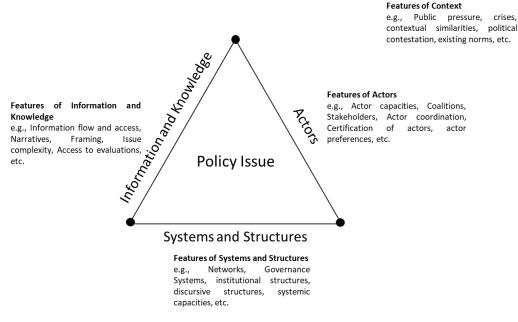


Figure 3: A Background Conceptualization of Policy Learning

In this context, the circulation and consumption of knowledge and information express varying degrees of "depth of interaction." This ranges from a mere circulation of policy-related knowledge and information (known to increase awareness of policy issues or induce tangible implications for the policy-making agenda), to in-depth dialectic and discursive engagement with knowledge and information (across levels, systems, and structures) that spans different processes such as sense making, translation, negotiation, and institutionalization (see e.g., Heikkila and Gerlak 2013; Sabatier 1988).

We contrast this conceptualization against the key features of "conceptual goodness" proposed by Gerring (1999) as a guiding framework for concept forma-

tion in social sciences: familiarity, resonance, parsimony, coherence, differentiation, depth, theoretical, and field utility. While policy learning enjoys significant scholarly interest, rearranging the concept under the same label is preferrable to introducing a new conceptual label (Maggetti and Gilardi 2016; Goyal and Howlett 2018). This provides familiarity and resonance. The conceptual statement is also both syntactically and logically parsimonious. In terms of coherence, this conceptualization directly draws on the empirical attributes of policy learning as the phenomenon in question. Thus, it provides a non-coincidental typologically sensible grouping of policy learning's underlying dimensions (Gerring 1999; e.g., Hamilton 1987). With respect to differentiation, this conceptualization delimits and defines a policy process-embedded view of learning and separates policy learning from its outcomes, thus allowing a clear and theoretically consistent view of the phenomenon. Clearly bounding the concept allows for the distinction between policy learning and other seemingly similar and often confounding concepts and mechanisms (e.g., policy transfer, policy convergence, etc.). In ensuring differentiation, we also lay the groundwork for operationalization, given that the former is a precursor of the latter (Gerring 1999). The proposed conceptualization also meets the central criterion of *depth*, where we draw on and "bundle" core defining characteristics of the concept (Gerring 1999). In our case, such characteristics are grounded in empirical findings, policy process, and learning literatures—it is of theoretical utility. By adopting a classificatory view, this conceptualization creates a high-level hierarchal category that allows for the overlay and placement of existing policy learning theories and concepts (e.g., collective learning: Heikkila and Gerlak 2013; epistemic learning: Haas 1992; Policy Transfer: Dolowitz and Marsh 2002, etc.). This largely eliminates potential spillover effects on existing concepts within a field of study resulting from the introduction of novel conceptualizations (Ansell 2019). In doing so, we avoid compromising the conceptual integrity of other concepts in the field (i.e., through inducing or proposing changes to established concepts), thus achieving a substantial degree of *field utility*.

#### Conceptual Utility

The proposed conceptualization offers five main merits. *First*, it builds on a view of policy learning that is grounded in both theoretically and empirically substantial dimensions of policy learning and policy theory. *Second*, it offers an overarching, dynamic, and adaptable framework for modelling and weighing different case-sensitive contexts in policy learning research. *Third*, with clearly articulated dimensions, it allows for better systemization, accumulation, and mapping of findings serving as an analytical framework of policy learning processes. *Fourth*, it emphasizes the nuanced and interactive nature of policy learning. For example, the interaction between agency and structure has been previously pointed out in the literature (see e.g., Zhang and Yu 2019). However, modeling in other salient dimensions, such as context and knowledge, in an overarching conceptualization of policy learning has been lacking. This conceptualization embraces the highly interactive and dynamic nature of policy learning, particularly with growing tendencies toward networked governance, deliberation, collaborative partnerships, and complex networked spaces (Sanderson 2009; Malkamäki *et al.* 2019). It does so by illustrating the simultaneous interaction points between actors, systems and structures, information and knowledge, and context, particularly with the expansion of the policy universe and the growing influence of non-linear and non-hierarchal models of the policy process (Sotarauta 2012; Crozier 2008). Hence, as a background conceptualization, it falls in line with being "a general idea which, once having been tagged, substantially generalized, and explicated, can effectively guide inquiry into seemingly diverse phenomena" as explained by Merton (1984).

This conceptualization also advances the ongoing debate on what can constitute evidence of policy learning (see e.g., Montpetit and Lachapelle 2017; Bennett and Howlett 1992). The literature shows that outcomes of policy learning usually fall within two broad categories: *cognitive* or inward products, such as updates of cognition, intelligence, awareness, or beliefs; and *behavioral* or outward products, such as policy or narrative changes. In both categories, the outcomes of learning can be both confirmatory (thus affirming the *status quo*) or negatory (thus acting against the *status quo*). Linking the proposed conceptualization with the observable and potential manifestations of learning (cognitive and behavioral) can assist in discerning what constitutes evidence of learning. This, of course, does not speak to the quality, or utility of learning, as it can still be misdirected or failure-inducing (see e.g., Dunlop 2017). Establishing links to the proposed conceptualization can guard against the inclusion of non-genuine instances of learning, particularly given the long temporal frames often associated with policy learning research which can introduce potentially confounding or "learning-like" phenomena (see e.g., Radaelli 2009).

## Conclusions: How Can the Results of Our Systematic Literature Review Inform a Future Research Agenda?

After carefully tiptoeing through the conceptual minefield, we now leverage our findings to offer two sets of conclusions to inform a future research agenda, hopefully clearing some mines. The first set is spurred by the results of our systematic field synthesis, and the second is inspired by our proposed conceptualization of policy learning.

First, results based on our field synthesis call on policy learning researchers to consider three main aspects. *Theoretically* articulating the definitions of policy learning (and the logics of choice) upon which empirical research is designed, and thus consolidating ontological positions and enhancing theoretical grounding (Gerlak *et al.* 2018). The same can be argued for theoretical lenses used to study policy learning, whether as the *explanandum* or the *explanans*, two main approaches to the study of policy learning outlined by Dunlop and Radaelli (2020).

This also applies to delineating the types and levels of learning and their interactions within studied cases. Clearly explicating those aspects can enhance synthesis and knowledge accumulation. This also can enable theory building and extension research by drawing on more nuanced and relatively less ambiguous empirical configurations. Such considerations pertinent to theoretical clarity can contribute to strengthening the field's theoretical cohesion (see Collins and Stockton 2018). This can also enhance our ability to conduct replication research as well as contextualize and extend research findings to different settings.

Methodologically, while qualitative methods in policy learning have significant exploratory leverage that can illuminate complex relationships and interactions (see e.g., Raudla et al. 2018; Dunlop, James, and Radaelli 2019; Thunus and Schoenaers 2017), the field is yet to garner the full potential of quantitative and mixed methods. Through this article, and by drawing on policy learning literature, we have argued for-and showcased-the complex, multi-leveled, and multi-actor nature of policy learning. We certainly observe that the largely qualitative methodological approaches to the empirical research analyzed are indeed rigorous and suitable for the respective research objectives. Yet if future scholarship is to engage in research endeavors that consider the multi-level, multi-actor, and complex features of policy learning (as we find is warranted), qualitative methods in standalone mode might not necessarily be sufficient in all cases. Thus, mixed-methods research can allow for broader understandings and interpretations, particularly for complex phenomena and systems (Molina-Azorin 2016; McKim 2015). This can contribute to enhancing structured knowledge accumulation and eventually enable the conduction of policy learning metanalyses. As our analysis offers an empirical toolkit of potential catalysts, outcomes, and barriers associated with policy learning. A first step on the path can be to map those relationships and their associations under different configurations building on existing frameworks using a range of context-sensitive quantitative and mixed methods.

*Empirically*, the geographical dispersion of research calls for more attention to empirical accounts on policy learning from developing and transitioning countries. The growing role of public international organizations and their learning influences within developing economies lends additional importance to conducting more research within such contexts as relatively vibrant and pristine environments with for potential policy learning. Future research in this avenue can illuminate key areas pertinent to the interplay between economic development, policy, and political legacies, politico-administrative traditions, and policy learning. This can enable nuanced comparative cross-national and cross-regional comparisons toward more in-depth understandings of causal mechanisms and the influence of policy learning (both as a cause and an effect) on policy design and outcomes within new contexts, as encouraged by Dunlop and Radaelli (2020).

Second, we leverage our proposed conceptualization of policy learning to propose a coherent future research agenda over three main lines of action. *The*-

*oretically* building on existing theories and concepts of policy learning (see e.g., Collective learning: Heikkila and Gerlak 2013; Advocacy coalitions: Sabatier 1988; Epistemic learning: Haas 1992; Policy transfer: Dolowitz and Marsh 2002; Genera of learning: Dunlop and Radaelli 2013) by elaborately plotting and mapping their positions from the proposed conceptualization. This includes using this conceptualization to unpack existing concepts into meaningful taxonomies that delineate their nature whether as super/sub-ordinate concepts, products/outcomes, types, or mechanisms, of learning. This is in addition to using the proposed conceptualization to scale existing approaches to defining and operationalizing policy learning across multiple levels of analysis complementarily.

Bridging the *theoretical-empirical divide*, the proposed conceptualization can be utilized as an analytical framework with three main foci on: illuminating multi-level interactions, clarifying the relationship between policy learning and policy change, and developing measurements. Here, we view an analytical framework as a structure of theoretically grounded simplifying ontological propositions (assumptions) that are useful to understanding complex phenomena with applicability across multiple contexts (Dunlop and Radaelli 2018).

We start by employing the proposed conceptualization to illuminate multilevel micro-meso-macro interactions (see: Dunlop and Radaelli 2017). Throughout this article, we have argued for the complex, interactive, and interconnected nature of policy learning, and that in many cases, learning types are seldom standalone or constant. We have also showcased that the structural dimensions identified in our conceptualization (i.e., actors, information and knowledge, systems and structures, and context) are often in a state of flux across multiple levels simultaneously (individual, organizational, systemic, etc.). As such, they can interact and vary even within single units of analysis (see Biegelbauer 2016). Thus, simultaneously scaling the proposed conceptualization across multiple levels of analysis can leverage more nuanced investigation of complex policy-learning phenomena. It also allows the overlay of different micro-meso-macro policy-learning theories and theoretical lenses and plotting their interactions across different levels within single and multiple cases. This can also help elaborate on (and taxonomize) the micro, meso, and macro level factors acting as catalysts or barriers to policy learning and establishing their relationships to outcomes under different configurations within existing frameworks. Doing so can contribute to a needed dialectic and discursive process of hypotheses formulation and testing in the policy-learning literature. Naturally, such an approach ties into our aforementioned call for more use of quantitative and mixed-methods research.

Another enticing prospect of using this conceptualization as a multi-leveled analytical framework pertains to exploring the enigmatic and "analytically blurred" causal relationship between policy learning and policy change. Stronger and more robust research designs can be achieved through mapping relationships between micro foundational, meso, and macro-level influences using the proposed conceptualization as a new and refined approach that allows for systematic comparisons across different levels of analysis (see e.g., Moyson, Scholten, and Weible 2017; Dunlop and Radaelli 2017). The proposed conceptualization's clear structural elements provide ample space for using configurational approaches and methods to unravel causal inferences, particularly those between policy learning and policy change (see e.g., Thomann and Maggetti 2017; Dunlop and Radaelli 2017). Once again, this ties into our earlier call for hypotheses generation and testing to be enabled through a wider range of methodological tools at different levels.

Last, but not least, with a growing research agenda on measuring policy learning, we call for future research that operationalizes this conceptualization to create multi-dimensional measurements and scales for policy learning while leveraging existing approaches to measurement (e.g., Radaelli 2009; Moyson, Scholten, and Weible 2017; Pattison 2018).

On the *practical* plane we call for utilizing the proposed conceptualization and toolkit of potential catalysts, outcomes, and barriers to offer policy makers and practitioners a framework for designing frameworks and processes that can facilitate effective and efficient policy learning. In doing so, we extend Dunlop and Radaelli's (2018) "wider audiences" call by opening up policy learning as a practice to exploring "what can go wrong" and identifying how can key factors be managed toward enhancing policy-learning processes within different contexts.

Finally, as we are naturally limited by the available analytical capacity to synthesize a manageable number of resources, future reviews, and syntheses can build on and extend our review by expanding the dataset for analysis. This can include non-SSCI publications and books. Furthermore, as policy learning is a highly practice-oriented endeavor, we call for future reviews to also include practitioner and practice-oriented resources such as reports and proceedings pertinent to learning from national governments or public international organizations and transnational networks (e.g., the European Union, African Union, WHO, OECD, World Bank, etc.).

On our endeavor to maneuver the complexities of the burgeoning policy-learning literature, we presented a theoretically coherent and empirically grounded background conceptualization of policy learning, we also provided a synthesis of its growing body of literature. We then proceeded to outline how this conceptualization can be leveraged to enhance the field's theoretical, empirical, and practical leverage. As this endeavor has further substantiated the centrality of policy learning for public policy research and practice, we further echo the calls for investing significant intellectual resources in the field in the years to come.

## **APPENDIX I: Supplementary Material**

## Substantive Areas of Focus Breakdown

Articles coded have been represented under different substantive areas of focus corresponding to those mentioned in the *Policy Studies Journal* public policy yearbook (Jenkins-Smith *et al.* 2020). To enable the analysis, several policy domains have been aggregated under the respective substantive areas of focus as follows:

Sn.	Substantive Area of Focus	Sub domains	
1	Economic Policy	Labor Policy, Monetary Policy, Fiscal policy, Financial- Banking Policy, Minerals and Mining Policy, Competition Policy, and Industry Development Policy.	
2	Energy Policy	Nuclear Policy, Wind Policy, Electricity, and Shale Gas	
3	Environmental Policy	Dam Building, Disaster Management, Climate and Climate Change, Natural Disasters, Emissions, Nuclear Waste, and Marine Conservation.	
4	Welfare Policy	Social Policy-Leaves, Social Policy-Pension, Social Policy-Welfare, Childcare, Family Violence, Disability, Discrimination, Indigenous Populations, LGBT, Basic Income, Social Service and Societal Design, Drunk Driving.	
5	Healthcare Policy	Pandemic, and general Healthcare policy	
6	Governance	Procurement, Open Method of Coordination, Administrative Reform, Open Governance, Public Performance, Regulation, Regulatory Assessments, Cluster Coordination, Governance Networks, and Evidence-based Policy Making.	
7	Agricultural Policy	Food Safety, Biotechnology, Hormones, and Veterinary.	
8	Urban Policy	Urban Studies, Land Claims, and Housing	
9	International Affairs	Brexit, Foreign Policy, Refugees, Immigration, and International Committees.	
10	Legislation	Freedom of Information, Death Penalty, Parliamentary Affairs, and Justice – Legal.	
11	Transport	Railways	
12	Education	School Buildings, General Policy on Education	
13	Science and Technology	Innovation, ICT, Technology, Research Policy	

## List of Coded Articles

Sn.	Article Name	Year	Journal Name
1	Policy Learning and the Evolution of Federal Hazardous Waste Policy	1985	Policy Studies Journal
2	Urban Policy and the Myth of Progress	1997	Policy and Politics
3	Analytical Debates and Policy Learning: Analysis and Change in the Federal Bureaucracy	1998	Policy Sciences
4	The Temporal Diffusion of Morality Policy: The Case of Death Penalty Legislation in the American States	1999	Policy Studies Journal
5	Policy Feedback: The Comparison Effect and Small Business Procurement Policy	1999	Policy Studies Journal
6	Policy Networks and Policy Learning: UK Economic Policy in the 1960s and 1970s	2000	Public Administration
7	The Road to Innovation, Convergence or Inertia: Devolution in Housing Policy in Canada	2000	Canadian Public Policy
8	Policy Transfer and Policy Learning: A Study of the 1991 New Zealand Health Services Taskforce	2000	Governance
9	Social Benchmarking, Policy Making and New Governance in the EU	2001	Journal of European Social Policy
10	Environmental Policy as Learning: A New View of an Old Landscape	2001	Public Administration Review
11	Conceptual Innovation and Public Policy: Unemployment and Paid Leave Schemes in Denmark	2001	Journal of European Social Policy
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