

Faculty of Social Sciences
University of Helsinki

WHAT EXACTLY IS RESEARCH IMPACT?

Exploring the concepts, vocabularies and logics used in evaluating the
impact of social research

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DOCTORAL DISSERTATION

To be presented for public discussion, with the permission of the Faculty of Social Sciences of
the University of Helsinki, in Auditorium PIII, Porthania, on the 10th of December 2022, at
10 o'clock.

Helsinki, 2022

Publications of the Faculty of Social Sciences 221/2022
Doctoral Programme in Social Sciences

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What exactly is research impact? : Exploring the concepts, vocabularies and logics used in evaluating the impact of social research

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ISSN 2343-273X (print)

ISSN 2343-2748 (web)

ISBN 978-951-51-7073-6 (pbk.)

ISBN 978-951-51-7074-3 (PDF)

Unigrafia

Helsinki, 2022

ABSTRACT

This article-based dissertation explores the vocabularies of research impact and their logic in evaluating the impact of social science research. The motive for this study stems from the increasing emphasis on social impact in Finnish research evaluation culture and practices. In practice, impact has become a criterion for quality judgements in competitive funding and formal approval for completed research projects, as well as a developmental tool for university faculties and the legitimization of research policies. Broad academic literature have welcomed the cause of impact thinking with practical frameworks for research evaluation, while a small body of literature has taken a conceptual distance from the practical discussion. This dissertation continues the exploration of the latter discussion by collating its crucial arguments and developing them further. This dissertation brings together the previous notions of critical academic discussions and literature by elaborating on their conceptual contributions to the discussion about impact. The dissertation attempts to develop the critical discussion further by trying to understand why the vocabularies of impact appear in such discordant and often simplistic ways in policies, public discussions and evaluations. It also seeks to understand why impact is construed as a diminished version of the complex social relations of knowledge within official evaluation frameworks for funding and research development.

This dissertation presents discursive notions of the policy frames used to approach impact and the academic discussion on the concept of impact. In addition, this dissertation investigates the logical aspects of a practical impact evaluation. Conceptually and methodologically, the dissertation contributes to the discussion by developing a critical approach that recognises the discursive accounts behind impact thinking, the in-betweenness in the operationalisation of impact via formalised methodical choices and the logical prospects and limitations to constructing and construing impact evaluation.

The conceptual framework of the dissertation relies on previous conceptualisations of research utilisation, public engagement and transdisciplinarity. The dissertation uses these conceptualisations to show which aspects are familiar in the vocabularies of impact and how they construct the concept in various contexts of talk and practice. The dissertation also uses a constructive understanding of evaluation studies to comprehend liminal spaces in impact evaluation. The liminality perspective provides insights into institutional purposes and tensions in evaluation approaches. The methodological approach of the dissertation underlines contextual vocabularies that represent a broader social and cultural understanding of knowledge practices, research evaluation and higher education. The preoccupation with impact is considered a political, social and cultural phenomenon that shapes the understanding of how research knowledge

interacts with social agents and how to operationalise it in evaluation. These premises counter purely prescriptive research agendas that attempt to develop ways to construct simulacrum of real research impacts for policy purposes.

The three articles in this dissertation investigate the discursive and logical characteristics of research impact and its evaluation. They are based on research material from policy documents/recommendations, expert interviews, funding proposals, mid-term research reports and funding calls in Finland. *Article I* illuminates the vocabularies of impact in policy and academic discussions. *Article II* clarifies the guiding principles of impact evaluation and their dilemmas. *Article III* explores the relationship between researchers' pre-evaluative strategies of impact depictions and guidance for proposals and evaluation. Each of the articles contributes original typographies, identifying new usages of the concept of impact. They also highlight what the concept of impact means for formal evaluation practices and possibilities for social scientists in expressing the social opportunities of knowledge.

This dissertation concludes that it is not possible to comprehensively understand research impact evaluation without a critical meta-evaluative perspective. Although practical-prescriptive studies of impact evaluation have achieved conceptual sophistication, they have not been able to solve the logical problems that lead to profound methodical and practical problems. This is because of their lack of understanding of the notion that impact evaluation is based on divergent ideals of knowledge and knowledge use, which have unbalanced representations in research policy and evaluation. This dissertation contributes to the debate by arguing that impact has become an amorphic concept. This is realised by absorbing divergent vocabularies that construct conceptually entangled understandings of the social capabilities of research knowledge and possible ways to operationalise this understanding in evaluation. However, because the emphasis of impact thinking is on incumbent public policy rationales for rating research productivity and legitimising research as socially responsible, it often relies on a reduced understanding of social science research and its possibilities for social change. This is why impact evaluation is often premised on a formalised logic that identifies similar threads of impact that have been preconstructed in its vocabularies for research priorities and evaluation guidance. The dissertation suggests that the only way to solve the contradictory ideals within impact thinking requires a shift from research impact evaluation towards more open organisational and institutional learning of knowledge use in local communities.

ACKNOWLEDGEMENTS

I would like to compare the process of completing a dissertation to a long cross-country bicycle trip, during which one's feelings shift from the euphoria of outdoing oneself to complete despair and wanting to smash the bike deep into the forest while mosquitos and horse flies are irritating one's nerves to the very limits. I have had similar feelings of highs and lows in writing the articles for this dissertation. It is difficult to imagine a better feeling than having a successful funding application for the thesis, solving a complex conceptual problem, and getting one's articles accepted in journals. Unfortunately, those moments are as fleeting as the passing of a photon. More often, one is agonised by challenging the critiques of peers or the lack of understanding of how to write academic text. The foregoing are the reasons why I see dissertation work as a process of meaningfulness rather than a mere accomplishment on the way to achieving one's full potential as a researcher and expert.

Numerous people have supported me on this journey. Unfortunately, I cannot mention everyone by name, even though they have had an immense influence on my work. First, I want to thank my supervisors for their unceasing support. Heikki Hiilamo, who initially suggested this research theme for me, provided invaluable support and guidance in the technical and practical aspects of research work and helped lay the foundation of my work. Risto Eräsaari, with whom I spent valuable time in cafés and summer terraces, engaged me in in-depth discussions about Finnish research policies and theoretical and methodological questions, aside from providing countless manuscript comments, sometimes more than I was able to chew. Undoubtedly, Risto contributed more to this dissertation than the university could compensate.

In particular, I want to mention Totemi, the science and technology study seminar in the Faculty of Social Sciences. Based on my experiences and discussions with other students, Totemi might very well be one of the best academic and doctoral seminars in the Finnish social science field. I want to thank all the participants who offered me comments and support during the seminar. I especially want to thank the senior members and teachers, Petri Ylikoski, Aaro Tupasela, Karoliina Snell, Mikko Jauho, Mikko Jääskeläinen, Heta Tarkkala and Mianna Meskus, who contributed to my work with their insightful and constructive feedback. I want to thank my fellow students, Sampsa Saikkonen, Jaakko Taipale, Tomi Lehtimäki, Jose Canada, Vera Raiviola and Kamilla Karhumaa, from whose work and comments I learned a lot and with whom I occasionally had splendid conversations about STS.

Many thanks to the reviewers of the articles of this dissertation and the pre-examinators of this dissertation, Juha Tuunainen and Anu Lyytinen. The review comments helped me improve my studies and my professional

mindset. Perhaps, the most memorable one transformed my paper from having an uninteresting topic to a superb study.

Although professional help has been crucial in my work, I also wish to acknowledge the unofficial and silent support of my colleagues. I want to thank Henri Aaltola for his merry spirit and talks during coffee breaks that so often were extended. Many thanks also to Antti Kääriälä for the splendid lunches and talks during stressful hours. In addition, Reetta Muhonen and Tommi Kärkkäinen provided me with delightful discussions and puzzles about research impact during our project.

My friends and family also deserve my profuse thanks for consistently boosting my spirits. In particular, I am grateful to Wang Ziyu, who helped me with many academic, practical and life questions. In the countless times I was grappling with tricky problems in academia and elsewhere, you were willing to have a discussion. Thanks to Julius Dragon, Lucas Pardo, Arttu Timling and Misha Henrikson for the bromance by pizza and beer. Finally, my heartfelt gratitude to my father, mother and brother—and Pipa, Tepu and Siri, of course—for the all-around support.

Rovaniemi, September 2022
Juha-Pekka Lauronen

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LIST OF ORIGINAL PUBLICATIONS

This thesis is based on the following publications:

- I Lauronen, J.P. (2022). Tension in interpretations of the social impact of the social sciences: Walking a tightrope between divergent conceptualisations of research utilisation. *SAGE Open*. <https://doi.org/10.1177%2F21582440221089967>

- II Lauronen, J. P. (2020). The dilemmas and uncertainties in assessing the societal impact of research. *Science and Public Policy*, 47(2), 207–218.

- III Lauronen, J.P. (2022). Epistemic, production, and accountability prospects of social impact: An analysis of strategic research proposals. *Research Evaluation*, 31(2), 214–225.

The publications are referred to in the text by their Roman numerals.

ABBREVIATIONS

cf.	confer
e.g.	exempli gratia
EU	European Union
NGO	non-governmental organisation
OECD	Organisation for Economic Co-operation and Development
UK	United Kingdom

1 INTRODUCTION

1.1 MOTIVE FOR THE STUDY

The public debate around the social impact of research (hereinafter referred to as research impact or impact) has vaguely considered the accountability of publicly funded research, while evaluation researchers have attempted to find ways to show accountability to society through research evaluation. Public and academic opinions have underscored researchers' responsibility to provide practical value and utility back to society for the resources spent in research work (Penfield, Baker, Scoble, & Wykes, 2013). During the last two decades, the political discussion about research responsibility has turned to the question of research impact by first emphasising academic outputs, such as articles, and, recently, to the question of research applications, social outcomes and public engagement. The discussion about research impact has been a complex myriad of conceptualisations from research policy recommendations to academic literature. This dissertation began its journey by sailing in the conceptual vastness and perceptual ocean of impact without finding a strong theoretical ground, creating a central methodological dilemma for this thesis. It was a challenge to identify any theoretical basis for impact evaluation or the conceptual premise of social impact that would have built a logical conceptual development. Hence, this dissertation focused more on the discursive aspects of impact evaluation than on methodological problems and explored the conceptual and logical aspects of impact evaluation from this perspective—logical in a figurative sense referring to the entanglement between conceptual, social, and cultural characteristics of impact evaluation.

While it is fascinating to see how comprehensively the impact assessment models can interpret research impact in academic and policy rationales, I found uneasy practical reasoning in both their premises for social relationships of academic disciplines (cf. Martin, 2011; Williams, 2020). This practicality considered not only the normative orientation of the evaluation models but also their methodological and conceptual superficiality. I found similar hollowness in the actual evaluation exercises. I was curious about what happens in the evaluation itself, considering it as a kind of 'black box' evaluation practice. However, the more I learnt about the methodical principles of impact evaluation, the more it began to look like an empty box—a collection of practices and methods without any deep direction. This uncertainty in impact thinking acted as a signpost of the problematics and approach of this dissertation. Although this dissertation focuses on the traditional fields of the social sciences, such as sociology, and other fields, such

as education, relying on social research methodology, it can be read as a wider cultural analysis of research impact evaluation itself.

An ulterior research motive of this study was to respond to the growing discussion about research impact and research evaluation trends in Finland, similar to the European Union's (EU) research policy agendas and evaluation models of other countries in Western Europe and Scandinavia. I became interested in this research theme because, in my previous sociological studies, I have explored the questions of higher education and Finnish university policies towards greater financial liberalisation. The exploration of this dissertation began with a small-scale investigation of the research impact evaluation methods of Finnish foundations; they had concerns about the image of their social responsibility, regardless of their legal tax-free position. This scope broadened towards a question about the evaluation methods of social science impact. However, much as it was challenging to conclude any methodological foundation for impact, it was also challenging to understand the social reasons for research funders' preoccupation with impact. This curiosity and the unsatisfying answers led to a wider social question about the impact evaluation of the social sciences. Because the question of research impact seemed impossible to understand without the wider questions about the social and cultural dimensions of research evaluation, I broadened the scope of the project from its methodological questions to questions about the rationale behind impact thinking and its manifestation in research evaluation. Finally, the underlying mission of this dissertation took the shape of uncovering the conceptual characteristics of impact—to distinguish authoritative definitions and formalised practices from academic and disciplinary conceptualisations of research impact.

The discussion about research impact has been going on for the past 20 years in Finnish research policy, following similar trends in Western Europe. Finland has been one of the countries at the forefront of developing and aggregating research impact evaluation ideas through investigations by research policy advisers. Several institutions have implemented strategies for research impact (and the impact of higher education) in Finland. These strategies have developed from mere talk to more systematic implementation in evaluation practices. Institutions such as the Ministry of Education and Culture, the Academy of Finland, the innovation funding centre, Tekes (now Business Finland) and the Finnish Education Evaluation Centre have had their own discussions about research impact. Institutions with research funding and evaluation tasks have been more active in implementing the idea of impact in evaluation practices. In addition, universities have exercised their own impact evaluation—perhaps to correspond with the agreed social goals of the Ministry. Yet, the decision for the comprehensive reform of public research institutes and research funding in 2013 was a decisive turning point for focusing the strategies on competing funding. Due to the reform, the Academy of Finland established a strategic research council for funding research that concentrates on complex social–technical problems. The Prime Minister's

Office established a funding instrument called government's analysis, assessment and research activities (VN TEAS), which aims to produce knowledge for specific policy problems and situations and which brought together the ministries' old and scattered sector research activities. Both of these funding instruments have a clear focus on research impact, which researchers must elaborate on in their proposals. The discussion about impact has given rise to more normalised administration and disciplines in universities. The reform also has resource-intensive goals by merging research institutes with one another and connecting them to the University of Helsinki, thereby incorporating diverse ideals, from transdisciplinary academic autonomy to innovations.

At the same time, the international discussion has accelerated in academic publications, EU's research policy recommendations and cross-national think tanks that provide evaluation services. In particular, the English academic debate—also partaken by non-English researchers—seems to have heated during the development of the Research Excellence Frameworks (REF), which become known as the infamous evaluation exercise of impact. In research funding programmes, research impact has become entangled with a multitude of other concepts, such as relevance, innovation and interdisciplinarity. In many cases, it has become a 'second quality' of research excellence with traditional research quality. Finnish policymakers, funders and universities have incorporated the idea of research impact at many levels in their discourses of strategic planning and have operationalised these plans in various formal evaluation exercises and practices. Impact assessment has a real influence on research allocation and funding decisions at a multitude of institutional levels. The idea of social impact can be found in almost every institution related to research, higher education and research funding. However, researchers have encountered its most tangible consequences directly through various competing funding programmes, which have operationalised social impact in their peer reviews and in meta-evaluative research funding programme evaluations. It is difficult to imagine a single funding programme or grant without any prospective and retrospective accounting of the possible social benefits of a research project in the Finnish science system. Impact assessment has also become a practice in private funding, although these tax-free or non-profit organisations have no public accountability. Inasmuch as impact has become a naturalised part of research evaluation and a part of the development race towards more redefining conceptual frameworks for impact evaluation, the academic community has also problematised the concept and the motives behind it. This specific discussion about impact can be found in academic articles and in popular writings in various publications and newspapers. However, politicians and policy advisers have also published pro-impact evaluations and research on impact statements in the same breath.

As there have been debates about research impacts in a multitude of national contexts and in the EU's frameworks for national research policies,

the empirical studies of this dissertation had a presumption that the idea of research impact incorporates a more general trend in international research policies and evaluation globally. While the empiric studies of the dissertation (*Articles I–III*) focused on Finland and examined specifically national policies, discourses and operationalisation of impact, they found similar policy frames of impact internationally. This is why this dissertation suggests that impact thinking in research policies can be identified with a conceptually and methodologically common framework, regardless of the nationally specific arrangements. In the study design, I preferred a more comprehensive conceptual approach derived from sociological/anthropological studies of science to understand the rationales behind policies and discourses of impact and what those meant for the inner logic of impact evaluation and researchers' ways to use the concept of impact. The empirical material of the articles contributed conceptual tools for understanding the preoccupation with impact in policies and evaluation. This material was analysed to construe impact as a phenomenon related to changes in research policy and academic debates on the role of academic research in society. Thus, this dissertation searched for answers on *how policy authors, policy advisers and researchers understand and use social impact in various contexts, how they operationalise impact in the Finnish research evaluation system, what principles they think guide impact evaluation and how impact is constructed in prospective and retrospective research evaluations in relation to the evaluation criterion for impact.*

1.2 THE DEBATE LINES OF IMPACT

Research impact has been discussed at several institutional levels, from the national research policy influenced by supranational agencies, such as the Organisation for Economic Co-operation and Development (OECD) and the EU, to academic and public debates about the meaning of impact in science and research evaluation systems. Both the policy-oriented and academic discussions emphasised prescriptive research evaluation frameworks and methods attempting to make improvements in practical impact evaluation. This practical discussion often relies on the needs of policies, funders and evaluators, yielding mutual interdependence and co-productive relations between these two fields. In this dissertation, I call this research tradition the practical debate line of impact evaluation. Practicality helped describe this body of literature because it explicitly has the prescriptive goal of providing novel methods and ways to evaluate impact. The debate line also takes impact as a real object of evaluation, although it may have constructivist notions. Thus, it has the characteristics of providing value statements of what impact is and how it should be evaluated. It has traditions in scientometrics, which focuses on improving technical measurements of impact (e.g. Bornmann,

2017), or practical assessment practices (e.g. Derrick, 2018). It derives from the evaluation literature and science studies to establish a set of underlying theoretical premises of constructive or realist evaluation traditions. The practical research line shares similar goals with political research demands for more intelligible impact evaluation methods and principles. It concentrates on showing research accountability to public and private funders by evaluating individual researchers, research projects and university units. I identified a development in this debate similar to and different from Donovan's (cf. Donovan, 2007; Donovan, 2008) phases of impact evaluation. The early literature was composed mostly of research reports for science evaluation (e.g. Arnold & Balazs, 1998). The authors and organisations of these reports were mostly interested in social outcomes and outputs, making basic typographies between research and outcomes and assumptions of feedback from the social world to research. Later, evaluation researchers became more enthusiastic about complex feedback and interaction systems and mixing evaluation data and methods. System thinking seemed to fit poorly in fields other than science and technology. The debate was directed towards simpler methodical principles, while constructivist and more theoretical ways to understand the impact of the social sciences and humanities acquired space in the debate (e.g. Sigurðarson, 2020). However, the prescriptive and practical research motive has remained, closing the inspections of impact within the field of evaluation without external discursive relations to other discussions and institutions, such as higher education policies and research.

This tension is between the practical focus on the social value of research—its implications for wider networks and structures of knowledge in society—and critical notions about the rhetoric demanding evaluation structures in showing research responsibility by accounting for public value and research use. The practical research line has often attempted to solve this tension, first, by ignoring the discursive and rhetorical aspects of research impact regarding broader research policy disputes about the role of higher education and university research in society, and, second, by having a research agenda that claims to fix impact thinking through better conceptual understanding. Researchers of the practical research line have also attempted to solve the tension between various academic disciplines by developing more distinctive and contextual evaluation methods. However, actual methodical development has often been derived from previous impact evaluation methods for the sciences, and these methods do not differ significantly from each other. They rely on the same basic principles of accounting for events or written depictions of public engagement. The practical debate line has also been hampered by an implicit credibility problem. Evaluation practices do not seem to recognise their contribution, as they often employ random techniques that are easy enough to operate administratively. For example, the Payback Framework was originally designed for health studies but became a widely recognised model to assess research impact in various academic fields, such as the social sciences (Klautzer et al., 2011). However, such systemic models seem inapplicable in

the reality of the social sciences or other non-technical fields because their knowledge practices have completely divergent foundations in society.

Thus, one cannot say that the practical debate line has purely prescriptive purposes without any critical elements, according to the literature examined in this dissertation. However, I distinguished a critical debate line of impact evaluation because it explicitly aims to reveal the political characteristics of impact thinking and point out inconsistencies in evaluation practices. A critical debate means a precise critique of the political, cultural and social dimensions of impact evaluation. However, as mentioned, the distinction between these two bodies of literature is more analytical and ideal for helping build the argument and conceptual framework for this dissertation because the critical debate line can also have prescriptive goals to improve evaluation practices. In ideal cases, the critical debate provides alternative ways of thinking and analysing the social relations of academic research rather than direct applications for policy purposes of evaluation. I considered the critical debate line to be a broader discussion of research impact evaluation. The critical debate includes discussions from higher education studies on problems of research utilisation, public engagement and science communication. Impact can be seen as part of the discussion or as an accumulation of previous discussions.

This study took the direction of a more critical approach without attempting to ridicule impact evaluation. However, it showed that there might be more understandable ways to conceptualise impact evaluation as a social phenomenon. In this dissertation, I considered critical debate the more intelligible way to conceptualise the impact phenomenon. This way, it is possible to distance itself from its authoritative and formalised definitions. I found the practical research line problematic due to its entanglement with the formal vocabularies of impact, which is why it carries many popular and even harmful paradigms regarding the social sciences and other fields of study. The critical perspective on research impact could also tackle the philosophical questions and boundaries of research autonomy (Douglas, 2003; Gieryn, 1983), as well as the special characteristics of university research (Pels, 2003). Nevertheless, this dissertation was framed for questions on discourses and practices and their control over the understanding of impact. The problem of boundaries is close to the theme of this study. However, it is redundant regarding the understanding of impact thinking and evaluation per se. The questions of autonomy, its boundaries and boundary work are not necessary to analyse the concept of impact and its use, although they might be necessary to understand the power situations in shaping policies and frames for impact evaluation (e.g. Smith et al., 2011).

In the practical research line, the British research evaluation system has been acting as a highlight of empiric investigations and speculations, giving less voice to alternative practices from other countries. While the impact agenda has acquired discursive space in Western Europe, it is unclear what kind of role it has in countries such as Nordic countries, Germany and France,

where higher education and research cultures are different from the English-speaking world. While the practical research line has been preoccupied with providing functional evaluation frameworks for national research evaluation systems, researchers have also used the rhetoric of accountability demands to justify their prescriptive research endeavours on impact evaluation. Many researchers of the practical debate line have adopted the impact endeavour and its vocabularies with great enthusiasm, although their national discourses and evaluation practices may differ greatly from those of the British (e.g. Bornmann, 2013). They diminish the national and cultural variations in the impact evaluation phenomena by pursuing and simultaneously advocating a unanimous rationale for research evaluation. National research evaluation systems operate on the principle of what is fitting for the purpose (Molas-Gallart, 2012).

In this dissertation, I explored these debate lines and used them to construct a comprehensive understanding of the conceptualisations on which impact thinking relies and to build conceptual premises for a critical approach to research impact. The motives of the practical debate line have relied on rhetoric for profound changes in the role of higher education and research in society. Hence, I considered it essential to distinguish political and academic rhetoric from each other, particularly the academic conceptualisations from the policy frames of impact. However, these two domains remain deeply entangled.

2 CONCEPTUAL FRAMEWORK FOR IMPACT THINKING

2.1 NEW AND OLD IDEALS OF RESEARCH UTILISATION

2.1.1 PRODUCTIONAL IDEALS OF TRANS-INSTITUTIONAL RESEARCH

Sociological studies of science have widely discussed the university–society relationship, which this study found to be the underlying discussion about impact thinking in research policy and evaluation. Impact thinking incorporates a multitude of conceptual frames for understanding how research processes connect to non-academic social agents. By conceptual frames of impact, I mean the assumptions and logical constructions of concepts, such as research utilisation/use, public engagement and public value of research. These conceptual frames illuminate that the concept of impact incorporates a multitude of previous ideas and ideals for applying academic research in a social context.

In the preoccupation with enhancing the public engagement of academic research, one can locate changes in the rhetoric for knowledge/risk governance, the role of academic research, expertise and universities, as well as real structural changes in governing knowledge. Risks and uncertainties have begun to define the role of academic research and expertise in public policymaking and debates. Eräsaari (2009) argued that the traditional tripartite structure of expertise had encountered severe problems with uncertainties in knowledge. Traditional expertise comprises science (theory and method), institutions (e.g. university) and professions (duties and responsibilities). However, this structure has been under pressure because such preregulation does not communicate with fragmented and multiplied contexts of knowledge and knowledge use. Knowledge does not only provide definite representations of the object world and specific uses of knowledge in the form of applications. Expertise has been displaced by reflexive or ‘open context’ expertise, which is aware of its uncertainty of ways of knowing and state of knowing vis-à-vis differentiated and individualised life politics (Eräsaari, 1998). Knowledge delivered via open context constructs new unintended consequences and uncertainties and continues to communicate out of positioned expertise. Beck et al. (2003) argued that the reason for such multiple contexts of simultaneously drawn boundaries between academics, experts and laypersons is the reflection on reflections. The foundation of rationality has unravelled, as there are multitudes of rationalities based on

alternative sources of knowledge, information and strategic options. The only way to unravel uncertainties is to accept them institutionally. Callon (1994) pointed out that the participation of laypeople in academic knowledge processes relies on three models: public education, public debate and co-production. Only the last builds trust between academia and laypeople through more open participation in the research agendas. However, Callon argued that the uncertainty of science does not consider any crisis of the credibility of science itself but the regimes that build the participation of laypeople on trust. Uncertainty is a question of mistrust between academia and people. Latour (2004) argued that even though factual and empowering critique has lost its full power to explain phenomena to the public, academic research can have an open dialogue with other communities and rationales by expressing its concerns. This question was crucial for the conceptual understanding of accountability demands in impact thinking in this dissertation.

According to a branch of scholars, the foundation of academic research has changed due to normative and structural transformations in the university–society relationship. Ziman (2002) conceptualised post-academic science in which cultural practices have challenged the traditional sociological (Mertonian) understanding of the distinctiveness of the academic institution. According to Ziman, post-academic science relies on the principles of industrialisation. Academic research has ended up under the scrutiny of the moral of utility, which infuses it with the ethics of non-academic institutions. From this point of view, research has its limits in freedom and growth, and it must be managed by administrative principles. Ziman’s argument of bureaucratisation of science describes the institutional premises of research evaluation that helps understand the cultural consensus in research management, contradicting the dissensus in academia. However, the normative perspective provides an unproblematic view of the values and beliefs of academia.

Weingart (1999) pointed out that the boundary between academic research and politics needs to be constantly demarcated because policymakers rely on academic expertise to decrease the uncertainty of political choices in an environment of overflowing research activity and demand for research. This has caused a double paradox of a delegitimising effect on political certainty and the credibility of knowledge. The problem of legitimate knowledge regarding academic research has shifted to the problem of extension, as researchers must negotiate their expertise with a multitude of societal agencies, expertise and concerns (Collins & Evans, 2002). However, the problem of legitimation has not vanished between academia and public policy. Research policies have attempted to tackle the problem of legitimation and extension by increasing internalised audit systems and quality assessments in universities (Nowotny, Scott, & Gibbons, 2001, p. 114). Thus, there is an implicit contradiction between the problem of extension and the means to solve it, either via legitimation from the research evaluation or via

organisational changes in trans-institutional collaboration. This contradiction provides a perspective from which to explore the underlying tensions in impact thinking and identify deeper logical problems in impact evaluation.

Guston (2007) attempted to solve these tensions by promoting collaborative assurance, which argues for academia proactively seeking opportunities to recognise social needs and interests for knowledge. In the same breath, Guston speaks of boundary organisations that support institutional change for trans-institutional collaboration. The problem with Guston's argument is a one-sided view of research use. Social agents do not have knowledge practices of their own to be developed in collaborative assurance, and it seems that their proactivity and organisational structures do not matter in finding collaborative assurance.

Nowotny et al. (2001) argued that the social transformation of university research could be called Mode 2. Mode 2 requires the contextualisation of knowledge needs, de-differentiation of disciplinary practices and dissolution of academic authority through open communication between disciplines and with private and public organisations. Nowotny et al. shifted their idea away from the earlier notion of applicable knowledge and commercialisation (Gibbons, 1994) towards the concept of the Agora, which describes an idealised structure for the free flow of unauthorised knowledge between social agents. A group of researchers has recessed the development of the Mode 2 concept from a purely economic perspective of the Triple Helix and similar (Carayannis & Campbell, 2009; Leydesdorff, 2012). I call this recession because these conceptualisations explore the social relations of academic endeavours in relation to social systems and knowledge governance, abandoning the cultural aspects of knowledge. For this study, the Agora worked as a model of what characteristics of impact evaluation should be ideally. At the same time, the Agora, at its finest, provides only an illustration of the relationship between university research and other social institutions in contemporary society and re-introduces openness of expertise and knowledge. At its worst, it lacks distinctions between academic fields. The social sciences have less authority in society than, for example, physics, because their conceptualisations have divergent relationships with the public (Bourdieu, 1975).

However, political discourses about higher education have clearly emphasised the commodification of knowledge and higher education. Sum and Sum and Jessop (2013) argued that the rise of the global knowledge-based economy and its competitiveness discourse of higher education corresponds to the changes in economic discourses in post-Fordist economies. In these economic imaginaries, universities are expected to make more direct connections and collaborations with businesses, industries and the government to increase the value of services and products by developing universities' knowledge production towards managerial organisation structures. Universities have gained more organisational autonomy with the expectation that they serve the state's economic interests in global markets

(Whitley, 2014). Slaughter and Rhoades (2004) explained the integration of academia into the global knowledge-based economy by academic capitalism. In academic capitalism, capitalist knowledge production practices have intruded at all levels of university tasks and administration. University administrations have built managerial practices to establish infrastructure for economic development. Kauppinen and Kaidesoja (2014) argued that a similar development of academic capitalism could also be identified in Finland. The strength of the argument for a knowledge-based economy is that it focuses its perspective on policy, governance and the administrative level, which can provide hints of the underlying connections to the policy frames of impact and their operationalisation. However, the problem is that such an institutional perspective poorly describes disciplinary practices and thinking. Labelling impact thinking under a monolithic ideology loses the sophistication to understand the variety of impact thinking; regardless, the policy frames of impact would have their inspiration from such economic motives.

The political rhetoric for the third mission of universities manifests ideas similar to academic capitalism. Zomer and Benneworth (2011) noted that the third mission refers to how universities have strategically made social contributions while the proactive enhancements of evaluating the performances of these activities have increased, along with stakeholders' expectations on universities to provide useful knowledge. The third mission can be seen as part of a wider reform process of higher education institutions in which the dwindling resources of research and the changing nature of academic research in a more competitive and liberal higher education system have changed the expectations and motives for publicly engaged universities. Nedeva (2013) argued that the third mission could be seen as a global phenomenon, which is pushed by international NGOs and governments to get universities to achieve economic and social goals. However, Nedeva also argued that the changes for the third mission are embellishments for collaboration with private partners and that the basic academic tasks, teaching and research, have been maintained at the core of the university institution. Nedeva's point also helped in understanding the role of changing research evaluation in relation to the third mission, as the dissertation was puzzled by the actual changes in research practices by impact evaluation. The concept of the third mission provides more space to articulate the university–society relationship than capitalism due to its rhetorical characteristics.

The previous literature can be summed up under a concept that this dissertation called the productional ideals of trans-institutional research practices. They have a common emphasis on the practices of universities and researchers vis-à-vis non-academic knowledge users. The productional ideals of trans-institutional research were used to comprehend the discursive accounts of impact conceptually and the relationship between these concepts and real-life policies and impact evaluation. They also raised questions about the relationship between ideals and real research practices. Several studies have shown that there is no evidence of a significant change in disciplinary-

based research orientation (Gulbrandsen & Langfeldt, 2004; Hessels & Van Lente, 2008). Ylijoki et al. (2011) argued that the Mode 2 thesis also considers insufficiently that disciplines have different research markets or several markets that are interested in research and for which researchers aim their research ideas and findings, for example, occupational professions and ordinary people of the public. Although the Mode 2 paradigm considers, for example, the social sciences, it clearly lacks an understanding of a variety of academic endeavours, and laypeople's curiosity for a variety of knowledge, such as history and astrophysics, which have no direct social application. Thus, the Mode 2 thesis and other similar concepts seem to be more in pursuit of the ideal for trans-institutional research, which is yet to become, than a description of reality. However, the ethos of Mode 2 has raised concerns about academic autonomy among many researchers. For example, Ziman (2003) was concerned about the instrumental relation of research to policy and serving the interests of governments and commerce. He thought that post-academic science threatens the non-instrumental social functions of academic endeavours, such as the critical investigation and simulation of rationales.

As Weingart (1997) argued, the discussion about Mode 2 has similarities with earlier similar considerations. Mode 2 and its similar counterparts overly romanticises the nonprofessional's knowledge of research problems. Martin (2003) argued that in the long run, there is nothing new in Mode 2 research. From this perspective, its paradigm of trans-intuitional has historical characteristics that may relocate themselves in new contexts of discussion. This realisation provided a crucial conceptual understanding of the impact endeavour. However, idealisation does not mean that concepts such as the Agora and open context would not contribute to comprehending the role of academic research in society.

2.1.2 DIVERGENT LOGICS OF RESEARCH UTILISATION AND PUBLIC ENGAGEMENT

The idea of research utilisation incorporates divergent conceptions of how knowledge becomes part of social life. Weiss (1979) conceptualised these conceptions through ideal-type categories of research utilisation of the social sciences. She identified five types of conceptions of research utilisation: knowledge-driven, problem-solving, interactive, political and enlightenment models. These ideal types represent the logic of research utilisation of the sciences and the social sciences in research policy and research evaluation. The knowledge-driven model follows the sequential idea of innovation models. It supposes that basic research advances applied research, which leads to development and application. One can locate this concept in the development of innovation process models.

The formation of the idea of basic research (or pure research) in research policy can be located in the time of the Second World War and the post-war era during the industrialisation of research activities. Godin (2006) showed that the conceptualisation of basic research is related to the statistical practicalities of the National Science Foundation (NSF) from 1920 to 1950, which led to the idea of a linear model of innovation comprising basic research, applied research and (industrial) development. NSF ended up with the distinction of basic research, applied research and development when policymakers had to decide what activities were counted as research. Simultaneously, researchers wanted to build a protective self-image of research activities, which is why they emphasised the importance of basic research (Kline, 1995).

Godin and Lane (2013) illuminated how the discussion on the linear model of innovation continued shortly by focusing on a demand-pull model. According to Godin and Lane, the demand-pull model of innovation emerged in the 1960s and focused on the economic and technological demands of knowledge and knowledge gaps, pushing scientific research towards the needs of the market. However, this model simply added complexity to the basic assumptions of the linear model and lacked the societal aspects of knowledge needs.

Similar to the knowledge-driven conception, the problem-solving model of Weiss can be traced back to innovation thinking, particularly to the demand-pull model of innovation, which attempts to fill knowledge gaps to solve a problem. Later, the rise of literature in the area of evidence-based policy has provided similar assumptions of knowledge gaps in policymaking. For example, what French (2019) called reinforcement school has attempted to tackle knowledge gaps in policymaking by emphasising the quality of research and the multitude of sources of knowledge. Scheufele (2014) called this knowledge deficit model of science communication.

The concepts of innovation models have fused with later ideas of a knowledge-based economy and more comprehensive ideas of innovation systems and policies (Lundvall & Borrás, 2005; Lundvall, 2007). During the same period, there have been changes in the discourses and governance of universities and research institutes. Slaughter and Rhoades (Slaughter, 1993; Slaughter & Rhoades, 1996) argued that the science political narratives on linear thinking of innovation and problem-solving changed in the 1980s when the boundary between basic research and applied research began to blur because of economic expectations for universities and when political interests became closer to academic research agendas (Slaughter & Rhoades, 1996). The ideals of direct knowledge transfers have also been challenged outside of the framework of the sciences. The discussion about the influence of the social sciences on public policies followed similar traits by emphasising the significance of networks and interactions between divergent groups, knowledge creeping into public discussion and divergent ways to use knowledge in public policies (Donnison, 1972; Weiss, 1980, 1995). In

particular, the idea of interaction has achieved wider popularity outside social science research, as more complex innovation models have emphasised interaction and networks (e.g. Hyytinen, 2017). However, aspects that emphasise divergent possibilities to interpret, use and relocate knowledge have been significantly less discussed, although the literature on evidence-based policy and science communication have addressed the political aspects of research use similar to Knorr's (1976) idea of delayed discursive use of social science research. For example, Scheufele (2014) referred to science communication as political communication, similar to Callon's (1999) co-production of knowledge model—both called model 3. Model 3 emphasises the active role of laypeople in research processes and public engagement.

Alongside the discussion about innovation models and knowledge use in public policy, interdisciplinarity (and/or its extended version, transdisciplinarity) has encouraged researchers and policy advisers to think about the role of combining academic disciplines to solve social problems. The rhetoric for Mode 2 and its variations have also incorporated the idea of interdisciplinarity. Gibbons and Nowotny (2001) described transdisciplinarity as an essential part of publicly engaged problem-solving models, which attempt to break the traditional disciplinary structure by finding epistemic premises across knowledge practices. Behind the idea of transdisciplinarity, there is a conception of knowledge practices that are diffused and find their epistemic basis in laypeople's experiences and expertise (Nowotny et al., 2001). The idea of interdisciplinarity has attempted to change the institutional topography of knowledge production and the topography of knowledge by organisational structures for research but also by research practices themselves (Stehr & Weingart, 2000). However, there have also been purely political needs in the interdisciplinary legitimation of research programmes initiated by the academic community itself (Weingart, 2018). The idea of interdisciplinarity has entered research evaluation through organisational demands for research. One could call it interdisciplinary accountability of research—a form of social responsibility via interdisciplinary concern for public policies (Huutoniemi, 2012). Thus, the idea of interdisciplinarity has an inner motive to move beyond academia towards dialogue with other institutions (Frodeman & Mitcham, 2007).

The previous ideas of research utilisation in the social sciences and broader domains helped build an understanding of similar traits in impact thinking and locate and identify similar logics of knowledge use and processes. They also helped identify what was missing and not mentioned in the recent conceptualisations, policies and evaluations of impact. The conceptual framework of this dissertation focused on innovation and interdisciplinary models because their premises of knowledge use and research responsibility are often represented in formalised evaluation frameworks for impact.

2.2 PRESCRIPTIVE STUDIES

2.2.1 DEVELOPMENT OF RESEARCH EVALUATION TOWARDS IMPACT THINKING

The development of evaluation paradigms and their connection to research evaluation is an underdeveloped area of study, which this dissertation attempted to use in comprehending the background of impact evaluation. There have been attempts to distinguish divergent evaluation schools (e.g. Alkin, 2012). Although their purpose in public policy programmes differs significantly from research evaluation practice and academic culture, similar trends and developments can be traced between the academic/policy trends of evaluation and research evaluation. The general evaluation development has taken contradictory directions. While there has been a trend towards constructivist and realist styles of evaluation regarding the complexities of social relations and social histories of institutions and organisations (e.g. Guba & Lincoln, 1989; Pawson, 2013), the uncertainty and low resilience of contingencies have led to sociopolitical situations, which Dahler-Larsen (2011) called neorigourism. Neorigourism means avoidance of reflexivity about the methodical choices and establishment of strict monitoring systems for a feeling of control, security and ability to act. This type of management culture relies on evaluation machines, which are mandatory and permanent organisational procedures to show responsibility. Power (1997) called these procedures total quality management in audit systems, which pursue maximal assurance of accountability by minimal inputs.

A similar trend of total quality management can be seen in the governance of higher education and research via evaluation machines (Power, 2008). Hicks (2012) noted that the principles of research evaluation have begun to resemble New Public Management by enhancing, for example, productivity and accountability via retrospective evaluations. The authority of science has encountered the science of accounts and shifted it to the financial accountability of science (Power, 1994). Hansson (2006) argued that the formalised evaluation measures of New Public Management, such as quantified indicators, have been entangled with the traditional peer review system. New reflexive approaches to organisational learning in research behaviour still exist under the shadows of formalised evaluation principles—or vice versa, the formalised evaluation is presented in the guise of reflexive evaluation culture. Hansson et al. (2014) argued further that the evaluation of the utilisation of social science knowledge in the public sector has relied on linear ideas of knowledge implementation. The linear models have failed to interpret the organisational aspects of complex knowledge networks. National research evaluation systems share these similar traits of evaluation tools, such as bibliometric indicators, but national systems have divergent purposes,

which is why they also apply these evaluation principles differently (Molas-Gallart, 2012).

Impact evaluation has a long history in evaluation practices, where it has often meant impact assessment of specific policies, implementations or policy programmes. As Rajavaara (2007) showed, impact evaluation has evolved from the grounds of New Public Management and formed a rationale for governance by effects, distancing itself from moral and value questions of decisions. However, the rationale for impact evaluation encounters other historical governing rationales simultaneously in a national evaluation context, which defines the purpose and needs of such evaluation styles. Research impact evaluation has also adopted similar formalised and apparently neutral measures. In particular, bibliometric tools such as citation counts have become a common measure to show research impact in academia. Weingart (2005) argued that bibliometric data had become a public representation of evaluation data to legitimise the public interests in research institutions. Finland has been a leading example of such data of public representation by its JuFo classifications and the Ministry's indexes. Social impact evaluation has become a similar political trend and a topic of debate in academia. As Penfield et al. (2013) argued, social impact assessment has several functions: accountability, monitoring, developmental and learning purposes. However, the accountability purpose is clearly the main function of impact evaluation because the other functions seem to support the practice of impact evaluation and showing accountability.

In the field of scientometrics, there has been a continuous debate about the purpose of social impact evaluation (Bornmann, 2013; Holmberg et al., 2019). The most enthusiastic scholars have advocated social impact as a second criterion for quality judgements of research work—one could say a second research quality (Ernø-Kjølhede & Hansson, 2011; Van der Meulen & Rip, 2000). For clarity, evaluation systems and evaluators have begun to distinguish two kinds of impact: scientific/academic impact and social impact (e.g. Bornmann, 2017; D'Este et al., 2018). The first refers to the recognition of a research paper within the academic community and represented by bibliometric measures, whereas the second refers to the research impact on society assessed by a variety of social metrics and qualitative methods. However, in policy and academic discourses, research impact often refers to both categories. It seems challenging to distinguish them in mundane talk and logically in conceptual thinking. This is why although this dissertation focuses on the social aspects of impact, I did not separate these two domains conceptually.

2.2.2 FROM SUMMATIVE TO FORMATIVE THINKING

Based on Donovan's (2007, 2008) conceptualisation, three phases of impact evaluation development can be distinguished: technometric, sociometric and case studies. The technometric phase focused on quantitative data on low-order commercial products and technology transfers. Sociometrics added social data of local regional-level governance without finer cultural aspects. Case studies brought sensitivity to definitions of impact by combining quantitative and qualitative data and broadening the scope to consider all possible aspects of society. Later, based on Bornmann's (2013) findings, de Jong et al. (2014) developed since the 1990s more precise stages of impact evaluation—impact as a product, as knowledge use and as societal benefits. Impact can be considered a product: knowledge embodied social value in the form of a commercial product and a tool or a model for policies. Knowledge use considers the interaction processes between researchers and stakeholders, which may lead to the adoption of knowledge in various forms. Impact as a societal benefit focuses on the effects of the use of knowledge. Societal benefits consider wider changes in practices, social life and culture.

However, in these typologies, there are logical problems. Donovan's evaluation trends describe only generally wider research evaluation trends. When comparing the debate lines of impact and real evaluation practices, these phases look different and messier. As this conceptual framework illuminates, the difference between the phases is not only methodical but conceptual, shifting from simplistic knowledge transfer, outcome and system thinking towards a cultural understanding of knowledge impact. Regardless of the conceptual shifts, methodical thinking has not changed radically due to the limitations of formalised evaluation. The typology of divergent types of impact describes this shift of thinking insufficiently because there has not really been a shift towards evaluating wider social benefits. In addition, it is problematic to call the evaluation of products and interactions an impact. The evaluation of interactions has remained superficial in practice due to practical constraints, although there has been a significant conceptual improvement.

The development of impact evaluation frameworks for the social sciences and humanities has often been based on earlier impact frameworks for technical and health sciences. One of the most well-known early adaptations is the Payback Framework and its logic model (Hanney et al., 2004), which leans on a more complex and interactive understanding of research impact. Klautzer et al. (2011) showed through cases how one could apply the Payback Framework in the social sciences. Using a wide range of methods, it is possible to collect pedantic data on research use and public engagement outputs and build a case. However, many problems remain, such as influencing policymaking processes and showing attributions to a specific research project. The Payback Framework focuses overly on listing outputs but is not able to point to interaction processes and their dynamics. Various projects of altmetrics (alternative metrics), which focus on, for example, social media

citations, have attempted to bring similar bibliometric principles to impact evaluation (e.g. Bastow et al., 2014). Molas-Gallart (2015) grasped this problem by suggesting that impact evaluation ought to focus more on the processes of public engagement and their formative assessment. However, in the processual–interactional approach, there are several dilemmas to be compromised.

The concept of productive interactions by Spaapen and Van Drooge (2011) continued the constructivist approach of impact cases but focused on stakeholder engagement instead of speculating on a broader social change. The productive interactions framework holds the premise that stakeholder interactions lead to social impact, that is, social change on the institutional level. However, productive interactions consider ongoing interaction processes, which is why they can only predict the impact of the interaction at hand. Wider interaction processes between various stakeholders and institutions make evaluation harder, as one needs to rely on quantitative and qualitative network analysis. De Jong et al. (2014) argued that the labour intensiveness of such case evaluations could be avoided if one focuses on the contributions the collaborations have had in the stakeholders' opinion. Muhonen et al. (2020) took the interaction approach further by investigating various impact pathways of the social sciences and humanities. They showed that in the social sciences and humanities, there are ideal types of knowledge and expertise influencing the private sector, public policies and social life (12 in total). However, the contribution aspect, as much as the attribution aspect, still constitutes problems in the social sciences because the pathway approach has not paid attention to the relationship between potential research users' values and interests and research agendas' values and interests. The absence of ethical and moral considerations remain the pathway structures clinically detached from real-world social relations—as such ideal types. Because values and interests have their own complex logic in politics, social life and the market, the consideration of the political aspects of research use requires a more profound disciplinary understanding of the connection between epistemic questions and social questions in various academic fields. As Latour (2014) pointed out, even sciences have their own political styles outside traditional politics. In the social sciences, the question of politics becomes an even more crucial dimension of research, as they often directly explore issues for a better society and social life by attempting to find new perspectives.

The summative and formative approaches to impact evaluation have often based their assumptions on naïve realism, which considers evaluation a methodical tool to show actual research impact per se by constructing a real impact case. It is not difficult to see that the formative evaluation style of interactions appears as a new guise for summative impact evaluation. The formative impact evaluation frameworks often attempt to count interactions in a summative way. The summative school has not been able to provide methodological solutions to the diversity of disciplines and their complex knowledge and social relations. In particular, the formative and summative

frameworks have approached the social sciences with evaluation methods derived from previous frameworks for science and technology. From this sense, the summative–formative frameworks for impact seem regressive compared to the constructivist turn of realist evaluation studies in public policy (cf. Dahler-Larsen, 2011; Pawson, 2013). The summative–formative frameworks incorporate formalism similar to new public management and audit culture (Hansson, 2006; Power, 2008). In this study, the summative–formative approach was defined by attempts to explain research impact through mechanisms in research systems and practices. These explanations give a limited space to people’s understanding and interpretations of knowledge. The summative–formative approach contributed to seeing the underlying logic of formalised impact evaluation.

2.2.3 TOWARDS CONTEXT-SENSITIVE IMPACT EVALUATION

There has been a clear development towards a context-sensitive understanding of research impacting the prescriptive agenda—even to the extent of constructive criticism within the summative–formative evaluation paradigm. By context-sensitive understanding, I refer to a body of literature that discusses research impact as a construction yielded by the evaluation process in relation to social theories. The frameworks for impact are sensitive to the social and political context of research use (e.g. Mitev & Venters, 2009). In this way, they emphasise that research users have divergent interpretations of knowledge and its use and adopt social science knowledge’s idea of enlightenment (Weiss, 1979) further by elucidating the institutional conditions for research use. For this study, the context-sensitive literature was the signpost of the finite possibilities of impact evaluation.

Williams (2020) addressed the problem of public value by presenting fields between which impact occurs based on Bourdieu’s theory. Impact means legitimation of knowledge endeavours in different fields. They are the academia, politics, markets and media, which require their own symbolic power. For example, politics requires language and skills to influence political actors. Research actors should be able to acquire symbolic power within and between these fields of legitimation to achieve public acceptance of the research endeavour. In Williams’ field perspective, the institutional context of research use is the field and its capital. However, William’s field approach to impact does not elaborate on the inner relationships of these fields or other possible fields, such as civic society and sports. The field perspective should be able to show how social scientific disciplines (and other academic fields) and their power act in relation to these other fields and how the symbolic capital of social scientific knowledge acts in relation to these fields. The field approach seems to have no direct consideration of divergent interests and values within fields and what kind of power (impact) research has on guiding people’s views,

for example, in the political deliberation or politicisation of social agendas, except remarking that impact is a sign of capital in a field. The fields appear as fixed categories lacking dynamics. An essential question is what kind of evaluation methods show capital in a field, as the field framework is for evaluation. There is also tension on whether one comprehends impact as a real capital in a field or contrarily, as a moral justification for valuable research and a compromise within an evaluation system in the sense identified by Boltanski and Thévenot (2006). This tension guided the conceptual development of this dissertation favouring the latter emphasis.

In the context-sensitive literature, researchers have conducted organisation- and environment-focused conceptualisations of public engagement. Benneworth and Olmos-Peñuela (2018) discussed the importance of knowledge users' understanding of new knowledge. New knowledge should be cognate to knowledge users' previous understanding so they can adopt and build it on their old practices and understanding. This relationship requires sensitivity in policy-oriented research, in which maintaining social networks with knowledge users is crucial. Useful knowledge does not mean mechanical knowledge utilisation. Several researchers have also noticed that the research environment's agenda and cues for researchers guide their understanding of what kind of impact is appreciated, resulting in changes in research behaviour (de Jong & Balaban, 2022). The institutionalisation of public engagement may paradoxically narrow the definitions for research impact (Watermeyer & Lewis, 2018). However, there has been surprisingly little discussion about organisational structures that support public engagement and its contextual variety. Outside of the impact discussion, researchers have hinted at organisational learning instead of formalised evaluation indicators (Bushe, 2012; Hansson, 2006; Hansson et al., 2014). These notions indicated that impact research might narrow the perspective itself and be the problem in comprehending the social relations of knowledge and universities' comprehensive research practices.

Miettinen et al. (2015) considered the contextual dimensions of impact in their long-term analysis of education and social science research projects in Finland. Their tripartite approach to research impact examines the social context of public engagement through epistemological, artefactual and interactional/institutional impacts. This conceptualisation considers the historical development of methodological practices in disciplines and their relation to social problems. The approach also sees impact in the context of academic activity, following historically developed methods and disciplines. Later, Esko and Miettinen (2019) proposed an extension of this typology by adding spatial-geographical dimensions and emphasising artefacts. Epistemological impact answers 'what new understanding of phenomena related to a societal or technological' provides. Researchers are engaged in social phenomena, which they use as a ground for their epistemic questions and tests in the academic community. The artefact dimension asks, 'Through which kinds of artefacts, instruments and services is the impact of science on

society materialised?’ Artefacts can be understood broadly as any mediating apparatus for knowledge, such as seminars (Spaapen & Van Drooge, 2011). Interactional/institutional impact describes what kinds of social and organisational forms the interaction between scholarly endeavours and society creates. This dimension refers to collaboration networks, which may become institutionalised.

Esko and Tuunainen (2019) argued that impact could also be framed by stakeholders’ interpretations, which help construct how divergent agents conceive the same social phenomenon and research findings related to it, based on Goffman’s frame analysis. While frames help in understanding divergent values, interests define the frames of impact. Sigurðarson (2020) pointed out that without understanding the divergent values and goals of disciplines and their social prospects, impact assessment leads to a problem of goal displacement and reduced understanding of disciplines’ relations to social life. Thus, Sigurðarson suggested that impact should be understood as a capacity to provide a better social life, which means the capability to maintain and use knowledge to make better choices and decisions in society. Sigurðarson’s main argument is that such an impact of the social sciences and humanities is much more complex and challenging to understand in evaluation. In evaluation, this means the consideration of a multitude of levels of public engagement, research users, impact and disciplinary goals to improve understanding of choices in society (see also Benneworth et al., 2016).

The context-sensitive assumption of social relations of knowledge creates analytical depth in interpreting research impact. Thus, the context-sensitive approach shares common ideas with Callon’s (1994) notions of reconfigured knowledge, which finds new ideas and applications in local and global networks of social actors. Yet, it is surprising how little the studies on impact have utilised the idea of reconfiguration of knowledge—that knowledge can become a completely new idea in a different context. Reconfiguration is more than just an extension of knowledge. However, in the context-sensitive literature, there have been serious attempts to distinguish organisational aspects and varied institutional levels of impact (D’Este et al., 2018; Sivertsen & Meijer, 2020).

The contextual understanding of the social relations of knowledge relies on interpretivist and constructivist premises. Raiski (1991) illuminated this contextuality in relation to the problem of epistemic histories behind a priori theoretical assumptions in research. Using this argument, Raiski raised the problem of constructing the process of research in sociological studies of science. Similarly, assumptions of social interactions or networks of knowledge—referred to as impact—can be misleading if they neglect the historical epistemic nexuses deriving from social contexts and the possibilities of building epistemological grounds for further social contexts. However, such constructions may encounter problems in defining the boundaries of the myriad histories of intertwined knowledge and social contexts. Raiski called these the historical social nexuses of knowledge, which are fundamentally

infinite chains of theoretical and conceptual trials and errors. One cannot draw a rational line for the social and historical development of knowledge contexts, although one can construct contours similar to the finding of Esko and Tuunainen (2019). However, I would call this social science research, not evaluation.

2.3 CRITICAL APPROACH TO IMPACT

The analytical framework for this dissertation relied on what I call a critical approach to impact evaluation. The defended critical approach means elucidation of naturalised vocabularies by clarifying the social influence of discourse on social practice, which is often opaque to the people involved (Fairclough, 2013). Substantially, it means conceptualisation of impact thinking, its varieties and impact evaluation as a phenomenon itself, which needs to be uncovered from its own conceptual and logical premises. The critical approach utilises the idea of vocabularies of justifications within a context but broadens its perspective towards the social and cultural critiques of impact thinking (cf. Gilbert, & Mulkay, 1984; Mulkay, 1976). The critical approach considers both the discursive aspects of conceiving impact and the profound logical aspects of impact evaluation. The discursive aspects attempt to comprehend not only how people use discursive accounts when discussing research impact but also what kind of cultural and social relations of universities and research evaluation these accounts illuminate. I also employ the idea of liminal spaces of evaluation to illuminate how these accounts occur when thinking of impact evaluation methods in practice. The profound logical aspects elaborate on the relationship between impact evaluation practices, particularly depictions, and the underlying vocabularies and conceptualisations. In this dissertation, the logic of impact refers to the inner way of rationalising impact in evaluation and the mundane and habitual conceptions that these rationalisations comprise. Thus, the discursive, liminal and logical understanding of impact illuminates the divergent sides of impact thinking and evaluation.

2.3.1 DISCURSIVE ACCOUNTS OF IMPACT AND LIMINAL SPACES OF IMPACT EVALUATION

To analyse the relationship among policies, operationalisation and the evaluation of impact, one needs to understand the characteristics of impact. In the investigations of this study, impact was understood as a flexible concept, which is used in various ways in different contexts in a similar sense to Gallie's

(1955) contested concepts. According to Gallie, a concept is essential when it entails endless disputes over its use by its users. In this sense, impact is also a contested concept because its meaning changes contextually and is used for divergent purposes. However, the meaning of impact does not change only between various users but also within the users' contextual vocabularies. Mulkay (1976) stated that researchers use a vocabulary of justifications, which is derived from standardised verbal formulations defined by the leaders of the academic fields and community. Researchers use these vocabularies in favour of their interests in the academic community and other forums of academic interests. These accounts of discourses are contextually defined (Gilbert et al., 1984). Similarly, Calvert (2006) noticed how researchers use the concept of basic research flexibly in their favour depending on the context. Pielke (2012) referred to basic research as a political symbol in policy and academic justifications for research interests. The notions of contextual flexibility of impact vocabularies opened the problem of impact talk towards the critical approach.

The premise of impact being a contextually flexible concept means that its meaning is negotiated on a multitude of levels. They are policies, policy implementations, and the academic community. However, this negotiation is a dynamic process that changes constantly. Kearnes and Wienroth (2011) noticed how the policy frames of impact had changed their conceptions and ideas for evaluation over time. They speculated whether the more complex pathway frameworks for impact are mere preparations for a wider set of indicators. Smith et al. (2011) reasoned that impact is something that divergent parties debate about and negotiate over to define the boundaries of research autonomy. The dispute about impact ultimately considers control over research practices, research use and images representing research findings. They elaborated on this negotiation situation through Gieryn's (1983) idea of boundary work. Martin (2011) noticed that such negotiations had yielded endless definitions and redefinitions of impact and shaped evaluations on the basis of handcraft, as there is no methodological foundation for such a fast shaping practice relying on shifting conceptions. The concept of boundary work inspired this study to explore the idea of constantly shaping the understanding of impact. However, boundary work did not unravel the problem of dynamism in the use of impact in divergent contexts.

The flexibility of impact not only means talking but also considering practical choices in evaluation, which is why I needed to rely on alternative ways to conceptualise the variation of methodical preferences. Liminality is a conceptual way to explore these variations at an operationalisational level. The concept of liminality derives from an anthropological background in which it has described the transitional states of rites but can also conceptualise ambivalent meanings of sociopolitical phenomena (e.g. Giesen, 2015). From this perspective, liminal space between sociopolitical situations has ambivalence of meanings that pave the way for new interpretations. From this research tradition, the idea of liminality has transferred to sociological and

political studies and to evaluation studies. Dahler-Larsen (2011, p. 16) perceived evaluation as a liminal sociopolitical practice that creates extra space for interpretations and unusual perspectives apart from everyday institutional practices. The extra space between practices is artificial in the sense that evaluation is purposely created for additional interpretations. The artificial nature makes evaluation procedures controversial because they provide optional ways and methods to distance oneself from everyday experience, leading to ambiguous identities and definitions. There is uncertainty and the potential to create new ways to interpret practices. The controversy of evaluation particularly considers diverse interpretations of assessed practices and the ways to assess these practices. Furthermore, there is uncertainty between the official rhetoric of evaluation and actual implementation procedures. In research impact evaluation, various justifications of public value and preferences for impact assessment methods create intermediate interpretations between several fields of practice. Impact evaluation inevitably becomes a crossing point of divergent ideas and practices, where evaluators and researchers must adapt to unfamiliar situations.

Studies on research impact have provided hints of such liminal spaces, although they have not addressed these spaces directly. De Jong et al. (2015) noticed that researchers tend to understand the meaning of impact in conformity with policy guidelines, although such guidelines would allow more flexibility than the interpretations of researchers. Researchers also try to make sense of official guidelines by distancing themselves from their ordinary disciplinary thinking (de Jong & Balaban, 2022). Watermeyer and Chubb (2019) noticed liminalities between old and new modalities of evaluation distinctions for judgements. New modalities of impact assessment confused evaluators who were used to traditional disciplinary distinctions. These studies show 'gaps' between people's understanding of impact, policy guidelines and disciplinary possibilities to imagine impact. The gaps in the understanding of impact guided this dissertation to ask whether there are similar gaps in impact evaluation itself, whether liminal spaces could help conceptualise these gaps and how evaluators compromise between divergent understandings of impact.

2.3.2 PROFOUND LOGICAL UNDERSTANDING OF IMPACT EVALUATION

The logic of impact is related to previously discussed discursive accounts of impact. In this dissertation, profound logical understanding refers to the relationship between vocabularies of impact and impact evaluation practices. The vocabularies frame the possibilities and limitations of evaluating impact

due to the underlying conceptual and cultural presumptions. The inner logic of impact evaluation relates to the cultural understanding of public engagement and evaluation. Because I discovered that previous studies on interdisciplinarity/transdisciplinarity resonate with recent findings on the characteristics of impact evaluation, I conceptually frame the logic of impact vis-à-vis the logic of interdisciplinarity. Interdisciplinary evaluation, particularly its more stakeholder-oriented version of transdisciplinarity evaluation, incorporates similar principles as impact evaluation because they rely on the same trajectory of logic for research responsibility and research utilisation.

Barry et al. (2008) identified three divergent logics of interdisciplinary research depictions: accountability, innovation and ontology. Innovation logic refers to research interests that are expected to contribute to industrial products and economic growth. Accountability refers to the guises of legitimising research by public engagement and social relevance. Ontology refers to the internal motives and justifications of disciplines. The three identifiable logics have similarities with the previously mentioned productional ideals of trans-institutional research. Strathern (2004, 2006a, 2006b) clarified in her studies the logic of interdisciplinary collaboration and social relevance. According to Strathern (2004, pp. 73, 80), interdisciplinary research is supposed to build a virtual connection to society via a problem-solving setting of disciplinary collaboration. Problem-solving through collaboration shows interdisciplinarity. Interdisciplinarity, in turn, shows accountability, and accountability means that society is considered. In addition, Strathern turned this virtual connection into a wider misconception about merging ideas together. Accountability is a moral stance towards wider society. However, this institutional responsibility turns into output flows of responsibility for self-management, which are supposed to show what is happening in (inter)disciplines mirroring societal development. Unfortunately, this virtual connection between disciplines, outputs and society cannot represent the complex relations between academic fields and social and public life. Interdisciplinarity has become management science, which operates through different principles than many academic fields. These principles create an epitome of consensus and context-free ethical justifications and rely on thick evaluative concepts (Nagatsu et al., 2020; Strathern, 2006a).

Studies on the cultural values represented in impact evaluation have shown that the ideals of impact thinking have clear continuity with previous interdisciplinary ideals. This logic of responsibility has followed similar reduced economic and management ideals of knowledge and research use (Benneworth et al., 2016; Bozeman & Sarewitz, 2011; Williams, 2020). The reduced lenses of impact have also caused challenges in understanding what public engagement means and fostered a tendency to interpret it in a narrow sense (de Jong et al., 2015), which is due to the strategic vocabularies in universities and policies (de Jong & Balaban, 2022). In actual research

evaluations, this logic has led to unwanted behaviour. According to Chubb and Watermeyer's (2017) findings, researchers pretentiously exaggerate the impact related to commercialism and evident outcomes because they assume it will gain attention in funding competitions, while evaluators prefer presentations of impact that rely on accountable outcomes and applications (Watermeyer & Hedgecoe, 2016). Derrick and Samuel (2018) also noticed that evaluators' academic roles entail political expectations of accountability, which is why evaluators are likely to prefer grandiose cases of impact to show accountability to society. Brauer et al. (2021) illuminated how impact depictions imitate the structure of scientific procedures, although their logic is different from a traditional research process. Researchers have a tendency to exaggerate their political agendas and narrative structure to support the evidence for the social goals of their research. I found these economic, innovation and management rationales for public engagement useful in understanding the logic of impact evaluation. However, in this dissertation, I preferred to discuss productional accountability logic as an umbrella term because it comprises a wider variety of ideals for economy, industry and incumbent public policies.

The productional logic does not provide an understanding of why evaluators and researchers tend to rely on such logic consistently regardless of the context of impact evaluation. I found that many studies on research evaluation and peer review dynamics provide insights into this problem. In research evaluation, distancing oneself from ordinary academic work is a common practice. Lamont (2009) showed that research evaluators often follow customary rules within external constraints. In panel reviews, research evaluators rely on customary rules of deliberation, which help them overcome their disciplinary biases, judge the research more broadly, and set themselves in the context of the evaluation. Researchers also tend to adjust their cognitive similarity with the peer reviewers of their funding proposals, and reviewers tend to favour similar disciplinary and theoretical approaches among themselves (Travis & Collins, 1991). However, regardless of customary rules and the tendency to harmony, research evaluation has a multitude of tensions that evaluators must solve when pursuing a consensus (Langfeldt & Kyvik, 2011). Similarly, in impact assessment, peer review panels have their own structured mechanisms, which balance guidance and panel deliberation (Derrick, 2018). It seems that the logic of impact is comprehensively different from the traditional academic distinctions, which is why evaluators, as well as researchers, must shift their mode of distinctions for judgements (Watermeyer & Chubb, 2019).

As this chapter presented, the critical approach is more a principle for exploring impact evaluation than a definite theoretical or methodological foundation. On the contrary, I found the theoretical attempts to conceptualise impact evaluation uncompromising in an analytical process. Other conceptual structures than those presented here might work as well. The critical approach attempts to break down naturalised vocabularies and mechanised thinking

and practices in impact evaluation. Through this uncovering, it illuminates the possibilities of developing or changing the evaluation practice. Discursive accounts of impact and their logic in impact evaluation practice comprise the analytical approach used in this dissertation. They form a meta-perspective and recognise the context of conceptions of impact and the constructedness of impact depictions: the relationship between discursive accounts and depiction of impact. This is how the critical framework for impact elaborates a more in-depth understanding of impact evaluation than mere contextual notions of practical impact evaluation. In conclusion, the critical approach contributes by ideally incorporating several analytical axes of impact evaluation: the use of discursive accounts of impact and their relationship, the role of the accounts for operationalisation of impact in evaluation practice, the role of the logic of impact for evaluation, the role of pre-evaluative strategies in prospective and retrospective evaluation, and the meaning of the accounts, logic and practices to the social sciences.

3 STUDY DESIGN

This chapter describes the empirical research material used in this dissertation. The study utilised qualitative research material in its exploration of the understanding and use of research impact. The research material was composed of texts and talks from social actors at various levels of society. A methodological approach of discourse analysis derived from the traditions of sociological studies of science and critical discourse analysis was applied to the research material. The methodology was inspired by Mulkay's (1976) idea of a vocabulary of justifications, which refers to accounts that scientists use to express their interests in contextual situations of talk. The methodology was also inspired by Gilbert's and Mulkay's (1984) idea of contextual discourse analysis, which focuses on talk as a social action. However, this perspective, without attempts to interpret motives for social actions, constrained the analysis. It was not able to provide answers to the research questions.

In this dissertation, I expanded the restrictive methodology of Gilbert and Mulkay in interpreting the beliefs behind discourses and the reasons social actors rely on such beliefs (Fairclough, 2013; Fuhrman & Oehler, 1986; Shapin, 1984). I supplemented the idea of contextual vocabularies with critical discourse analysis, which suggests that vocabularies are naturalised and, thus, non-transparent to the people using the vocabularies (Fairclough, 2013). This is how the study design was able to connect Gilbert's and Mulkay's basic ideas of accounts to wider interpretations of cultural ideals behind social impact and how these ideals comprise contextual understanding in talk, which has a real influence on evaluation as a social practice. This approach helped avoid Mulkay's (1976) contradiction when he referred to collective interests in his own study of vocabularies. The methodology utilised in this dissertation does not see a contradiction between a focus on contextual accounts and wider social interpretations of those accounts if those contextual accounts are understood as resources to provide—even contradictory—justifications for opinions and actions rather than absolute motives for action.

The research material aimed to provide accounts of vocabularies from various social actors on many levels of research policy, higher education, academic research and research funding. First, the material consisted of text from specific policy actors to frame formal discussions by policy advisers and the relation of this type of text to similar international policy texts. Second, the material incorporated talks of various policy and academic experts to explore the relationship between more informal discussions about impact and formal policy discussions about impact. Third, the research material also had text from research funding proposals and mid-term reports to explore practical depictions of impact, which were considered practical implementations of the ideas manifested in the texts and talks in the other parts of the research

material. Thus, the first and second parts of the material explored the ideals and understanding of impact and their relation to each other, whereas the third part explored how these ideals and conceptions were organised in practice in real situations of pre-evaluation.

All three articles (I–III) relied on the principles of grounded theory methodology and applied thematic analysis. The grounded theory provided conceptual clarity and allowed for interaction with previous conceptualisations (Timonen et al., 2018), while the thematic analysis provided a tool to build descriptive analyses towards conceptual interpretations via various organisations of themes (Attride-Stirling, 2001). Thus, I used the grounded theory as a tool to deepen the conceptual basis of research impact and impact evaluation, as those areas lack profound and commonly accepted theoretical grounds. As Timonen et al. (2018) elaborated, the grounded theory means openness to the data in relation to its context, iterative analysis process and conceptual sampling. This approach applies logically to thematic analysis in the sense identified by Attride-Stirling (2001). Thematic analysis aims to deconstruct text and find explicit rationalisations via levels of thematic networks. To identify the levels of thematic networks, I applied the idea of the iterative process of grounded theory and followed the cues of conceptualisations used in the literature. I ensured the trustworthiness of the thematic analysis by following rigorous analytical procedures similar to the approach of Nowell et al. (2017). Rigorous thematic analysis requires many steps and re-assessments of these steps, from familiarising oneself with the research material to defining the themes. Although I did the analytical procedures solo, a dozen of my seminar peers reviewed parts of the research material and analytical work multiple times.

Although the research material covers divergent aspects of impact talk, it is limited to the context of Finland's research policy and evaluation discussion, particularly the opinions of chosen academics and experts. A wider selection of reference groups, such as politicians and research users in public organisations, could provide alternative views on discourses about research impact. In addition, an alternative conceptual approach could shed light, for example, on the power relationships and boundaries between divergent discourses.

3.1 FORMAL POLICY DOCUMENTS

Article I used formal policy documents in its analysis of accounts of impact in Finnish research policy and evaluation. In *Article II*, the material was used only as a background for the investigation. The policy documents consisted of research policy recommendations, practical research evaluation recommendations and evaluation reports that utilised criteria for impact

evaluation. The search for policy material was set in the period early 2000 to 2018. This period was chosen because active policy discussions about the social impact of research and universities began approximately two decades ago. The material was searched from the major research policy actors using keywords related to research impact. The main annual publications of these actors, such as *Tieteen tila* (State of National Science Activity), were also searched internally using keywords related to impact. Finally, the search focused on three major policy and research actors, as they showed active discussions and conceptual development of social impact. These actors were the Ministry of Education and Culture, the Finnish Education Evaluation Centre and the Academy of Finland.

Although the Finnish Education Evaluation Centre does not directly consider research evaluation, its discourses on the social impact of higher education and universities have had a significant long-term influence on the vocabularies of higher education and the auditing of universities. The Finnish Education Evaluation Centre added complexity to the material as it illuminates the challenge to demarcate the impact of university research from the impact of higher education and the practices between teaching and new knowledge in relation to the third mission of universities. Universities' research assessment exercises and material from other institutions in Western European countries were used as background information to have a more comprehensive picture of discourses and practices in Finland in relation to international research evaluation trends. This background material was also used in *Article II*.

Thus, the research material attempted to frame the formal policy discussion about impact and its relationship to the main lines of research policy and development in two decades. The material was analysed thematically by examining each institution's discursive development and comparing the development among the institutions. The analysis considered the institutional context of the discourses regarding the purpose of the institution and its relationship with the researchers. This is how the material helped frame broad rationales behind policies of research impact and the logic of operationalisation of these rationales in impact evaluation.

3.2 INTERVIEWS WITH EXPERTS

The research material of *Articles I and II* was composed of interviews with experts (n = 14). In the context of the study, experts refer to people who are professionally connected with research impact and its assessment in their field of work or study. The experts represented a specific sector of research counselling, evaluation and academic professorship, and their selection was based on these representations. The interviewees were selected equally from

each field or institution of research and research policy. The academic experts were chosen to represent either research evaluation or evaluation in the social sciences. However, these fields were entangled because all the academic experts had experience in research evaluation, as it is often part of academic work. Many of the policy advisers interviewed also have a doctoral degree and, thus, are familiar with research work and evaluation. The interviewees represented the Ministry of Education and Culture, the Academy of Finland, the Finnish Environment Institute and the Universities of Helsinki, Tampere and Turku. In addition, one Finnish interviewee represented a French institution, one Swedish interviewee represented a Swedish university and one British interviewee represented King's College London. These institutional representations also overlapped, as some interviewees had two affiliations. The international interviewees were included in the research material because they were able to provide a more extensive non-Finnish perspective of impact evaluation. In particular, the Nordic and British perceptions provided an important point of view, as the discussion about impact evaluation has had conceptual similarities with Finland in these parts of the world. The interviewees' choices partly followed a snowball method. The interviewees were asked to recommend knowledgeable experts on the topic. However, the final choices were decided later after consideration. The snowball method helped significantly in finding relevant and interesting people in a small country like Finland.

The interviews were organised through face-to-face interaction, video calls and telephone and email communication. Email communication was used for preliminary and follow-up questions. The interviews were semi-structured, and the questions considered policies, understanding, operationalisation and methods of impact evaluations.

Through the interview material, the studies aimed to build frames for understanding impact and impact evaluation. By employing thematic analysis, *Article I* was able to yield accounts of research utilisation that the understanding of impact derives from. *Article II* utilised themes to build guiding principles for impact evaluation. Together, these analytical procedures illuminated both the idealised side of impact and its operational aspects.

3.3 FUNDING PROPOSALS AND REPORTS

The research material of *Article III* comprised funding proposals and mid-term reports of the Strategic Research Council belonging to the Academy of Finland. The funding proposals have a section in which funding applicants must describe the prospective impact of their project. Funding applicants must also describe their planned stakeholder engagement and interactions. These

depictions of interaction and impact were used to study the relationship between funding criteria for interactions, relevance and impact and researchers' pre-evaluative strategies to correspond with these criteria. However, the study utilised the proposed texts comprehensively because these depictions were entangled with different sections and because it was not possible to comprehend, for example, the impact depictions without the context of the theoretical and methodological choices. The mid-term reports considered only one term but were able to provide a picture of the differences and similarities between prospective and retrospective depictions. In addition, the study utilised the funding calls, proposal instructions and blogs of the Academy of Finland as background material. The background material helped identify the relationship between the instructions and the researchers' depictions. In particular, the proposal calls had a significant role in comparing incumbent vocabularies to disciplinary vocabularies.

The depictions were analysed thematically by utilising a conceptual framework for the logical and contextual dimensions of impact. The logical aspects were derived from previous notions about the logics of interdisciplinarity (Barry et al., 2008). Meanwhile, the contextual aspects relied on the conceptualisations of Miettinen et al. (2015), who illuminated the divergent histories and contexts of impact in each branch of research and academic fields. This is how the study built thematic vocabularies of impact in each logical-contextual dimension and concluded with a general simulacrum of impact common to the proposals.

4 SUMMARY OF FINDINGS

In this chapter, the main findings, research questions and conceptual frameworks of the three original articles, providing the main argument of this dissertation, are summarised. The articles investigated the research questions introduced previously in the Introduction: *how policy authors, policy advisors and researchers understand and use the concept of social impact in various contexts, what principles they think guide impact evaluation, how impact is operationalised in the Finnish research evaluation system and how impact is constructed in prospective and retrospective research evaluations in relation to the evaluation criterion for impact*. The articles and this summary contribute directly to the conceptual and empirical discussion of the impact of the social sciences and its evaluation. This chapter has not yet synthesised the findings. The Discussion chapter provides a broader conceptual and empirical synthesis of the findings. A comprehensive research design and analysis can be found in the original research articles.

4.1 ARTICLE I: TENSION IN INTERPRETATIONS OF THE SOCIAL IMPACT OF THE SOCIAL SCIENCES: WALKING A TIGHTROPE BETWEEN DIVERGENT CONCEPTUALISATIONS OF RESEARCH UTILISATION

Article I focused on the problems of the conceptualisation of research impact in policy discourses, evaluations and the social sciences. The study investigated the understanding of research impact in the fields of the social sciences from the perspectives of policy authors (meaning policy recommendation documents written by academic experts), policy advisors and academics, exploring the first and second research questions about the understanding, usage and operationalisation of impact. The analysis focused on contextual vocabularies in policy documents, evaluation study reports, evaluations and disciplinary discourse. Initially, the research motive was to determine how policy advisors and academics interpret research impact and what those interpretations mean in the context of the social sciences. However, the research material was revealed to be substantially more complex and contradictory, requiring a more in-depth interpretivist enquiry into the participants' interests and motives in their replies.

On the surface, *Article I* identified five interpretative frames of impact: impact governance, operationalisation of impact, politicisation of research

utilisation, guiding arrangements and the social impact of the social sciences. These frames are possible discursive areas where policies, policy advisors and academic people locate their understanding of impact. The frames comprised divergent vocabularies related to research utilisation, academic responsibility and integrity, research evaluation and the meaning of the impact of the social sciences. The vocabularies had a peculiar way of forming divergent accounts of statements regarding impact in various contexts. Within the frame of impact governance, which considered mostly policies and policy concerns expressed in reports and documents, impact served a legitimising purpose of public policies and the productional rationalisation of academic research and higher education. The operationalisation of impact was also located within formal policy discourses and divided the discussion about evaluation principles, either by sociotechnical application—such as identifying innovations—or comprehensive knowledge processes in social life and public policies.

In the informal discussion, the interviewed experts politicised research use and usefulness by relating it to accountability demands for universities and researchers. Another strategy was to label these demands as a political misunderstanding of the social sciences and research in general. The policy advisors and academics also positioned the discussion as guiding arrangements (or principles) for impact goals at various levels of research organisations. A common understanding was to control impact goals through the evaluation criteria for impact, which guide research priorities and design, leaving less space for unwanted academic directions. Another way was to provide institutional support and services for knowledge use rather than to control the research directions. Finally, within the frame of the meaning of impact itself, the policy advisors and academic experts emphasised either a comprehensive enlightenment of society by knowledge or the specific instrumental utility of knowledge—knowledge that is a means for a specific purpose, such as a problem in policymaking.

An in-depth investigation of the frames revealed the vocabularies derived from previous conceptualisations of research utilisation in policy and academic discourses. The more unsophisticated vocabularies relied on the assumptions of knowledge-driven innovation models familiar with science and technology. The other branch of vocabulary was built on a more profound and complex understanding of social relations of knowledge. These two accounts of vocabularies appeared throughout the research material, from formal policy recommendations to informal opinions. Surprisingly, the vocabularies were contextually intertwined, which means that the same person may have relied on opposite accounts within different contextual frames or even on opposite accounts of the same frame in different textual contexts of the frame. Thus, the vocabularies of research utilisation were juxtapositional.

In *Article I*, these accounts were designated as the socioeconomic account and the interpretivist-critical account. The first has a preoccupation with attributable applications of knowledge, which are managed by formalised

evaluation tools and assume rational interaction without ethical considerations. This canon of research utilisation hypostasises rational public policy development and choices under the guise of value-neutral and knowledge-based decisions. The latter account is grounded in the ideas of social enlightenment, social criticism and deliberation. It relies on a belief in institutional structures for dialogue in society and reciprocal engagement in research endeavours. *Article I* concluded that social scientists—if not policy advisors as well—feel the necessity to comply with formal policies for impact on many levels and incorporate impact thinking into their disciplinary motives and goals. However, because such linear conceptualisations of knowledge are alien in many fields of the social sciences, impact thinking causes constant tension in the integrity of disciplinary thinking and the possibility of comprehending research impacts in a sound manner. Thus, policy advisors and researchers apply these vocabularies inconsistently when they attempt to correspond with the ideals of socioeconomic impact schemes while being honest with themselves.

In conclusion, policy authors, policy advisors and researchers understand and use the idea of research impact flexibly between social contexts of talk. The boundaries between the divergent accounts of impact can be more explicit in formal policy text than in mundane talk. However, the policy advisors and researchers blend these accounts together to express opinions and depict impact in various contexts. This is why understanding research impact precisely is difficult. One cannot rely on academic research, policy guidelines, and people's attitudes and opinions to understand impact. Thus, the operationalisation of impact in evaluation entails a balance between highly formalised methods to measure individual projects and programs and ideas of organisational learning and interconnected social systems. However, due to the strong tradition of research evaluation in academia, formalisation of impact by evaluation methods dominates the understanding of operationalisation.

4.2 ARTICLE II: THE DILEMMAS AND UNCERTAINTIES IN ASSESSING THE SOCIETAL IMPACT OF RESEARCH

Article II investigated the methodical preferences of impact evaluation by divergent participants of research evaluation and asked the guiding principles upon which impact assessment relied. *Article II* investigated the third research question. The motive of the study was to find common methodical ground among various agents in evaluation through their divergent opinions, but the investigation showed more profound logical or methodological issues behind the principles than the mere question about the sophistication of the methods.

The study was grounded in the concept of liminality from anthropology and evaluation studies. The conceptual idea of liminality illuminates the space between divergent understanding, which acts as a crossing point to negotiate between evaluation styles or frameworks other than evaluation. However, this space does not mean that the negotiation would create an ideal space for methodical understanding because the principles of impact evaluation are hampered by logical conflicts and because the positions of academic participants are unequal in power.

The findings identified four ideal types of guiding principles within impact evaluation that had conflicting tendencies: stimulation of impact thinking, interaction loop, integration by formalised methods and framing impact. Research evaluation systems with impact goals attempt to stimulate researchers' orientation towards this impact thinking. However, this stimulation can be experienced and guided by external control, internal self-control or undirected orientation towards public engagement. External control emphasises pre-set evaluation criteria for research impact and universities' wider public engagement, for example, by public research funders or other institutions allocating resources, whereas internal self-control means that these criteria for impact have been adopted in the daily practices of universities, for example, by wage levels or bonuses, producing self-organised behaviour for impact thinking. In practice, the external and internal controls are fused, as competing funding programmes and universities' internal policies may both yield internalised organisational and individual behaviour. Undirected orientation refers to policies for impact that only encourage researchers and universities to develop their social relations for various goals. Notably, the same methods, such as social media metrics, can be external or internal, in principle, depending on where and how they are arranged and how they are established in institutional practices. The distinction is based more on researchers' ground-level experience of the method than the method itself—how much significance the method and its interpretations are given outside of its capability to provide information about research impact. In this stimulation principle, there is a constant tension between traditional academic quality distinctions and criteria for impact, as their boundaries have not been settled and are intertwined with disciplinary considerations for quality.

The principle of the interaction loop refers to the procedures of monitoring research and research priorities to produce mechanisms for determining what kind of research will have an impact and, thus, should be supported. Meta-level monitoring practices produce broader feedback systems of research evaluation and research policy, whereas project-focused monitoring has controlling and directive characteristics. The interaction loop principle entails dilemmas among the external transparency of research, internal capture of research agendas and concealment of research processes or agendas. The academic community considers external transparency for trust and responsibility purposes important but, at the same time, they fear that overly rigorous monitoring of research priorities would reduce control over choosing

research agendas. This dilemma has an underlying problem of research concealment, as research agendas are based on accumulating knowledge in academic fields that can be completely understood only by experts in those fields. Simultaneously, research agendas are political choices and are, therefore, publicly considerable.

On the one hand, the principle of integrating credibility and functions by formalised methods means ensuring that the policy goals for public engagement are operationalised in evaluation; logically, the chosen evaluation methods are formalised in a sufficiently credible way. On the other hand, this means that the purpose of the impact evaluation is considered in the choices of the methods. The methods must be able to correspond to research policy advisors' and policy makers' understanding of research responsibility and research priorities and deliver information about research use and applications outside of academia. On the other hand, the methods must also be academically credible to ensure the rationality of the evaluation for the academic community, which is under inspection. Thus, the methodical choices and their implementation balance the instrumentalities to communicate public policy rationales in research agendas whilst satisfying the basic soundness of the methodology.

Finally, the principle of framing impact through meta-expertise emphasises the importance of peer reviews in the interpretation of evaluation material. Reviewers or panellists are meta-experts in the sense that they create new distinctions and judgements on academic research and fields that operate autonomously by their own logic and practice. Framing impact creates tension among disciplinary, interdisciplinary and inter-sectoral expertise. Interdisciplinarity seems to be a compromise between these logics by following already established review practices—a safe choice of assessment practice that does not create any new distinctions for judgement but does not ignore wider responsibility assurance. In addition, impact assessment struggles between standardised criteria for impact and creative deliberation within panels. This dilemma shows the underlying problem of the vague criteria for impact, which require more reliance on discipline-based interpretations, but it also shows the problem of externally defined strict criteria for impact, which leave less space for integrity in the review.

Article II concluded that the guiding principles of impact evaluation have a multitude of dilemmas that cannot be solved without compromise. Impact evaluation also has many practical problems, such as time constraints and resources, which this study did not focus on. The study also showed that policy advisors, evaluation experts and disciplinary professors have divergent preferences regarding impact evaluation methods due to their institutional positions and expectations. These institutional expectations are part of the uncertainty in the underlying principles that derive from deeper cultural and logical problems in impact thinking. The study concluded that evaluation scholars should consider the actual social purpose vis-à-vis consistent methodological approaches to impact evaluation before applying 'all-around'

solutions to scholarly fields because academic fields have divergent epistemic grounds in research practices and social life, and even various social goals within academic fields. Impact evaluation should be open about its purpose and its relation to methodical solutions or solutions other than evaluation.

4.3 ARTICLE III: THE EPISTEMIC, PRODUCTION, AND ACCOUNTABILITY PROSPECTS OF SOCIAL IMPACT: AN ANALYSIS OF STRATEGIC RESEARCH PROPOSALS

Article III focused on impact depictions within a well-established evaluation framework for the strategic research council of the Academy of Finland. *Article III* scrutinised the fourth research question about the construction of impact depictions. The focal interest of *Article III* was to investigate impact in a tangible evaluation framework, whereas the previous articles had a conceptual-discursive perspective. The motive of the study was to learn about the logic of impact depictions in relation to real criteria for social impact and public engagement and to find out how such criteria manifest themselves in prospective depictions for panel reviews. This study analysed research proposals for funding calls and mid-term reports of funded projects. The proposals were produced by consortiums comprising several partners. The proposals were also compared to retrospective mid-term reports. For this purpose, I developed a contextual-logical framework for identifying the characteristics of the impact depictions.

Article III found that divergent logics of impact portray the context of impact in a distinct manner. The logics are scholarly styles, productional slogans and accountability slogans. Within each logic, knowledge impact, interactions or artefacts and social impact are depicted divergently. However, the depictions place a heavy emphasis on productional and accountability slogans, and there are logical gaps between the epistemic contextualisation of strategic public policy concerns and these slogans. The researchers attempted to fill the gaps using research designs that favour the rationalisation of methodological choices for public policy purposes. These methodological choices explicitly favoured commercial goals in consortiums, which involved both technical and social sciences. In consortiums with a social science composition, the choices were explicitly instrumental for public policy goals or the methods were re-rationalised for public policy purposes. *Article III* identified a tripartite epitome of public engagement built by divergent slogans. First, researchers epistemically contextualise the public policy rationales at hand. This can also mean the re-rationalisation of public policy. Second, the depictions of stakeholder collaboration attempted to find collaborative consensus in which expertise from divergent backgrounds is equalised and

academic research practise is harmonised with non-academic practice. These depictions of collaboration also fill the logical gaps between wider social networks or impacts and proximal stakeholder engagement. Third, the depictions constructed productional accountability that used artefacts for research utilisation as a virtual indication of relevance, accountability and social outcomes. Depictions of productional accountability recycled the themes of social goals and priorities from funding calls without yielding new interpretations of social change.

Article III concluded that the minimalistic management style vocabulary in funding calls, funding criteria for social impact and guidance for proposal sections invite mechanistic depictions of impact by researchers. Such pre-evaluative vocabulary is likely to shape the focus of evaluation to productional outcomes, mediating artefacts and methodological choices because the impact depictions do not furnish contextual distinctions to make judgements in assessment. Thus, the study sees more integrity and possibilities in assessing epistemic contextualisation—scholarly styles—than in assessing formalised impact depictions. The study also found more possibilities for sophistication in impact depictions in retrospective reports of impact than in proposals, but this also requires awareness, guidance and sensitivity about political interests and social values in public policies. Retrospective depictions become easily reduced to pedantic lists of social media attention, partners and commercial patents without a real indication of impact on social life, organisations or policies.

5 DISCUSSION AND CONCLUSION

5.1 SHIFTING THE PARADIGM OF IMPACT THINKING

In the articles, I found the justifications for impact evaluation as misinterpretations of the metaphors for social change in knowledge practices. The practical debate line attempts to increase research evaluation, which can be considered only a proxy solution or even a part of the problem of knowledge extension. The metaphors rarely suggest that providing solutions for the problem of extension and the boundary problem between academic research and laypeople lies in impact evaluation per se. Although many research papers have emphasised structural preconditions for public engagement and their evaluation (e.g. D'Este et al., 2018), in practice, impact evaluation is often in the context of research evaluation targeted at the academic community. As long as impact evaluation is framed as research evaluation, it can hardly shift towards a more complex analysis of systems and environments. *Article I* addressed this problem via discursive contradictions. Increased research evaluation is an internal way to address comprehensive institutional pressure or changes. Evaluators can solve the contradiction only if impact thinking changes from the neorigourism of research evaluation to an external and more open perception of knowledge as a relation between the academic community and social agents.

Article I noted that the socioeconomic account of impact considers knowledge often instrumentally in relation to applications or problems. Knowledge is supposed to target a specific problem. However, this understanding causes a multitude of problems in impact evaluation because knowledge is someone's contribution to a solution. This notion ignores that knowledge and the problems of society construct each other. Several studies in practical impact research have addressed this problem of linearity (e.g. Muhonen et al., 2020). The characteristics of knowledge are not fixed, and it can find instrumentality in one context or lose it in another when the social problem settings and their politics change. Callon (1994) explained this potential for multiple contextual interpretations via local and global reconfigurations of knowledge. The interpretivist-critical notions provide an alternative way to comprehend impact as collective relations of knowledge, but they do not provide direct answers to the questions of evaluation due to their disconnection from the auditing style evaluation culture, which dominates evaluation practices. Evaluators often associate these reconfigurations with research projects because, according to the logic of accountability, impact must be attributable to a research project, programme or faculty. Impact evaluation should have a complete shift of paradigm to solve this dilemma.

The critical debate line has considered the consequences of impact thinking both in policies of impact and in research evaluation (e.g. Kearnes & Wienroth, 2011). The deeper realisation of *Article I* is that impact as a conception of policy goals and impact as an academic concept are not easily separated. Thus, impact is not a logical concept, but an accumulation of divergent conceptualisations resulting in an illogical concept. These illogical characteristics have tremendous consequences for impact evaluation in practice, which *Article II* described as dilemmas. *Article II* investigated this problem of identifying commonly acceptable methods for impact assessment to find out whether such a question is impossible. The study found that it is not possible to develop common grounds for impact evaluation, not only for divergent institutional preferences but also for the profound dilemmas in evaluation principles. The dilemmas occur because impact evaluation itself attempts to incorporate impossible contradictions that cannot be solved via research evaluation. These contradictions would require some other means to avoid watered-down evaluation practices. This means redirecting the evaluation paradigm away from a research-centred to a relation-focused approach. Another means would be giving up the evaluation-focused perspective and giving space to institutional learning and development (Hansson, 2006; Hansson et al., 2014)

Critical and practical impact studies have contrasting views on presenting the problems of impact evaluation. Researchers of the critical debate line have identified ideological aspects and political agendas behind impact thinking that may shape evaluations in unintended directions that appear as artificial labels (e.g. Watermeyer & Hedgecoe, 2016). Practical researchers have attempted to tackle these tensions by expanding the spectrum and understanding of impact. Either way, impact evaluation in practice has experienced only cosmetic changes. *Article III* illuminated that the possible reason for the few changes in evaluation practices lies in the logic of impact, which evaluators cannot change until the understanding of impact thinking changes. Impact evaluation begins before it even has an institutional shape, formalised methods and clear research agenda because research programmes incorporate political expectations for research in the form of research management style vocabularies in their descriptions. Before the evaluators and researchers enter into the frame of evaluation, the frame has already been set by incumbent public policy agendas, expectations and vocabularies. In *Article III* (and also I and II), the essential conclusion was that impact is not a mere empty label of political legitimation for research funders, management and governance; rather, it has ideological dimensions. Although impact is not a mere empty label, impact evaluation is a mere empty box because it structures the evaluation in a way that has no true substance—a mere frame in which one can operate disciplinary interests via clever research design embellished with ostentatious management vocabularies.

Comprehensively, the articles question the conceptual distinctions between academic and social impacts, although it is convenient in evaluation

practice. The findings show that research impact is expansive and accumulative in a disciplinary understanding. In the social sciences, it is not conceptually possible to understand a piece of research that would have no academic prestige and that would have wider awareness in society and vice versa. Countless researchers work on theoretical and methodological studies that do not necessarily have immediate social implications. However, those studies have significance for other people's work and for the overall development of fields and the education of students, who also link knowledge to wider social practices. Similar notions can be identified in impact depictions. One cannot understand the social connections of studies without a careful reading of the disciplinary or interdisciplinary approaches to social phenomena and methodological designs. Thus, the articles raise the assumption that academic people in their fields are perhaps the most adequate evaluators of research impact.

5.2 THE AMORPHIC ACCOUNTS OF IMPACT

The main findings of this dissertation underscore that the understanding of impact and the practical operationalisations based on divergent understanding derive from discursive accounts. These accounts are amorphous. One can locate the underlying ideals of knowledge utilisation and public engagement in accounts, but they appear entangled in policies and talk. The vocabularies of impact are flexible and contextual because one uses a multitude of vocabularies to construct a statement. The context of the statement matters more than the vocabularies, which only support formulating a statement vis-à-vis research impact, as long as the vocabularies are consistent in the context. Policy advisers and academic researchers divergently use the vocabularies of impact in relation to the context they want to refer to. The context does not mean a particular discussion or text but a contextual segment or frame for a particular theme in a discussion. This is why informal and even public discussions about research impact can appear completely consistent in the context, although it would be conceptually illogical. Thus, the vocabulary of impact has similarities with previous findings on justifications and boundary work (Gieryn, 1983; Mulkay, 1976). However, one's interests and agenda do not seem to exclude opposite vocabularies completely, as people use vocabularies that support their comprehensive statement (cf. Mulkay, 1976). In this sense, the use of vocabularies resembles tailoring as in boundary work (cf. Calvert, 2006). However, tailoring does not simply mean creating one kind of image of impact to appeal to the target audience. It means various entanglements of images—like Janus having many different masks and rarely revealing his two true faces. Thus, I call it the contextual tailoring of an image.

The rationale for impact thinking originally derives from the policy frames of impact, which are disconnected from disciplinary practice and which have motives other than purely academic. Researchers and research policy advisers adjust their vocabularies to formal policies when they argue for disciplinary goals. In an ideal academic context, social scientific vocabulary overcomes policy frames and is autonomous. However, conformity to the official rhetoric for impact can be beneficial for building an image of usefulness. Conformity to policies and evaluation rationales for impact depend greatly on the context of a discussion and the position of the participant. According to the findings, there are tactical elements even in informal discussions because impact evaluation might be a beneficial way to justify a research agenda, as much as the vocabularies can be attempts to diminish and ridicule the official evaluation rhetoric.

As the divergent accounts of impact are fundamentally contradictory, confusion is evitable in the academic community. De Jong et al. (2015) showed that confusion occurs due to an unmatched principal-agent relationship. However, the findings of this dissertation show that the understanding of impact is not clear on any institutional level because different institutions, research fields and individual academics discuss impact in many ways and even entangle divergent meanings together. Thus, one kind of impact can be acceptable in one context, while in another, it would not correspond with the target audience or the purpose of justifying research interests. This paradox of interpreting impact elucidates the amorphy of the concept. In practice, one can see this paradox in how academic researchers and research policy advisers may jeopardise the integrity of social science practice by relying on naïve ideas of problem-solving, mutual interactions and operationalisation of these activities when discussing research use and public engagement.

In the Finnish policy discussion about the social impact of higher education and university research, I identified development from regionalism towards recent rationalisation of academic research by public policy goals and legitimisation of publicly funded research by a similar rationalisation in the guise of impact pathways. In the institutionalisation of Finnish impact evaluation, there is a clear coupling between the rationalisation of research in accordance with effectiveness, cost-efficiency and socioeconomic utility and the legitimisation of research by the reassurance of impact. Ahonen (2015) noticed a similar coupling comprehensively in Finnish evaluation. Thus, the institutionalisation of research impact evaluation does not differ significantly from the overall development in Finland. The variation between legitimisation and rationalisation also helps in understanding why impact evaluation in research policy and higher education has established such strong grounds for the evaluation culture and practice, regardless of its rather recent development and disconnection to academic evaluation traditions.

Finnish research policy vocabularies of impact also have similarities with discourses in the EU, Nordic countries and the UK, in particular. Although the specific purposes of impact evaluation may vary, its main ideas seem to be the

same, that is, preoccupation with the usefulness of research in terms of public policy agenda, which defines the public accountability of research, and showing the usefulness by formalised evaluation (cf. Benneworth et al., 2016; Penfield et al., 2013). Thus, this dissertation identifies significant similarities between divergent concepts describing similar ideals for productional accountability. The political rhetoric of usefulness seems to have isomorphic themes, as the tone of the themes barely changes between the English-speaking world and the Finnish political rhetoric. These similarities indicate that the role of the impact evaluation fad in Western Europe and especially in the UK in the last 20 years has had an immense influence on Finnish research evaluation.

The divergent accounts of impact influence the rationalisation of impact evaluation, the methodical range and negotiations over methodical preferences. I called these the dilemmas of impact evaluation that constitute the guiding principles of impact evaluation—the critical choices to be made by evaluators. This uncertainty underlying impact evaluation makes it more or less unsatisfactory for all participants. Ideally, evaluation creates a liminal space where it is possible to create new interpretations of evaluation objects (Dahler-Larsen, 2011). In impact evaluation, the interpretations do not consider so much a new understanding of the relations between academic fields and social institutions but what the purpose of impact evaluation is and how it is formalised via evaluation methods. This is problematic in several ways considering the liminal space, because the evaluation yields ambiguities rather than illuminates creative ways to interpret social relations. Thus, it is no surprise that the evaluations often present rather trivial activities as impact or highlight the creativity of unique events and collaborations without an actual grasp of their real impact. In addition, the social sciences are in an odd position when impact evaluation attempts to create a meta-interpretation of the social relations of the disciplines via a liminal space and social science methodology. I call this an attempt to be apparently ‘triple hermeneutic’.

5.3 THE PARADIGMATIC LOGIC OF IMPACT

The methodical considerations often neglect the political, social and moral aspects of public engagement and research use, which the contextual approach to impact evaluation has addressed (e.g. Esko & Tuunainen, 2019). Even researchers in the field of altmetrics have been concerned about the logical misconceptions of operationalising impact in the form of social media data (e.g. Holmberg et al., 2019). These methodical issues lie in the logic of the evaluation. The logic of impact evaluation affects the pre-evaluative conditions of impact evaluation and the relationship between researchers and assessors in peer reviews. As Chubb and Watermeyer (2017) showed, researchers seem willing to sacrifice their integrity in the competition for funding. Likewise,

reviewers tend to favour lowbrow depictions of impact because they want to meet the political expectations set for the evaluation (Chubb & Watermeyer, 2017; see also Derrick & Samuel, 2018). As the findings of this dissertation show, researchers tend to structure their impact depictions in conformity with the logics of productionality and accountability when these logics are operationalised in the vocabulary of funding calls or instructions for reporting. The underlying logic of impact evaluation has tremendous consequences in the assessment dynamics of prospective impact depictions because researchers adopt the logic of impact as a pre-evaluative strategy to be in harmony with reviewers' understanding. Thus, criteria for impact, pre-evaluative choices of impact depictions and their reviews are constructed in relation to each other. Ma et al. (2020) observed that reviewers focused on simplistic outcomes, processes of public engagement and academic quality in their impact reviews. According to this dissertation, this focus is due to a lack of sophisticated distinctions to make judgements based on social impact. Retrospective impact depictions and their evaluation have more range and possibilities for sophistication. I understand these limitations and possibilities via Joas' (1996) non-teleological interpretation of action, according to which plans and motives are always products of self-reflections in a situational context of standardised vocabulary that can create new meanings for the action taken. The proposal setting can be an externally more limited frame for creativity than retrospective reports because of the criteria for judgements, their vocabularies and a clear goal for funding. Depicting impact in proposals is not just a rational plan; it is also an action taken to be successful in the funding competition. Impact thinking creates content to research agendas. In retrospective reports, researchers can utilise a wider spectrum of goal settings that have redefined the project, but it can be as restrictive as in proposals when depicting is defined by a goal to continue funding or maintain institutional funding within a limited frame for understanding impact. This is why retrospective depictions have as many chances of reducing the imagination of impact into pedantic and lowbrow accounting of outcomes as in the prospective depictions when the instructions encourage it.

Other researchers have similarly argued that the concept of impact is controversial because of its underlying economic and financial imperatives (Benneworth et al., 2016; Bozeman & Sarewitz, 2011). This dissertation agrees with these arguments but points out that the economic imperatives alone are too narrow to describe the incumbent socioeconomic vocabularies for impact underlining public policies and its critical counterpart rising from the social sciences and humanities. The socioeconomic account dominates the logics of evaluation by being under the guise of a more comprehensive and contextual style assessment. The guise implicitly incorporates previous unsophisticated ideas of innovation models, technology transfers, problem-solving models and interaction models, diminishing the social sciences in the context of impact evaluation. The logic of impact carries a load of previous mechanistic conceptions of research utilisation, public engagement and transdisciplinarity.

Thus, such an impact evaluation has no real logical characteristics. In a prospective depiction of impact, the disciplinary-epistemic contextualisation of knowledge, which re-rationalises the messiness of problems at hand, and its connection to research design seem to make sense logically. To overcome the illogical characteristics of retrospective impact depictions, evaluators should distinguish the basic misconceptions of evaluation, such as taking perception as observation, and consider more seriously the subjective reconstructions between researchers and research users and their autonomous experiences of local knowledge in the sense identified by Callon (1994).

5.4 CONSTRUCTEDNESS OF IMPACT DEPICTIONS

The methodological considerations of this dissertation make several contributions to the further understanding of impact. The conceptual development of research impact evaluation has progressed from technical and practical evaluation models towards a context-sensitive understanding of impact. The mission of this dissertation has been to investigate the understanding of impact beyond prescriptive policy aims. Therefore, I adopted an approach in which I studied impact evaluation as a phenomenon per se. I called this approach critical because it is interested in the discourses and their logic behind impact thinking rather than mere practical evaluation and new conceptualisations for evaluation. One cannot understand impact evaluation comprehensively by only staying in the prescriptive agenda, which ultimately relies on the premise that impact is real and can be re-constructed. Instead, one needs to be reflexive about the underlying logic and motives of impact thinking and interpret them in the context of research policy and institutionalised evaluation practices. Beck (1996) argued that reflexive realism requires an understanding of how reality constructs meaning in the questions formulated, as well as the interpretations chosen and left behind. However, this does not mean naïve constructionism that overlooks events over talk. It does not mean fear of explaining anything or covering an evaluation by a meta-perspective that ignores all responsibilities of research, as Latour (1988) put it. Rather, the critical approach means recognising the amorphous characteristics of impact and their explicit and implicit motives and influence on operationalisation, as well as formalising evaluation methods and practices. It also means recognising how impact evaluation really functions—the guiding principles and their tensions behind evaluation designs. These characteristics are not necessarily fixed and may shift over time.

Other researchers have relied on the critical approach in their work by focusing on the ideological aspects of research policy and economic/financial motives in understanding impact evaluation and its consequences for academic work (e.g. Watermeyer & Olssen, 2016). This dissertation derived its

conceptual inspiration from their studies, but it developed its approach further towards a framework that considers the understanding of impact as multi-levelled and multi-contextual discourses. Impact cannot be understood only in the light of a single political rationale that defines its vocabularies and uses. The accounts of impact cannot necessarily be understood as a single opinion of a person or an attitude of a community that defines the person's thinking and discourse about research use, as Benneworth et al. (2016) assumed. The idea of impact is closer to what Pielke (2012) called a political symbol in the case of basic research. Researchers and policy advisers use impact as a symbol of their own research interests. Impact can also be a symbol against and for universities' autonomy, representing either a defensive research community in their ivory towers or a government's infinite economic greed. Impact is used to justify various research agendas. Even social scientists use impact to build arguments of the indirect enlightenment of research in society—enlightenment that cannot be shown but is definitely in use. Thus, the concept of impact is constructed in relation to people's interests and research political motives.

Moreover, the accounts for impact do not have an equal negotiation position between divergent discourses and preferences. The negotiations more closely resemble a compromise via discursive conflicts over definitive questions about the purpose of research, similar to Smith et al.'s (cf. 2011) findings. As Luukkonen and Thomas (2016) showed, research agendas and topics are negotiated on various levels in academia. Disciplines, agendas and researchers are not in equal positions in this negotiation, which is why it is problematic whether it can be called a negotiation. Due to the weight of productional ideals in impact thinking, valuable social scientific research can be neglected easily. The negotiation does not only consider promoting and choosing topics but also tailoring, configuring and reconfiguring research topics into the frame of impact thinking, similar to how Calvert (2006) discussed tailoring basic research. As *Article III* shows, research topics can be reconfigured to the impact agenda by separating the actual conceptualisation of a problem from the vocabularies of impact using research content as a connecting bridge.

The concept of impact is not only flexible by divergent accounts but also relocates previous concepts used in the rhetoric for research policy. Innovation models and interdisciplinary and transdisciplinary research become entangled in the ideals and vocabularies of impact as much as regional development and profiles for efficient research programmes. Impact is an aggregating concept for many purposes, ideals and rationales in research policy and evaluation. Thus, impact is not like basic research or interdisciplinary research because it does not define a single type of research ideal. Rather, it has become a focal point for rationales for knowledge productionalism, accountability and social robustness. This is why impact is not purely a negotiation question because its utilisation pursues and derives essentially from institutional changes. Whitley (2014) also considered the changes in authority relationships in research

governance, such as steering research priorities towards public policy aims. The academic discourse about impact is more than correspondence to formal policies because a body of literature has actively discussed the institutional changes of research in relation to social responsibility and extension of knowledge in a way that this academic discussion and policies have become thematically entangled. Conceptually, this was the biggest challenge to the dissertation due to the difficulty in distinguishing these two domains from each other. This challenge underscores the importance of a critical understanding of impact as much as it underlines that in the discussion about impact, policies and research are relationally connected. As much as impact evaluation finds it difficult to distinguish policy rationales from research agendas, the research agenda for impact evaluation is connected with the policy frames of impact. The global policy rationales are loosely coupled with the global academic community, local research agendas and standardised information (Drori, 2003). This is why exploring impact requires critical distance.

Previous studies have been concerned with the relational aspects of impact evaluation, namely, the relationship among the evaluation criteria for impact, evaluation methods and researchers' perceptions of the evaluation guidance (e.g. de Jong et al., 2015; Ma et al., 2020). Other branches of studies have asked essentially how cognisance of the public value of research may shape the understanding of practical impact evaluation (e.g. Williams, 2020). This dissertation contributed to the latter by illuminating how the conceptions of impact shape the grounds for impact evaluation and researchers' ways to meet the expectations. The predictability of impact assessment lies in the logic of impact and its relation to evaluators' distinctions for judgements and researchers' pre-evaluative choices. This problem goes deeper than Goodheart's law described by Strathern (1997). Impact as an evaluation measurement does not become ruined only because it is a target of evaluation. The paradigmatic logic of impact evaluation is inherently unsophisticated due to a lack of consideration of ethics, values and disciplinary episteme and to thick productional, accountability and evaluation vocabulary. Thus, from a methodological point of view, studies on impact evaluation should consider the constructedness of impact depictions through the logic of accounts and how these logics influence the evaluation systems and researchers' pre-evaluative strategies to correspond with the system.

Watermeyer and Chubb (2019) utilised the concept of modality and distinction to unveil the liminal relationship between traditional quality and impact. Their liminal point of view is useful in describing the characteristics of impact in reviews. They assumed that such looseness occurs in reviews because new modalities encounter traditional ones. By employing the logical perspective, one can identify how researchers construct depictions of impact in relation to these new and old modalities of review distinctions and why they seem to construct logically odd simulacrum of public engagement vis-à-vis disciplinary practice and episteme. Brauer et al. (2021) built an argument that

the logic of retrospective impact depictions imitates the logic of academic text but has a completely different premise of biases and personalised evidence. The impact goal is supported by deconstructions that favour the outcome, but the goal itself is not problematised or questioned. I found similar tendencies in prospective impact depictions in proposals. This dissertation finds that the styles of prospective impact depictions are only superficially academic due to their completely different logic. Researchers tend to flirt with management vocabularies and use its elements as embellishments for actual epistemic purposes. Retrospective depictions seem to be more varied and depend greatly on their guidance. Finnish cases show that retrospective depictions can find real political tensions in engaging with public discussion, while in many cases, there are no logical differences from the prospective ones. Thus, the prospective and retrospective depictions of impact have a similar relation to the underlying logic of impact. The logic of impact constructs the depictions in relation to the evaluation framework and seems to be unconnected to the researchers' and evaluators' individual understanding of impact.

Lamont (2009) showed that proposal evaluation follows customary rules within external constraints, such as criteria for excellence or impact. These rules are often based on practices in academic fields or their compromises. However, in the case of impact, the logic of impact incorporates rules in unfamiliar and predictable ways. The rules are unfamiliar because there is no common academic or disciplinary understanding of research impact. The rules are also predictable because they likely obey the direct expectations of the logics of producing and accounting. Thus, impact depictions are always constructed in relation to their paradigmatic evaluation logic and discursive context, which is why this dissertation argues against purely observational notions of impact data, which construe impact as an isolated evaluation object having no external context or considering researchers' and evaluators' actions in relation to the evaluation context.

5.5 CONCLUSION

As the findings demonstrate, the concept of research impact is rather alien in and in relation to the social sciences—and probably in many other academic fields. Even though context-sensitive frameworks have become sophisticated enough to present research impact on many institutional levels, one needs to ask whether it is meaningful to evaluate the complex social relations of disciplines and their histories when such complexity is a challenge to even serious research. One also needs to ask whether the concept of impact is useful at all for research evaluation when it carries such a load of previous idealisations and conceptualisations that can be harmful to creating a real connection between research and the public. Does the concept of impact help

the academic community solve the problem of extension and opening the context of knowledge for laypeople, or does it create further obstacles between expertises via its bureaucratic communication? To whom does research impact actually communicate when academic people mostly do research evaluation? Is it perhaps a mere forensic resource for appeasing the organisational uneasiness in front of higher-level political expectations, as Douglas (cf. 1990) would put it?

Impact evaluation has not solved its most profound questions about impact data and its interpretation. Researchers have approached the problem between quantitative and qualitative evaluation material, which puzzled the participants of this dissertation only superficially. While the recent trend emphasises qualitative depictions, more advanced researchers have been preoccupied with social metrics and artificial intelligence. This particularly considers the question of what kind of data would provide a sound representation of impact. The context sensitiveness of impact cannot provide complete answers because context is the mere beginning of exploring universities, faculties, research projects and such entities. Extension of knowledge would also require a consideration of the locality of knowledge and expertise and agency of social agents in their organisation. Impact evaluation should step outside the context of research. The practice of impact evaluation seems to lead to a compromise and a consensus, which are supposed to be achieved between researchers and policy implementations lacking rationality for impact evaluation. The reason for such short-sightedness is ultimately that evaluators do not know exactly what impact is and how it is shaped in relation to research ideals. Further research could elaborate more profoundly on the relational aspects of research impact in evaluation practice, that is, how impact is constructed precisely in relation to participants and institutions. There also remains the essential question of whether impact evaluation could have an alternative practice to understand the re-creation of knowledge in local social environments.

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Tension in Interpretations of the Social Impact of the Social Sciences: Walking a Tightrope Between Divergent Conceptualizations of Research Utilization

SAGE Open
April-June 2022: 1–16
© The Author(s) 2022
DOI: 10.1177/21582440221089967
journals.sagepub.com/home/sgo


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Abstract

In Finland, the discussion surrounding the impact of research on society has continued for two decades without a consensus on how impact should be part of research evaluation. In this paper, I examine the conceptions of social impact in the field of social sciences from the perspectives of policy authors and academics by reviewing policy documents and conducting semi-structured interviews with 14 policy advisors, evaluation experts, and faculty professors. The policy data sets are from 2003 to 2018, the period in which the Finnish discussion on research impact has been the most active. Interpretivist notions on the social impact of the social sciences argue that representations of social impact derive from juxtapositional conceptions of how social science knowledge is part of society. Grounded theory techniques were used to analyze policy artifacts and stakeholder interviews. I identified five interpretative frames. These are impact governance, operationalization of impact, politicization of research utilization, guiding arrangements, and social impact of the social sciences. A key finding is that policy advisors and academic experts tend to integrate divergent vocabularies of research utilization and its evaluation, resulting in uncertainty about the conceptualization and operationalization of impact. Integrity of research utilization in research policy and research evaluation could increase the social capacity of the social sciences by helping to understand the conceptual contribution of these fields to public policies and public discussion.

Keywords

social impact, research utilization, social sciences, research evaluation, research policy

Introduction

During the past 20 years of European science policy discussion, the term “social impact” (sometimes societal impact) has become a formalized way to highlight the beneficial outcomes of research. At the European level, impact has become a steering mechanism and a criterion for representing the social relevance and ability of scholarly work to address challenges in different societal sectors (e.g., European Commission [EC], 2010, 2014, 2017a, 2017b). In this sense, the Finnish research evaluation system has followed European examples of the social impact criterion for research assessment, allocation, and strategy while cultivating its own public discussion and the formal rationality of impact evaluation. The Nordic perspective on social impact can provide an understanding of how policy advisors and academic experts represent impact in moderate impact policies and assessment significantly different from countries having rigorous frameworks, such as in the UK.

Various assessment styles have attempted to correspond to the rationality of political accountability and administrative cost efficiency while concurrently pursuing sophistication (Martin, 2011). Research evaluators have struggled under the burden of theoretical and managerial challenges to provide evidence of the abstract impact of the social sciences (Lauronen, 2020). Both research policy advisors and academic experts have debated what social impact means and which activities belong under the term (Bornmann, 2013). Instead of providing clear conceptual definitions of social impact, research evaluation scholars have often

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claimed that impact is contextual and can mean divergent activities and outcomes beyond academia (e.g., Penfield et al., 2014). This constructive perspective permits a wide range of disciplinary approaches, such as in the fields of the social sciences. The focus of policies and theoretical conceptualizations has shifted from direct social outcomes toward interaction and pathway schemes (Kearnes & Wienroth, 2011; Muhonen et al., 2020; Spaapen & van Drooge, 2011). Impact has become a general term to mean stakeholder engagement, research use, and accountability of research.

Purpose

Rather than pondering the correct definition or method for showing the impact of social sciences, in this paper I concentrate on the conceptions of impact represented by policy advisors and social scientists in the context of Finland. The aim of the research question is to identify the conceptions policy advisors and academic experts employ when they represent social impact within various interpretation contexts and how they employ these conceptions. The focus in the paper is what research ideals in policy and academia constitute the conceptual repertoire of impact—which, inversely, the academic community can use as a conceptual repertoire to maintain control over social science endeavors in a multitude of social settings, as Calvert (2006) has identified in the case of basic research. In this paper, I argue that the formal and informal understanding of the social impact of the social sciences relies on integrated juxtapositional conceptions of research utilization to justify public value of research in various contexts.

The paper examines the innate conceptual tensions between divergent conceptions through documentary and interview material and identifies five interpretative frames for research impact derived from two different accounts of research utilization. The contribution of the paper is to understand representations of the social impact of social science in policies and academia. The remainder of the paper is as follows. First, there is discussion about the divergent conceptualizations of impact and their relation to audit principles. Thereafter, the data and the method used are introduced. The analysis section outlines the policy material and the interviews. Finally, the conclusion summarizes the main findings and implications of the work.

Conceptual Framework

This section introduces the conceptual understanding of social impact that research evaluators have integrated into their theoretical understandings and practical implementations of assessment. Impact assessment methods are founded upon basic arguments of summative (outcome-oriented) and formative (process-oriented) assessment styles (Molas-Gallart, 2015); these define how impact

ought to be operationalized under each assessment framework. Particularly, the summative approaches merge seamlessly into quality management principles. However, this section furnishes an alternative interpretivist understanding for knowledge use and impact characterized by dialogue and collective awareness.

Audit Principles and Impact Assessment

As the sciences have begun to lose ground in holding the monopoly of legitimate knowledge in public debates on the multiplicity of rationalities and uncertainty, extra-scientific justifications have increased dramatically (Beck et al., 2003). Funding systems have adopted a governance of new public management style that relies on the devolution of research goals using heavy indicator-based evaluations (Hansson, 2006; Hicks, 2012). Power (2008) argued that research evaluation has transformed into the scrutiny of audit society whereby evaluation is professionalized and self-audited to meet the effectiveness of research according to the standards of financial performance. Academia has encountered science of accounts in the form of economic calculations for greater institutional transparency. The pursuit of the greater openness, transparency, and accountability of academic endeavors has the downside of excluding crucial aspects of social structures, networks, and collective organizational knowledge in academic communities (Hansson, 2006).

Whereas research evaluation has become formalized under the rationale of the best practices of indicating academic effects, accountability by impact assessment has been constituted under similar audit principles of having evidence of social outcomes by knowledge use. As Nowotny et al. (2001) stated, knowledge governance has begun to highlight contextual problem-driven research in non-regulatory collaborations defined by the metaphor of the agora, where social sectors and their contextual knowledge interests and expertise co-mingle. Universities have attempted to manage the problem-driven interests of knowledge using overheated internalized research evaluation, which yields intense negotiations over the meaning and evaluation of impact and exhausting refinements of evaluation methods—yet remaining unsatisfactory by taking enormous amount of time and resources (Martin, 2011). Some scholars have considered the changes in knowledge governance as a reason for developing better research impact indicators for research evaluation (Ernø-Kjølhede & Hansson, 2011). However, this pursuit of connecting the ideas of research utilization in formal research evaluation has caused conceptual tension in knowledge ideals (Hansson et al., 2014). This tension can be understood by the logical differences between research management and disciplinary practice (Benneworth et al., 2016). These differences can be located in conceptualizations of impact and how they correspond with the legitimation problem of academic research.

Conceptualizations of Research Utilization and Impact

Weiss (1979) argued that the “utilization” of the social sciences can be categorized into six models: knowledge-driven, problem-solving, interactive, political, tactical, and enlightenment. The models represent the basic understanding of knowledge processes and their use in policymaking and institutions. Knowledge-driven and problem-solving models represent the intuitive understanding of social science research as a promise of sociotechnical applications and rationales in decision-making. The knowledge-driven model follows the assumption of a linear model of innovation. Godin (2006) illustrated three sequences from basic research toward applications and development in this model derived from statistical conceptualizations. The problem-solving model comprises similar linear argumentation emphasizing knowledge needs. This innovation model was known as the demand-pull model, and it was assimilated into more complex models (Godin & Lane, 2013). Knowledge needs appear in various research markets, such as in policymaking: policymakers have a problem, which requires identification of missing knowledge to be pursued by researchers (Ylijoki et al., 2011).

These sociotechnical and instrumental approaches are conceptually close to macroeconomic accounting of impact (Muhonen et al., 2020). They conceptualize research impact by countable applications and research outcomes for policies. Many impact assessment frameworks have emphasized the characteristics of social outcomes (Molas-Gallart, 2015). They have features from the econometric and sociometric approaches of impact evaluation, which later have resulted in reduced understanding of formative aspects of social wellbeing (Bozeman & Sarewitz, 2011). The payback framework (Hanney et al., 2004) applied to the social sciences (Klautzer et al., 2011) follows similar outcome-based logic, in which divergent impacts are distinguished in their own areas, such as policy outcomes. The payback framework develops the idea further by the logic model, which differentiates epistemic, discursive, and policy outcomes from each other. However, it lacks an understanding of various individual, collective, and institutional levels of knowledge processes in society. Social science and science endeavors have cyclical patterns rather than direct practical solutions (Miettinen et al., 2015).

The interactive model takes the social sciences closer to a contextual and cyclical understanding of knowledge processes. The interactional approach underlines the trans-institutional and contextual determination of research problems and processes in what Nowotny et al. (2001) called Mode 2 knowledge production. Leydesdorff (2012) located this idea in a system-level communication between institutions to produce economic and social innovations. Benneworth and Olmos-Peñuela (2018) criticized the naïve assumption of knowledge transformers in the existing literature on the relationship between researchers and society. Social impact is

cognate with knowledge users’ contextual understanding, and knowledge use is dependent on prior knowledge production and established networks. The interactive approach saw further formalized development under a Dutch project on productive interactions, which distinguishes direct personal interactions, indirect interactions via artifacts such as policy recommendations, and financial interactions (Spaapen & van Drooge, 2011). Molas-Gallart and Tang (2011) have developed the idea by reducing the measurement aspects of the framework, and they have considered this approach to be the most appropriate regarding the social sciences, as it avoids a simplistic outcome orientation. Muhonen et al. (2020) developed a comprehensive framework of impact pathways based on productive interactions. Their framework considers a wide range of research and other activities based on academic expertise. These are dissemination, co-creation, and reacting/driving social change. Thus, research impact is built by a whole range of activities and operations, which comprise dissemination of knowledge and engagement of stakeholders by synthesizing, comparing, and translating knowledge.

The political and tactical models consider people’s and groups’ interests and manipulations. Researchers and other stakeholders of knowledge may have an interest in scholarly endeavors and their further reconfigurations in local and global networks (Callon, 1994). The social and political interests in explaining social phenomena and interpreting knowledge have had a minor role in understanding the interaction between researchers and nonacademic agencies. To understand the knowledge processes behind research impact, evaluators need to set knowledge in a context and frame divergent interests of social phenomena (Esko & Miettinen 2019; Esko & Tuunainen 2019). Disciplinary research agendas work vis-à-vis academic and societal contexts that determine the development of the research tradition and its relationship with other institutions (Miettinen et al., 2015).

Weiss’ (1979) enlightenment model of research utilization can be elaborated further by the cyclical, contextual, and both multi-leveled and multi-operational understanding of research impact. Sigurðarson (2020) argued that the possible enlightenment of research can be understood as social capacity, which means sustainable social improvements over time. Disciplines’ capabilities to provide useful knowledge are based on their goals and established practices to have functioning interactions with nonacademic institutions. In social science endeavors, the interaction often means criticism and raising social/political contradictions. This approach is interpretivist and considers both the operational and structural dimensions of research utilization. Consequently, the interpretivist approach has similarities with the idea of appreciative inquiry by underlining the constructivist reality of problems and avoiding mechanistic/naturalistic assumptions of interactions (e.g., Bushe, 2011). The paper contributes to understanding how policy advisors and social research experts from divergent positions construct their understanding of social impact through these conceptualizations.

Table 1. Background Information of the Interviewees.

Categories (<i>n</i> = 14)	Affiliations	Positions
Policy advisors (5)	The Finnish Cultural Foundation The Ministry of Education and Culture Academy of Finland King's College London	Science policy advisors Research impact advisors
Evaluation experts (4)	École des Hautes Études en Sciences Sociales, The Research Institute of the Finnish Economy University of Manchester Finnish Environment Institute/Academy of Finland	Research director Evaluation researchers Altmetrics researcher
Academic professors (5)	University of Helsinki University of Tampere University of Turku University of Gävle	Professors of sociology, public policy, education/ behavioral sciences, and cultural studies

Method

Data

This study design is the second part of a larger project investigating social impact in Finland. The first part focused on the methodological grounds for impact assessment (Lauronen, 2020). The current study utilized policy documents and interviews with the research policy advisors, research evaluation scholars, and academic professors in the social sciences to identify the conceptions of impact in contextually constructed statements. The analysis aimed to provide interpretations, re-interpretations, and idiosyncratic ideas in relation to policy and formal conceptualizations. The documentary material was considered a formal presentation of impact discourse as emmeshed with governmental policies.

The main empirical material in the present study included 14 semi-structured interviews (13 hours 8 minutes, 94 pages) combining face-to-face, telephone, and email communication. The interviews were conducted in Finnish or English between September and October 2016. They were recorded and transcribed for further analysis. The experts represented their academic field and expertise in terms of practical research evaluation, evaluation studies, and the social sciences in the areas of sociological, public policy, and cultural research (see Table 1). The interviewees were categorized into three groups: policy advisors, evaluation experts, and professors. These were analytical categories to ensure diverse representation in the study. Direct conclusions were not solely drawn from these. Many of the informants had overlapping experience from varied positions. Two of the informants came from outside Finland, providing a wider cross-national perspective on social impact and its policies. They also discussed Finnish policy and assessment. The discussions mainly considered the social sciences, but within the wider perspective of impact and research policy.

The Finnish field of research evaluation and impact assessment is small, which required interviewing the people who were in touch with the question of impact on a regular basis and who had a professional point of view on the

matter. Due to the small number of people with in-depth information on the topic, the number was limited to its saturation point ($n=14$). Selection was based on recommendations of other experts in the fields. The informants were asked to describe their professional interpretations of the impact of the social sciences. The interview questions were semi-structured and had thematic prompts (e.g., definitions, mechanisms, and operationalization). The limited conceptual context of impact ensured that the informants discussed the same phenomenon. Because the answers had ambiguity and a variety of polar perspectives, the working hypothesis emphasized the discursive/interpretative approach. The informants' opinions and arguments were considered constructions from diverse sources.

Documentary data (see references in this paper) were also utilized to examine the progressive and chronological development of interpretations of impact by Finnish research policy agencies. The policy material was based on reports from the Ministry of Education and Culture (MEC), the Finnish Higher Education Evaluation Centre (FINEEC), and the Academy of Finland (AF), which were chosen for the purpose of understanding the discourses of the main Finnish agencies of higher education and research policy. They play a decisive role in defining university and research evaluation directions. The documentary data represented a formal perspective by policy authors. The period to which the material related ranged from 2003 to 2018 and included a total of 12 documents. The material was collected using search engines and the repositories of the MEC, FINEEC, the AF, Finland's government, and Google by searching for material discussing research impact and social impact.

Design

The study applied grounded theory methodology to understand the rationales behind research impact. Grounded theory provided conceptual clarity and allowed for interaction with previous conceptualizations (Timonen et al., 2018). The documentary and interview material were thematically

Table 2. Frames for the Impact of the Social Sciences.

	Frames	Conceptions	Key vocabularies
Formal policies	Impact governance	Socio-economic legitimation/ financial rationalization	Strategies, innovations, economy, profiles for research, collaboration, integration, and responsibility
	Operationalization of impact	Sociotechnical applications/ comprehensive knowledge processes and pathways	Strategic socio-economic relevance, education and culture, measurement, assessment, indicators, altmetrics, and pathways
Informal discussion	Politicization of research utilization	Public accountability/political misconceptions	Transparency, societal value, excellence, guided basic research, quality, value of the social sciences, positive/negative change, active/passive researcher, biased/objective outcome, and intrinsic social relevance
	Guiding arrangements	Guidance for research design/support for usage of knowledge	Self-organizing, guiding frameworks in funding programs, arrangements for collaboration, and undirected/priority free interaction
	The social impact of the social sciences	Enlightenment/instrumental utility	Social utility/change, collective, indirect, non-linear, long-term, higher education, working life, and decision-making

analyzed on the methodological premises of Gilbert and Mulkay (1984) and their notions on discourses. According to Mulkay and Gibert (1982), one should ask how academic people construct their interpretations of impact regardless of why these interpretations exist. Policy authors and interviewees produced social contexts (Gibert & Mulkay, 1984) through their discourse, which could be evaluated against standardized verbal formulations (Mulkay, 1976). In this case, these formulations refer to the ideas of the social impact of the social sciences, which were discussed in the context of research practice and management.

The interest in the present investigation was in how these discourses thematically construct various interpretations and contexts, as Jennifer Attride-Stirling (2001) illustrated in great detail. Thematic analysis can reveal the explicit rationalizations and implicit significations of text that have been broken into smaller units. Here, thematic analysis was used to identify the interpretation repertoire of the policy authors and interviewees (global themes), their contextual frameworks (organizing themes), and the polarized conceptualizations within these frameworks (basic themes) constituted by key vocabularies comprising these formulations. The global themes were identified as accounts, through which the informants justified their interpretations via select vocabulary within certain frameworks. These frameworks provided a contextual repertoire with which the policy authors and informants could emphasize various conceptualizations when interpreting the meaning, purpose, and implementation of social impact in the case of the social sciences. The frameworks were clearly divided into formal policy formulations and informal discussions, reflecting impact policies and social science practices.

Data Analysis

First, the data were descriptively coded to categorize rudimentary topics (e.g., accountability, relevance). Second, the

interpretations were conceptually examined to locate basic-level themes (e.g., the enlightenment purpose of the social sciences). Third, these conceptualizations were merged into organizing frameworks (e.g., impact governance), which indicated re-interpretations of similar formulations. Finally, these frameworks were examined for whether they constituted global themes based on common reasoning.

Results

The findings are placed together in Table 2 to concisely demonstrate the resultant vocabularies, conceptualizations, and frameworks. Table 2 illustrates five interpretative frames (main themes) for the impact of the social sciences within formal research policies and informal discussion among policy advisors, evaluation experts, and faculty professors. These are impact governance, operationalization of impact, politicization of research utilization, guiding arrangements, and social impact of the social sciences. Each interpretative frame incorporated the main conceptions (subthemes) and key vocabularies that policy advisors and academics used to emphasize divergent rationales for social impact in various contexts. These conceptions were contradictory, except in the formal policies for impact governance highlighting financial rationalization of research. The conceptions formed divergent ways of understanding the policy, evaluation, organization, and disciplinary aspects connected to the idea of impact. The interpretative frames showed the possibilities and limitations to use the concept of impact to understand the social capacity of the social sciences.

Formal Policies of Social Impact

The policy and evaluation documents illuminated how policy authors have defined social impact in relation to the social sciences, the purpose of the concepts, and how policies have attempted to rationalize impact assessment in research

evaluation. This section includes analysis of how the main agencies of research policy (FINEEC, MEC, and the AF) have interpreted and used the concept of social impact.

This section includes two distinct frameworks. The first illuminates how policy authors have defined impact as legitimation for institutional higher education and research funding and as a concept to rationalize the productivity and effectiveness of research vis-à-vis public policy goals (impact governance). The second shows how the operationalization of impact struggles between a mechanical interpretation of the outcomes and the wider civilizing effects in society in competitive research funding (the Academy of Finland: operationalization of impact).

FINEEC is mainly interested in universities' quality assurance systems and their educational excellence, but it has also been active in promoting higher education impact assessment. The MEC evaluates universities' eligibility for government funding. The AF is a public funding body under the government and has several funding programs. It also acts as a research council when developing evaluation recommendations. The MEC and FINEEC are closely related, but FINEEC is an autonomous organization. The AF is closest to the operational level of research assessment, as it directly designs and implements assessments in research funding.

Impact Governance

Since the early 2000s, FINEEC and the MEC have conceptualized impact as a form of regional interaction between higher education institutes and social sectors (Kinnunen, 2001; MEC, 2002). According to one of FINEEC's reports, higher education institutes can approach regional interaction through their basic tasks (research, education, and public engagement) that provide a multitude of ways to impact society (Kinnunen, 2001). The MEC has emphasized university profiles for research in relation to their impact policies. These profiles are supposed to be defined in university strategies in relation to societal collaboration (MEC, 2002).

A later MEC report by Jari Ritsilä et al. (2007) specified several forms of societal interaction. They concluded that the assessment of societal interactions should show how well universities' responsibilities are integrated into the labor market, socio-ecological development, regional development, and policymaking or societal discussion (social development and decision-making). This approach improves the basic idea of research, adding a multitude of routes for influencing society.

FINEEC's and the MEC's interpretations of impact have been comprehensive, decontextualized, and unspecific, describing a wide range of social activities and collaborations with other social sectors. As an institution for audit control, FINEEC has also emphasized the impact (which can also be read as effectiveness) of evaluation itself. Universities should utilize evaluation information to improve their impact

through social activities (Moitus & Saari, 2004). FINEEC's (2005, 2007, 2010) manuals have not indicated a change in this discourse since the early 2000s. Their latest auditing summary (FINEEC, 2019) highlights the same comprehensive understanding of impact in academic work as well as in collaboration between academia and research associates from diverse social sectors.

The MEC's policies have not undergone significant change, but they more strongly emphasize strategic priorities for research and profiles for universities' development (MEC, 2011, 2015a). In the MEC's funding model proposal for 2013 (MEC, 2011), there is no explicit indication of social impact in research evaluation. The section on impact considers rates of student graduation as the main source of societal influence from universities, measuring research impact by numbers of publications. In the latest proposal for a funding model, social impact has been given greater emphasis by adding strategic funding (10%) in the section on universities' education and science policy goals (MEC, 2015a). The MEC hopes to see social impact in the independent strategic planning of universities (i.e., profiles of research fields and closer collaboration with other sectors of society). In 2015, the MEC published a report (MEC, 2015b) focusing specifically on the social impact of academic research and higher education. The report greatly expanded its emphasis on society to contain any forms of interaction, strategies, and dissemination pathways. The report highlights the importance of interaction for achieving social and technological innovations.

FINEEC and MEC policies on social impact have remained at the comprehensive level—referring, in principle, to any kind of collaboration and network locally or nationally. Instead of specifying impact, FINEEC and the MEC have reinforced their recommendations and demands for impact. They have placed very little effort in operationalizing the assessment forms and procedures, as it is unclear how they indicate impact within the pathway scheme and what kinds of indices and assessment forms can show impact. Universities have received more formalized frameworks for how to describe their impact in the context of strategic development and socio-economic utility (e.g., Saari & Moilanen, 2012).

In this sense, impact means the societal relevance of research and higher education in relation to public policy goals. Substance or forms of impact do not seem to matter as much as that impact assessment's use of an appropriate framework of vocabulary to legitimize research and higher education as an integral part of wider social collaboration, strategic choices, and the development of universities in the context of national wellbeing and economy. The interaction and pathway models have a significant role in the exchange of ideas between universities and societal sectors. However, the conception of impact pathways has traits of the demand-pull innovation model, in which research is supposed to respond to sociotechnical needs (cf. Godin & Lane, 2013).

The ideas of interaction have focused on regional socio-economic development in their earliest formulations (cf. Esko, 2020, p. 28), and later have changed to mean universities as comprehensive producers of innovations through strategic partnerships. Impact emerges as an aggregating concept for coupling the institutional legitimization of higher education by emphasizing socio-economic utility and increasing the rationality of productivity and effectiveness of research outcomes. It does this by creating connections between public policy goals and research orientation as defined by research profiles. Thus, the concept of impact incorporates the ideals of various research needs outside of academia, but it emphasizes market-driven research model through technology, products, and socio-economic legitimization of publicly funded research (cf. Ylijoki et al., 2011). Bozeman and Sarewitz (2011) noticed that science policies have had a strong tendency to rely on economic thinking when evaluating research impact. Public value failure has often meant market failure.

Operationalization of Impact

The development of the AF's discourse provides a more operational perspective on impact than does discourses in FINEEC and the MEC. In its report (AF, 2003), it considered social impact to be a part of increased collaboration with various research associates, which is a distinct criterion from academic research results. The report explicitly prefers an interpretation of diverse impacts from differentiated academic fields, as it points out complex impact processes of the social sciences and humanities. It builds on the premise that the impact of the social sciences and the humanities on policymaking is not currently satisfactory. Controversially, the report states that impact is not a mechanical process while also claiming that impact mechanisms can be examined. The report states that impact is out of the reach of political control and assessment, but at the same time, it is subject to the directions of research policy. It states that in the long term, cultural and educational impact materializes through people's awareness and identity formation; this means influence through higher education, popular publications, and collaborative workshops. However, the report also stresses social innovations, such as new ways to organize work and technology. The report finds it difficult to define such innovations, but states that they are explicitly related to economic and technological arrangements that are constituted in multidisciplinary work together with service and product users (e.g., linguistic technology).

The AF's further investigations into proposals for social impact processes have continued with contradictory policy recommendations. Its report on the social sciences and humanities impact, "Education and culture cannot be produced" (AF, 2006), underlined the civilizing role of the social sciences and humanities and criticized the mechanistic measuring logic of impact. The report emphasized that impact is

an essential and traditional part of the social sciences and humanities because research can be interpreted as an active intervention in society. Further, the impact of intellectual endeavor cannot be reduced to utility, not even its broadest societal sense. In the same year, a report on the impact of basic research (Kanninen & Lemola, 2006) took a significantly more linear approach to impact by describing causal utilization transfers and writing asides about the idiosyncrasy of the social sciences. However, the report concludes with the idea of research collaborations and networks as sophisticated proxies for social impact, anticipating their emphasis in future impact frameworks.

Alongside these educational and cultural interpretations, the AF has promoted an idea of planned impact through systematic research programs and impact assessments. In its assessment report on the Centre of Excellence (Hjelt, 2009), the AF referred to impact as a research program's limited collaboration and influence on people who immediately used its new knowledge; it also contained the wider perspective of a program's policy goals and influence on policymaking. Although the report drew a picture of wide social impact, impact was rationalized as research outcomes that policymakers utilized. The Strategic Research Council of the AF took this one step further. Its framework operates solely upon the idea that research is organized around specific themes and problems by multidisciplinary and inter-sectorial collaborative partnerships (Mickwitz & Maijala, 2015). The government ratifies these themes, and although the social sciences play a significant role in strategic research programs, this role is reduced in the sociotechnical perspective on thematized problems. Impact simply means effectiveness in relation to meeting the targets of collaboration and interaction schemes.

The AF's research policy has turned toward a rationale like that of the MEC. Social impact is related to profiles for universities and research units in the sense of rewarding and strengthening research fields that gather similar knowledge across disciplines to address specific societal problems (AF, 2016). The pathway framework has become a tool to comprehend the multitude of ways in which research knowledge can impact society. In its latest report (AF, 2018), the AF considered altmetrics to be a rational method for assessing social impact regardless of its earlier criticism of measuring impact and having a congruent metric-based approach to impact assessment. This contradiction occurs tangibly in juxtaposed employment of impact narratives and metrics within the same funding programs, such as strategic research.

The AF has clearly attempted to operationalize strategic problem-solving and enhanced societal collaborations, but it has had an implicit struggle between a mechanistic outcome-oriented approach and a more sophisticated perspective on the culture and education contained in the social sciences and humanities. This tension has resulted in discussing the social sciences as socio-economic and technological arrangements alongside the diminishing critical and emancipatory aspects

of the social sciences emphasizing socio-economic wellbeing (cf. Bozeman & Sarewitz, 2011) and attempts to increase control over research agendas by convincing ways to represent knowledge to society and use knowledge (cf. Smith et al., 2011) in the guise of pathway and interaction frameworks. The discursive ambiguity of interactions and pathways can also be interpreted as reframing academic research as a strategic national capacity and as a way to conceptualize research value through new frameworks (Kearnes & Wienroth, 2011). The AF's operationalization of these frameworks underlines guided collaborations and targeted knowledge use via policymaking evaluated both by formalized narratives and impact metrics. The formalized problem-oriented approach conforms to the socio-economic legitimation and financial rationalization of the MEC and FINEEC.

Politicization of Research Utilization

This section outlines a framework—the politicization of research utilization—for addressing the contradictory recognitions of the value of the social sciences regarding problematized relationships with social relevance and outcomes. The informants, particularly the policy advisors, highlighted the rationality of impact, which describes political accountability to the public. They interpreted impact as a conceptual apparatus for valuing the worth of academic endeavors and for defending public research funding. They also used the political impact demands to occupy space from traditional research evaluation concepts by redefining them in terms of research relevance and societal interaction. At the same time, the interviewees pointed out the political misconceptions of impact policies regarding the value of the social sciences.

Public Accountability

According to the informants, impact policies correspond to the external demands of accountability to public interests in academic research due to diminishing expectations for academic self-guidance. The informants showed real concern about research not contributing anything to society. The worry is mainly concerning the problem of the irrelevance of the social sciences and their role in the public sphere. They pointed out how legitimizing research requires more visibility and transparency. However, their perspectives on the rationality of impact differ radically. The policy advisors pointed out that the representation of impact is crucial because it provides evidence of allocated funding having value beyond academic curiosity. One informant described the fear of becoming labeled as esoteric and useless:

Perhaps, I don't quite understand the transparency of science regarding impact, but we can talk about the legitimacy of science so that people could appreciate it more. Therefore, we could show some positive impacts, in the sense that science is not merely something locked up in an ivory tower. (Policy Advisor 1)

Several of the informants addressed their concern with the concept of the ivory tower by describing a problem with academic self-interest. In the informants' discourse, the ivory tower of academia means intellectual seclusion from social contexts of research problems. Academic endeavor and its claim of originality and quality is not enough to maintain the production of societally relevant social science research. They argued that academia has maintained research traditions that have gone off course for long periods of time because they only followed academic discussions and interests:

Academia can create research traditions in the social sciences that have an imaginary world and that distance themselves from all socially relevant matters for decades. . . . In these cases, the internal academic impact does not reveal the problem from having a tradition that has been in a bad way for a long time. (Professor 2)

However, regarding the implementations and assessment of social impact, the policy advisors give ambiguous explanations balancing policymaker wishes and academic research interests. They highlight research programs designed to tackle "strategic" problems in society, but they also emphasize the role of basic research in a two-fold manner. According to policy advisors, research funders can design basic research to evidence impact within a flexible framework. Academic research in general has an impact in one way or another, as several of the informants claim. One policy advisor expressed both perspectives:

It is clear that the social sciences and humanities are having an impact one way or another. They create discussions. In a sense, it is intrinsic to these academic fields. . . . Even though we have new instruments, our intention is that basic research should be bottom-up. We do not control it in any specific direction but encourage the search for wider societal connections. (Policy Advisor 3)

The interviewees tended to politicize research utilization by creating internal and external threats and requirements for academic research. In particular, the concept of research quality is at the center of the debate. Policy advisors tend to relate the concept of academic quality, in the sense of intellectual significance, and basic research to impact in a supplementary way. The policy advisors feel that impact complements research quality. Hence, the policy advisors extend the meaning of quality and basic research to include social relevance/utility while assuring the necessity of independent basic research. The center of politicization of research utilization is public accountability through transparency, which balances between control over research agendas and self-organized capability of the social science research agendas having socially significant substance. The idea of transparency combines the ideal of basic research as priority (Godin, 2006) with the transformation thesis of knowledge

production changing toward socially contextual research (Nowotny et al., 2001). Behind the concern of public accountability, there is the old doubt of social responsibility of research requiring more formal accounting of utility (Martin, 2011). Politicization of research utilization does not seem to displace the key conceptions of science policy. On the contrary, it incorporates the old symbols in the new discourses of social impact.

Political Misconceptions

The informants illuminated the political and conceptual misconceptions that policymakers have about social science research. Due to these misconceptions, the informants find it difficult to operationalize impact in research evaluation. This section presents the opposite interpretation of impact policies and formal assessment based on recording detectable outcomes.

The main problem with impact assessment seems to be showing positive changes or interactions and attributing the change to a research project. Several informants explained that the premises of impact assessment are flawed because of the limited perspective and rationalization within socio-economic utility. Particularly, they claimed that the concept itself is political and that political purposes define the quality judgments under the impact criterion. A policy advisor, who also blames researchers for the lack of socially sensible research questions, argues:

Everyone can define impact as they want. That is the problem. It becomes a problem when using it as a criterion for scores, which are used to compare funding applications. Does a piece of research have a positive or negative impact? That is a political question regarding the social sciences, which is political and a politicizing activity toward decision-making. (Policy advisor 1)

Most of the informants consider the social sciences to be socially relevant per se. They think the problem is that policymakers find it difficult to see the impact of the social sciences because they are considering misleading aspects of knowledge use. Instead of projects, departments and faculties, assessors should also comprehensively examine other participants' actions in their collaboration and use of research knowledge.

If our gaze is only on socially relevant knowledge, social science research can look useless. We have political processes that provide us with decisions and legislation and that involve many agencies, including political interests. Thus, the question about impact is set rather the wrong way around. (Expert 3)

Although the policy advisors specifically tended to underline the importance of legitimizing research through incorporating criteria for social relevance in traditional academic research assessment, many of the informants are uncertain or critical about the logic of impact rationality. They are aware

of the political and social reasons for legitimizing the impacts of academic endeavors, such as increasing research and its funding. At the same time, most of them display profound contradictions between social science research and impact policies. They pointed out that social scientists find it difficult to set their endeavors in impact policies because it is problematic to indicate social scientific outcomes in the assessment frameworks that represent influence through positive (meaning beneficial for public policy) interactions or effects and changes in policies. Politics are biased, and interpretations of research findings can be diverse (Esko & Tuunainen, 2019). They explained that the value of the social sciences lies in a different perspective than what formal assessment designs offer. Rather, the social sciences contribute to social disputes via theoretical and analytical discussion; they are not providers of undisputed solutions, as the opposite perspective argues:

The balance between critical social sciences and decision-making has been interesting. But how does one indicate the utility of critical social sciences? A researcher has a responsibility to enlighten people by her knowledge, but that is wishful thinking because politics do not work like that. Ultimately, it is a matter of societal atmosphere whether we appreciate critical research or whether it is regarded as shouting from an ivory tower. (Expert 1)

The informants' interpretations of the purpose and form of impact criteria in research evaluation show tendencies to conform to impact policies due to diminishing trust in academic research; they simultaneously show the pretentious characteristics of impact policies as lacking competence in understanding social scientific practices. The informants' understanding of the role of impact assessment regarding social science utilization is fundamentally divided. The informants represent the impact of the social sciences as a matter of political trends rather than a question of relevance in the sense of the value the social sciences can provide. Benneworth et al. (2016) reported this dissonance between policymakers and scholars, but it also seems to occur in contextual discourses between scholars and policy advisors depending on whether they happen to emphasize knowledge-driven models of socio-economic research applications for public policies or critical traditions of social science research focusing on intellectual dialogue with society—what Sigurðarson (2020) addressed as increasing the social capacity of society. In this approach, the vocabulary of applications and solutions becomes irrelevant, and the conceptions of interaction and pathways have dubious grounds.

Guiding Arrangements

This section presents a frame for guiding arrangements that includes two divergent conceptions of guiding research to have social implications (guidance for research design/

support for knowledge usage). Along the perceptions of socio-political accountability, a question of research guidance by impact policies polarizes the informants' interpretations. They do not support direct allocation through criteria for impact. The policy advisors have contradictory interpretations of allocation and do not favor university funding allocation through an impact criterion, as it could lead to spurious competition between universities and research units, contradicting the idea of collaboration. Instead, the idea of competition appears only within the format of research funding, which has an impact criterion for quality judgments.

There is a subtle contradiction between how the informants perceive the demands for impact being overly controlling and how the academic policy advisors present them as flexible via self-organizing frameworks. Regardless of this tension, both perspectives underline the enforcement of social collaborations very similarly and without heavily controlling policy priorities. However, their understanding of self-organizing is different in the sense that many of the informants see it as futile to set external incentives for social interaction. They argue that social scientists do not need additional control because they are intrinsically oriented toward social problems and because their academic quality and work ethics are already high. They highlight the serendipity of social scientific ideas and academically defined interpretations of social problems, as in the following extract. Theorizations on impact can find it difficult to consider serendipity (e.g., Penfield et al., 2014). Assessments based on audit mechanisms can hardly recognize the matter of serendipity (Power, 2008).

In the social sciences, it is not always the case that one has a societal problem, and then we have research related to the specific problem. . . I don't oppose research priorities, since we have always had those. But questions of social sciences are tricky in nature, in the sense that if we try to achieve significant results, they appear to be a bit accidental. It is difficult for anyone to plan those. . . At the same time, one should let it develop organically. (Professor 5)

The informants struggle between the ideals of a responsible researcher and supporting structures for research. According to them, researchers should understand basic policymaking processes as having an impact, but research findings need supporting dissemination structures such as research advisors. As much as the interviewed experts represent researchers who are too "lazy" to attempt to comprehend policymaking, they also represent public and private organizations reluctant to adopt social scientific knowledge. Their arguments about responsibility fluctuate between orienting arrangements (programs, assessments) for researchers and supporting structures for knowledge and societal dialogue. This polarized frame of responsibility shows the contradictory relationship between conceptions of impact assessment, in which a research unit is under inspection, and conception

of social research, which reflects on social phenomena as well as the reflexivity of a researcher. The tension in responsibility of knowledge dissemination represents different logics of knowledge. Hansson et al. (2014) described this contradiction between the linear problem-solving/evaluation approach and organizational learning. The learning approach underlines organizational structures for dialogue instead of control by indicators for pre-set goals. The interpretations conforming to impact policies are not likely to accept the uncertainty of research, whereas the ideas deriving from social research also underline the culture of criticism within academia and societal sectors.

The Social Impact of the Social Sciences

This section outlines a frame for the core conceptions of social impact (enlightenment/instrumental utility). The informants had several claims regarding the epistemic and social characteristics of the impact of the social sciences. They considered both how societal participation should be pursued in academic work and how the process of this participation is arranged through academic endeavors. The informants emphasized how the social sciences are inherently socially oriented and how formalized frames for impact assessment can make it difficult to indicate such impact. This section illuminates the interpretations of what makes the impact of the social sciences.

In this context, the informants refer to the practical usefulness of knowledge. This means the impacts that change people's behavior through changes in policy, institutions, or organizational structures. The informants regard social changes as being implicitly or explicitly positive and rational in relation to the common good. However, intellectual orientation is also enlightening in the sense of providing a better insight into and awareness of complex phenomena via scholarly interpretation. One professor presented the basic misconception between enlightenment and instrumental utility of the social sciences as follows:

Interaction in working groups has a discursive impact. I can also imagine a sort of ritualistic impact when we have working groups between researchers and other experts. These working groups are sort of a ritual. One must have these. It has elements of political performance when researchers encounter the public sector. As if they would exchange valuable knowledge and strategies. However, the actual impacts happen in a completely different setting. (Professor 3)

The interviewees understand research impact as being collective and indirect. They think that research impact always accumulates in relation to previous research pursuits, related research fields, and collaboration with other researchers and social sectors. They claim that impact is always based on accumulating effects in wide networks. These networks also

refer to networks between and within academic fields. This notion resembles the idea of local collectives where knowledge extends and where actors make knowledge useful by constantly reconfiguring and redefining ideas (Benneworth & Olmos-Peñuela, 2018; Miettinen et al., 2015). A few of the informants noted that a large part of social impact is the theoretical and methodological work across disciplines contributing to social science research. One professor sees poorly designed impact policies as a dangerous risk to theoretical work. The main argument is that the pathway to social impact is long, complex, and unpredictable:

The process from [social scientific] research outputs to policymaking and people's understanding is tremendously long. . . In some cases, we can trace this process. It is not an individual research project but a collective result of an academic community. And after that, there are political decisions and factors relating to people's understanding and behavior. (Professor 1)

The interviewees underline that impact cannot be limited to assessed outcomes. Several informants argued that the social sciences not only correspond to policy priorities, but they also create social movements and political agendas of their own. This notion moderately refers to the critical research traditions with emancipatory endeavors.

Research can collectively create an agenda. For example, no one was discussing the contamination of the Baltic Sea 30–40 years ago. But step by step, research has improved the discussion. This is the feature [of the impact of the social sciences] that we must mention. In the same vein, the social sciences can place topics on the agenda, for example, the equality of the education system. (Expert 4)

Several of the interviewees mentioned higher education as the most important pathway for research and how universities can have impact. They stressed that the social sciences rarely have a significant direct impact on other social sectors because knowledge dissemination is complex and understanding it happens slowly. According to them, students are the most significant group to adopt new knowledge, as it possibly shapes their understanding of society when entering working life. Education can be understood as having an enlightening impact on people's understanding and on innovation.

Because most people leave academia, one could ask them about impact since they have must have some understanding of useful knowledge. Universities educate all people in the public sector and most in the private sector. Yet somehow, the Ministry and politicians tend to think that our societal relations are poor and that now we should do something about this. (Professor 5)

The informants demonstrated varying interpretations of the research practices of the social sciences and the logic in those practices constituting the social capabilities for social impact.

A common baseline for their interpretations was that the impact of the social sciences is like its study objects: subtle cultural meanings, discourses, and the reconfiguration of problems and interpretations. It does not seem possible to separate social science research from discussion in other academic fields or social, political, and economic sectors, as it defines and reconfigures social conceptions vis-à-vis other sciences and institutions. Although their interpretations portray the conception of enlightenment and knowledge creep, their reasoning has traits of the linear problem-solving logic entangled with ideals of common good and rational development in public policy. In this regard, the representations merge several logics of knowledge utilization simultaneously from mechanistic/naturalistic ideals of research use to critical/interpretivist conceptions of knowledge and expertise in society, although the disciplinary considerations clearly emphasized the latter one. This tension considers basically what constitutes knowledge in society and how it can be used in policymaking and social life (Hansson et al., 2014).

Discussion

Thematic analysis of the interpretations of the impact of the social sciences revealed how academic experts construct various contextual meanings of research impact from governance to research practices. However, the findings from this paper indicated that academic experts constructed contextual formulations by using divergent and even polar interpretations depending on whether they wanted to underline formal accountability demands by impact policies or disciplinary aspects of knowledge processes. Weiss' (1979) categorization proved to be a useful approach for understanding the premises of conceptualizing research utilization. The analysis showed signs of conceptual dissonance of research utilization by merging traditional innovation thinking and priority of basic research with ideas of comprehensive interaction with public and private agencies. The policy documents and interviewed experts constructed a dual vocabulary between a linear problem-solving approach and a multi-leveled and multi-operational understanding of knowledge processes and impact. This investigation clarified how policy advisors and social scientists walked a tightrope between these rationales for impact governance and disciplinary understanding of social opportunities for knowledge and how they merged these accounts in contextual frames.

The study identified five frames by which the policy authors and the informants formulated their interpretations of social impact (Table 2). These frameworks were derived from two-fold accounts of research utilization (Figure 1). To a great extent, conceptualizations of impact policies derived from socio-economic legitimization of higher education. In this account, conceptualizations of impact aggregated various national political goals for social wellbeing and economic activity through knowledge governance and through

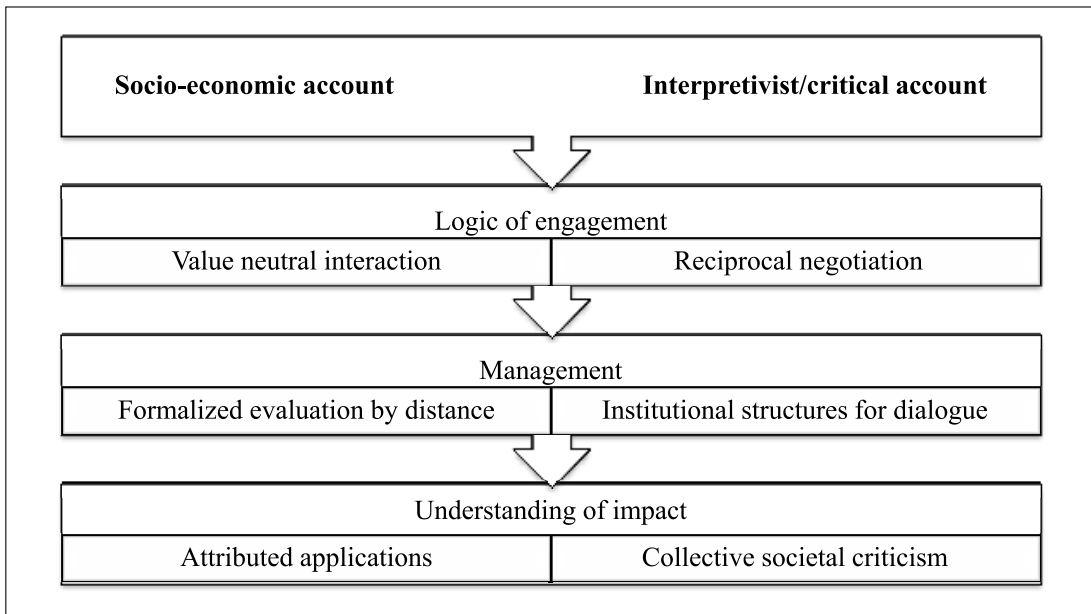


Figure 1. Accounts of research utilization.

the institutional legitimization of higher education and research funding. Impact meant the promise of positive solutions and progress by careful strategic planning under national policy interests. It resembled the linear problem-solving model but also had characteristics from the linear innovation model of academic research, which follows steps from relevant questions to applications (cf. Godin, 2006). In the socio-economic approach, the roadmap to “common wellbeing” lies in collaborations that integrate scholarly endeavors with public policy interests. Unlike the metaphor of the agora (Nowotny et al., 2001), socio-economic arrangements appeared to be bureaucratic interventions via the devolution of knowledge governance down to universities and competing research funding under the rationality of productivity. In this sense, the socio-economic account relies on the principles of new public management and formalized indicators in its strategy to organize societal knowledge processes (Hansson et al., 2014; Hicks, 2012).

The policy authors considered social science research to be useful from the perspective of sociotechnical solutions. The socio-economic rationale manifested a reasoning based on national flourish defined by economic and financial terms in like Bennenworth et al.’s (2016) notions on the economic discourse of impact. Whereas the discourse of the MEC and FINEEC has focused on aggregating conceptualizations, the actual operationalization of impact has been transferred to universities and competitive funding by criteria for impact and social relevance. The AF’s policies and operationalization have been equivocal. On the

one hand, it has been obliged to follow the socio-economic rationale by developing direct utility indicators that ideally show useful effects and outcomes. On the other hand, the AF’s Research Council for Culture and Society has promoted broader human flourishing alongside problem-oriented approaches.

Whereas socio-economic reasons drove impact policies, the informal discussions emphasized the internal struggle between socio-economic legitimation of research funding and disciplinary endeavors of the social sciences. The common theme between policy recommendations and the informants was the responsibility of the academic community to engage in the problems of societal sectors. According to the account of socio-economic legitimation, researchers are responsible for showing their engagement through audited research outcomes. Socio-economic accountability emerges as an extension of the economization of research accounts (Bozeman & Sarewitz, 2011) and internal formalization of research performance (Hansson, 2006; Hansson et al., 2014) via impact evaluation. Linear innovation and problem-solving approaches apply seamlessly in socio-economic impact rationality, in which it is preferable for societal knowledge processes to be audited. Consequently, these models seem to dominate the formal discussion on the operationalization of impact, although the new public management style of decentralized evaluation (Hicks, 2012) down to competitive funding and universities provides opportunities for divergent implementations within the interaction and pathway frameworks.

The second account from which the policy authors and the interviewed experts constructed their interpretations was the

interpretivist/critical perspective. In the policy documents, these interpretations took place when the policy authors had recommendations from social scientific perspectives. Research policy agencies have taken little notice on this account. The AF has been unable to reach any conclusive solution when operationalizing an impact criterion for accountability purposes, instead conforming to the MEC's policies. Similarly, the interviewees struggled with these two accounts when considering research guidance in public policies. This tension led to uncertainty over the formal policy conceptualizations of impact. The informants tended to rely on contradictory interpretations. The main thread of the interpretivist account was that there were misconceptions about the formalization of the impact of social science research.

From this perspective, impact assessments have overlooked the knowledge processes of the social sciences and thus are based on conceptual fallacies of governing research priorities and processes by outcome-based evaluations. The value of the social sciences and its contribution to social life is misunderstood. Benneworth et al. (2016) described this tension as a structural (and intellectual) dissonance between impact policies defined by economic terms and cultural studies focusing on human flourish. The critical account turns the operationalization of formal impact assessment upside down since it focuses on how institutional structures and organizations can support the ideas of social science research. It focuses on arranging supporting structures and dialogue to increase awareness. Benneworth and Olmos-Peñuela (2018) called this coupling of academic and user knowledge. However, in the critical account, knowledge dissemination is rarely direct. In societal change, concepts percolate and creep slowly into people's awareness (Muhonen et al., 2020). They challenge—but do not necessarily invalidate—their previous experiences and common sense. According to this understanding, social impact means the collective criticism between the social sciences and social institutions either through local engagement or through indeterminate wider networks (cf. Callon, 1994).

These polarized accounts cause uncertainty over how impact should be rationalized, operationalized, and managed. The uncertainty is due to the limitations of socio-economic vocabulary in relation to social science endeavors and the integration of these juxtaposed vocabularies in formal and informal contexts. The accounts become entangled with each other in contextually constructed frames that merge together the audit principles of new public management and disciplinary ideals of knowledge processes in society. In particular, the conceptions of interactions (collaborations) and pathways have had a significant meaning for understanding research use in impact policies within the socio-economic accountability of the higher education sector and simultaneously provided discursive space for the interpretivist paradigm. Refinements of this framework (Molas-Gallart & Tang, 2011; Muhonen et al., 2020) by social scientists have furnished the conceptions closer to the enlightenment ideals of utilization (e.g., Sigurðarson, 2020). The interpretivist assessment relies on organizational learning (Bushe, 2011;

Hansson et al., 2014). However, social scientists should be aware of these divergent accounts when justifying their intellectual endeavors because disciplinary goals could easily become displaced when attempting to defend them by a logic derived from risk management and auditing (Hansson, 2006; Power, 2008). The Finnish context shows how subtle negotiations over research utilization become a tightrope walk between juxtaposed accounts and how sophisticatedly they merge into each other, regardless of the obvious tensions.

Limitations and Future Research Directions

This study limited its inspection to representations of impact and concepts incorporated in it within a national context. Comprehension of international isomorphism of impact policies requires wider material than provided in this paper. To furnish the impact of the social sciences with deeper theoretical understandings, one should apply more sophisticated and in-depth interview methods to study long-term changes in research traditions and their relationship to social structures and politics. In addition, one should consider the differences between fields that are intertwined with natural/technical sciences and traditional social sciences. Thus, arrangements for interacting with nonacademic organizations should be considered more comprehensively than just within the framework of research impact assessment and criteria for judging social outcomes and interactions. This comprehensive understanding should guide future studies on the social opportunities of research.

Conclusion

Policy advisors and academics relied on conflicting accounts of research utilization in their interpretations of the concept of impact. They were often unaware of their contradictory vocabularies within their overall arguments. This latent disharmony between the contradictory interpretations of impact means that the divergent conceptions of research utilization were entangled each other in policy and academic discourses of impact. One way to understand this disharmony is that researchers have adopted and blended the idea of impact into their scholarly vocabularies, as it is needed to gain funding and resources. However, at the same time the concept of impact was logically alien to disciplinary thinking of research utilization causing problems in the relationship between disciplinary integrity, research evaluation and policy discourses. Greater awareness of the disciplinary integrity of research utilization in research evaluation and policies could increase the social capacity of the social sciences by helping funders and research policymakers to see the potential of social science research for public policies and social life.

Acknowledgments

I would like to thank the contribution of the interviewees, the comments of Heikki Hilamo and Risto Eräsaari, and the comments of the participants of the Totemi seminar of University of Helsinki,

particularly Petri Ylikoski. I would also like to thank the comments of Ian Dobson and Ziyu Wang. Special thanks for the reviewers of the journal.

Declaration of Conflicting Interests

The author declared the following potential conflicts of interest with respect to the research, authorship, and/or publication of this article: This project was conducted impartially without any affiliations to the parties and organizations under the investigation of the project. The funding of the project is impartial without any political associations.


Funding

The author disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This research project has received funding from Kone Foundation and financial support from the University of Helsinki. Kone Foundation is a funder of social science research, humanities and arts, which supports impartial research endeavors and venturesome ideas.

Ethical Approval

This project is not applicable to a review of the University of Helsinki Ethical Review Board in the Humanities and Social and Behavioural Sciences.

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