

# ***Rethinking Research Impact Assessment***

## **A Multidimensional Approach**

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# Rethinking Research Impact Assessment

## A Multidimensional Approach

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### Abstract

An interest in the evaluation of research impact – or the influence of scientific research beyond academia – has been observable worldwide. Several countries have introduced national research assessment systems which take into account this new element of evaluation. So far, research on this practice has focused mainly on the practicalities of the different existing policies: the definition of the term ‘research impact’, different approaches to measuring it, their relative challenges and the possible use of such evaluations. But the introduction of a new element of evaluation gives rise not only to challenges of a practical nature, but also to important ethical consequences in terms of academic identity, reflexivity, power structures, distribution of labour in terms of workloads etc. In order to address these questions and the relevant needs of researchers, in this paper we propose a multidimensional model that considers different attributes of research impact: **Responsiveness, Accessibility, Reflexivity, Ecology** and **Adaptability**. This holistic, multidimensional model of evaluation, designed particularly for self-assessment or internal assessment, recognises the qualities a project has on these different scales in a broader perspective, rather than offering a simple and single numerical evaluation. This model addresses many of the ethical dilemmas that accompany conducting impact-producing research. To exemplify the usefulness of the proposed model, the authors provide real-life research project assessment examples conducted with the use of the **Multidimensional Approach for Research Impact Assessment (MARIA Model)**.

**Keywords:** Research Impact, Research Evaluation, Self-Assessment, Research Ethics.

**JEL:** I23; I28; I29; O38; O39.

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### Table of Contents

1.	Introduction: The challenges of research impact evaluation.....	4
2.	Literature Review .....	5
3.	Context: Existing systems of research impact evaluation .....	9
3.1.	United Kingdom .....	10
3.2.	The Netherlands .....	11
3.3.	Norway .....	12
3.4.	European Union.....	13
4.	Multidimensional Approach for Research Impact Assessment (MARIA model) .....	14
4.1.	Dimensions of research impact.....	14
	<i>Responsiveness</i> .....	15
	<i>Accessibility</i> .....	16
	<i>Reflexivity</i> .....	18
	<i>Ecology</i> .....	19
	<i>Adaptability</i> .....	20
4.2.	The model in practice .....	21
5.	Self-assessment examples .....	22
6.	Discussion .....	23
7.	Conclusion .....	24
	<i>Acknowledgements</i> .....	26
8.	References .....	26
	Ex-ante research impact self-assessment example .....	35
	Mid-term research impact self-assessment example .....	36
	Ex-post research impact self-assessment example .....	37
	Poster .....	38

### **1. Introduction: The challenges of research impact evaluation**

An interest in the evaluation of research impact – or the influence of scientific research beyond academia – has been observable worldwide (Grant, Brutscher, Kirk, Butler, & Wooding, 2009; Wróblewska, 2017a, p.162). Several countries have introduced national research assessment systems which take into account this new element, such as the UK, the Netherlands, Norway, Australia (Australian Research Council, 2018), Hong Kong (Hong Kong University Grants Committee, 2018) and Japan (NIAD-QE, 2018), among others. The element of ‘impact’ is also present in the evaluation of research projects in international contexts, such as certain EU programmes, and several other countries are currently debating the possibility of introducing an impact component into their research evaluation systems. The appearance of a new element of academic evaluation has inspired much scholarship which focuses on the practicalities of the policy itself. However, this introduction gives rise to practical challenges as well as ethical consequences. More qualitatively-oriented studies and reports have pointed to impact evaluation implications in terms of academic identity and ethos, emotion, academic values, and power structures. (Bacevic, 2017; Chubb, 2017). Presently, it seems that many researchers are ill-equipped for dealing with these new and complex issues, often resulting in feelings of frustration, confusion or resentment towards the assessment exercise or impact-related activities (Chubb, Watermeyer & Wakeling, 2016).

Existing systems of evaluation seem to suffer from several shortcomings. Firstly, they mostly take a top-down approach, which does not account for the nuances of academic knowledge production. Secondly, they do not always offer a space to reflect on the ethical side of impact generation, often leaving those assessed feeling alienated. Thirdly, they do not attend to the processual nature of impact evaluations, focusing just on the final effect of research in the form of ‘change or benefit to the society’. Fourthly, they often tend towards a ‘one size fits all’ model aimed a final numerical assessment producing measurable, quantifiable scores which can later be operationalised and ranked, often for funding considerations. Fifty, they are often time-consuming and cumbersome for the assessed academic.

We believe this quantitatively-oriented, ‘numerocratic’ perspective on research assessment can result in disregarding less measurable implications of research. To account for the reality of research in its breadth and depth, evaluation systems

should recognise these qualitative features and their relative challenges. The lack of recognition of this complex nature of impact-lending science leads to an overly simplified vision of research and contributes to frustration with the exercise, which is seen as not adequately representing the reality of impactful scientific work. To address these questions and the relevant needs of researchers who conduct impactful work, as well as individuals who are in charge of research evaluation (policy-makers, academic managers), we propose a multidimensional model of research impact. A holistic model of assessment enables recognising the qualities a given project might have in different areas, rather than offering a simple numerical assessment. To address the above-mentioned issues, we propose a multidimensional approach, which 1) is created with self-assessment in mind, 2) should stimulate a reflection on the ethical aspects of achieving impact, 3) would ideally be conducted at different stages of the research project to account for the progress of work and the emergent challenges, 4) recognises the strengths of a research project in terms of impact and points to its weaknesses, rather than offering a single score, 5) is a light-touch assessment, which can be as short as one sheet of paper. Our model aims at widening the currently prevalent measurement-oriented and metrics-oriented perspective by promoting a critical and comprehensive assessment of research impact, both individually and institutionally. Through our contribution, we hope to advance the cause of building research impact literacy (Bayley & Phipps, 2017).

The model we put forward has been designed particularly with self-assessment or internal assessment in mind. We do not propose a model for assessment of research ethics, but rather a model for 'ethical assessment of research impact'. The criteria of assessment we propose are: **Responsiveness**, **Accessibility**, **Reflexivity**, **Ecology** and **Adaptability**, which we recognise as attributes of impactful research in all scientific disciplines in our **Multidimensional Approach for Research Impact Assessment (MARIA Model)**.

## 2. Literature Review

The introduction of exercises of impact evaluation can be placed in a wider perspective of changes affecting academia, and thus the topic can be related to several bodies of literature, drawing from fields as different as philosophy and sociology of science, economics and management as well as the specialised fields of science and technology studies, higher education studies, valuation and

## Rethinking Research Impact Assessment

### A Multidimensional Approach

---

evaluation studies, etc. Below, we briefly present the relevant main strands of research for the proposed model, signalling how our proposal compliments the existing literature and addresses gaps.

In a very broad context, the introduction of the impact assessment as part of national or international research evaluation systems can be perceived as part of a wider ***change affecting the position of universities and scholars in societies***. Universities have always been embedded in their local contexts while at the same time guarding their autonomy – a situation of performing ‘balancing acts’ between ‘pure’ autonomy and ‘impure’ social relevance (Hamann & Gengnagel, 2014). Against this background, individual researchers and academic environments have taken various positions towards what is now called ‘outreach and engagement’. We can recall the ‘public intellectuals’ of the post-war era (Baert, 2015), technocratic experts and entrepreneurs who put their knowledge at the service of market-oriented and governmental activities (Spiel & Strohmeier, 2012; Ritter, 2015), as well as researchers functioning in a critical capacity as activists and social engineers, questioning and subverting existing social and economic relations (Maxey, 1999; Pereira, 2016).

In recent decades, the relationship between academia and the surrounding environment has seen a transformation, partly in response to broad political and economic initiatives targeting universities’ involvement with society, such as the rise of the so-called ‘knowledge-based economy’ (Jessop, Fairclough, & Wodak, 2008) which sees the universities as strategic ‘knowledge-brokers’ (Lightowler & Knight, 2013). Hence social, political, or economic engagement, previously perceived as an additional activity to the ‘core business’ of research, became incorporated into the definition of what it means to ‘do’ science. In consequence, there has been an observable increase in the symbolic importance of applied scientific disciplines and collaborations of scholars within their social and economic environment (E3M, 2012; European Commission, 2003), often dubbed – particularly in a regional context – as the universities’ Third Mission (Brundenius & Göransson, 2011). Numerous initiatives aimed at linking universities with external partners have been launched, focusing on two areas: firstly, enhancing individual academics’ autonomy and responsibility in conducting entrepreneurial activities (for an analysis of this process in the British context see: McGettigan, 2013) and secondly, valorising the growing role of universities as business undertakings as well as instruments in national policy agendas, crucially in contributing to the national economy (Gornitzka & Maassen, 2007). The emergent tendency of requiring tangible effects of research conducted within universities can become especially

# Rethinking Research Impact Assessment

## A Multidimensional Approach

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problematic in Social Sciences and Humanities (SSH), where measurable monetary effects beyond academia, such as patents and licenses, are uncommon research outputs. In the context of a growing tension between SSH and STEM disciplines, often exacerbated by the demands of the performative, metrics-driven academy, our proposal offers a more nuanced, process-oriented evaluation model which would still preserve 'entrepreneurial' research impact, while recognizing the specific contribution and public value of SSH disciplines (Benneworth, Gulbrandsen, & Hazelkorn, 2016).

With a growing focus on incentivising university engagement, outreach and impact came **a demand to measure** such factors, much in line with the managerial approach to governing higher education institutions – sometimes dubbed 'academic capitalism' – which has been on the rise in the last few decades (Münch, 2014; Slaughter & Leslie, 1997; Slaughter & Rhoades, 2004). Numerical indicators – both 'traditional' bibliometrics and metric-based rankings (Hood & Wilson, 2001), as well as newer forms of scientometrics or alt-metrics (Priem *et al.*, 2012; Galligan & Dyas-Correia, 2013) – have been eagerly implemented by the administration of many universities, grant distributors and governments, prompting the metaphor of a growing 'metric tide' (Wilsdon *et al.*, 2015) and academic 'numerocracy' (Angermüller, 2013). At the same time an unproblematic reliance on metrics and rankings continues to be widely contested by researchers in the field of higher education and evaluation (Szadkowski, 2015) and academic communities worldwide (see for instance the DORA declaration: American Society for Cell Biology, 2012).

When reflecting on **the emergence of 'research impact' as a new academic value**, one can draw important lessons from evaluation and valuation studies. Scholars in this area have argued that new practices of valuation (for instance new sports or culinary practices) are likely to give rise to 'heterarchies' or 'plurarchies' of values, a state where several values can persist and be appreciated at the same time, rather than the often reductionist 'hierarchies', characterised by one scale (Lamont, 2012, p. 212). Given that impact evaluation is a new area of valuation, and that research impact constitutes a complex activity which can be assessed from varied perspectives (the economic, the developmental, the ethical, and the axiological, among others), we put forward our multi-dimensional model as an attempt to promote an open, multi-levelled approach to research impact recognition.

There have been valuable contributions in the literature towards a better understanding and assessment of research impact. Firstly, the context-based



## Rethinking Research Impact Assessment

### A Multidimensional Approach

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perspective of research assessment (Spaapen *et al.*, 2007) portrays a more comprehensive method for assessing the quality and relevance of scientific research, based on the relationship (mutual transactions) between researchers and their relevant environment, focusing on how “researchers manage to connect to themes in that environment, and on the ways in which this environment absorbs (‘uses’) and further develops the results of the research”. Secondly, the “productive interactions” concept (Spaapen & van Drooge, 2011) arises as an alternative for overcoming the difficulties of measuring and evaluating the social impact of research, focusing on the personal, indirect (through texts or artefacts) and financial (through money or ‘in kind’ contributions) interactions between researchers and other actors as a transparent proxy of the process from research to impact. Such a concept has been further developed, bringing more attention to the governance, evaluation and monitoring of transdisciplinary collaborations (TDCs) addressing societal challenges, as a fruitful – bottom-up or stakeholder oriented – approach for valorising socially robust knowledge (van Drooge & Spaapen, 2017). Thirdly, and in line with the approaches previously mentioned, the need for a more holistic view in the observation and monitoring of interdisciplinary research (Anzai *et al.*, 2012) has been addressed in Japan as an attempt towards research valorisation. Finally, a fairer treatment of Social Sciences, Arts and Humanities in research impact assessment (Benneworth *et al.*, 2016) has been pointed out as a necessity in the discussion on the value, impact and benefit of publicly-funded research.

There are also representative cases of research movements or projects attempting to influence research policy in Europe, specifically in terms of research impact evaluation. Since 2006 all the major science policy organizations in the Netherlands joined the project “Evaluating Research in Context” (ERiC), aimed at addressing the debate and the methodological development of research evaluation in a wider perspective that includes European and international participation (Spaapen *et al.*, 2007). ERiC project promotes a broader discussion and approach for conducting a comprehensive research evaluation in terms of societal quality and valorisation. This societal orientation of research has brought together the major organization in Dutch science policy around the need for methodological progress and (inter)national attention on this issue. With a stakeholders’ approach, the evaluation method considers the construction of a Research Embedment and Performance Profile (REPP) that provides a wider societal reference group for a scientific project (embedment) and the degree in which this project serves the interests of a wider reference group (performance), considering a context-based research impact. In analysing the possibilities of impact evaluation, it is important



to reflect on the role the proposed evaluation system will have in this wider panorama of rather tense and polarized attitudes and on how the results of evaluation may be used for managerial aims.

With the proposed approach (**MARIA model**) we do not seek to create yet another tool aimed at fine-tuning academics' performance through top-down, number-driven assessments. On the contrary, in line with a growing request for *responsible* evaluation (Hicks *et al.*, 2015), we wish to offer an alternative by arguing for a researcher-centred, multi-dimensional model of self-evaluation, which could not only offer a 'profile' of an assessed research project, but might also serve as an iterative tool for fostering ethical reflection in the new and often challenging field of generating 'research impact' (Chubb & Watermeyer, 2017). While the use of such a model might be rather limited in the framework of large performance-based research funding systems (Hicks, 2012), we argue that it could be valuable as an additional way of reflecting on the research of individuals, research teams, departments etc., in an iterative, qualitative way, in effect advancing the case for responsible, reflexive research impact.

### 3. Context: Existing systems of research impact evaluation

Creating an approach to research impact evaluation is a challenge, given that the assessment of academic work has long rested on factors internal to academia: above all the quality (or quantity) of research outputs but also the quality of graduate teaching, research environment, grant funding, international mobility of scholars etc. There certainly seems to be a tension between more qualitative and quantitative approaches to impact evaluation (Donovan, 2017) and depending on the strategic goals handed down to education by the government, academic traditions, prevailing political options, and often several contingent factors (Wróblewska, 2018) impact evaluation strategies vary greatly from country to country.

Below we present the most important points of reference for research impact evaluation. While research agencies in several countries have introduced elements of impact evaluation, particularly in the areas of technology, engineering and medicine (Buxton & Hanney, 1996; Canadian Academy of Health Sciences, 2009), we focus here particularly on the examples of the UK, Netherlands and Norway as the systems which take a most comprehensive approach in assessing impact across all the disciplines according to the same criteria. Apart from the approaches implemented by particular states or organizations there exist various frameworks

put forward by scholars. In this context, the most influential and noteworthy, also for our own proposal, is that of “productive interactions” (Spaapen & van Drooge, 2011) which advocates a process-oriented approach to impact valuation, in line with the approaches of context-based assessment (Spaapen *et al.*, 2007) and TDC’s (van Drooge & Spaapen, 2017) introduced in the previous section. Such approaches valorise the pathway from research to practice (impact), transcending the focus on research outputs themselves by considering the different sources and expressions of impact during the whole research process.

### 3.1. United Kingdom

UK’s Research Excellence Framework (REF) with its Impact Agenda is perhaps the most well-known and influential system of impact evaluation (Khazragui & Hudson, 2015), and surely the first to implement impact evaluation on such a large scale and with a rigorous methodology. The REF was introduced in 2014 to replace the Research Assessment Exercise (RAE) which, since its introduction in the 80s, had grown into a cumbersome, time-consuming exercise. The debate which proceeded the introduction of the REF neatly illustrates the tension between qualitative (peer-review-based) and quantitative (metrics-based) approaches, which we have pointed to above. The REF was initially conceived as a light-touch, metrics-lead exercise which would reduce the burden to assessed departments, while providing evidence as to the return on the government’s investment in science. However, this concept was abandoned after the failure of the pilot of the metrics-based approach (HEFCE, 2009) and the Impact Agenda was put forward as a replacement for metrics (Sayer, 2015). In its final shape, the REF, run by the British research councils every 5-6 years (the first edition took place in 2014 and the following one was announced for 2021), includes ‘impact’ as one of the three assessed elements, alongside outputs and environment. Impact is defined as “an effect on, change or benefit to the economy, society, culture, public policy or services, health, the environment or quality of life, beyond academia”, assessed on its ‘reach’ and ‘significance’ and accounts for 20% (in 2014) or 25% (in 2021) of the final result of the assessed unit (HEFCE, 2016). Expert panels evaluate impact in a process of peer review based on ‘impact case studies’ submitted by university departments, but the results are only published in an aggregated manner, i.e. for entire submissions, not for individual case studies.

The REF has been instrumental in increasing awareness of research impact in the UK (Donovan, 2017) and beyond, indeed becoming the model for impact

evaluation in other countries such as Sweden, Norway or Poland (Wróblewska, 2017b). Advantages of the system include being based on and accompanied by several thorough commissioned reports (King's College London and Digital Science, 2015; Manville *et al.*, 2015; Manville *et al.*, 2014), the use of a broad definition of impact, which is likely to be broadened still (Stern, 2016) and the accessibility of both impact case studies and (aggregated) results of the evaluation through online resources. Weaknesses of the REF approach to impact, in our view, include a focus on the 'effects' of impact-related activities, rather than on the processual aspect and intermediate consequences thereof – as advocated by the productive interactions approach (Spaapen & van Drooge, 2011). Furthermore, the impact case study template did not encourage a reflection on the ethical aspect of impact generation, while the performance-oriented character of the evaluation, as well the onus placed on the results lead academics to present often unrealistic, idealized and exaggerated accounts of impact (Derrick, 2018; Wróblewska, 2018). These are all shortcomings which we wish to address with our multi-dimensional model.

### 3.2. The Netherlands

The Standard Evaluation Protocol (SEP) – a system of research evaluation adopted by the Association of Universities in the Netherlands (VSNU), the Netherlands Organisation of Scientific Research (NWO) and the Royal Academy of Arts and Sciences (KNAW) in 2015 – incorporates “relevance to society” as one of the evaluation criteria (alongside research quality and viability. “Relevance to society” is defined as “contributions to economic, social and cultural groups and to public debate” (VSNU, NWO & KNAW, 2016, p. 7). Research conducted in Dutch higher education institutions is evaluated by external assessment committees for each unit or institute once every six years on a rolling schedule. This assessment concerns the research that the unit has conducted in the evaluated period as well as the strategy the unit will pursue in the next period. Each research unit conducts a self-assessment and provides additional documents (including a report of indicators and SWOT and benchmarking analyses), which are considered, together with interviews by the unit's representatives, the external committee, basing its judgment on international trends and developments in science and society. The exercise concludes with a report in which the external committee offers an assessment both in text (qualitative) and in four possible quantitative categories (excellent, very good, good and unsatisfactory), accompanied by recommendations for the future. PhD programmes, research integrity and diversity are also considered in

the assessment. The assessment report, together with a response position document by the university are published in the end.

ERiC Project, referred previously, has targeted some of the possible flaws of the Dutch SEP, which, similar to the REF, ignores to some extent the processual nature and intermediate achievements of research activity. A “one size fits all” model groups diverse research to be assessed within the same basket – or research unit – and by the same committee can ignore the variety of interactions among researchers, their environment and other stakeholders, which are valuable sources of impact. Additionally, the scale ‘unsatisfactory-good-very good- excellent’ may neglect a number of moderate – but still relevant – impact studies.

### **3.3. Norway**

The Research Council of Norway has introduced an element of assessment very closely modelled on the British REF in its cyclical evaluation of scientific disciplines. The first disciplines to be evaluated in terms of impact were the Humanities in 2015-2017 (Research Council of Norway, 2017, pp. 36-37), followed by the Social Sciences in 2017-2018 (Research Council of Norway, 2018). The Norwegian evaluation adopted the definition of impact, the peer-review approach and indeed the impact case study template from the REF, hence it might inherit some of the REF weaknesses portrayed in section 3.1. The Norwegian approach differs from the British model in that it is not tied to distribution of funding and, at least in the case of the exercises carried out to date, the exact scores attributed to impact cases were not made public, even in an aggregated manner. Instead descriptive feedback was given on the overall ‘impact culture’ of a submitting faculty, in some cases referring to individual cases fields (e.g. for the Humanities see Research Council of Norway, 2017, p. 36-41). While this choice promotes a more light-touch approach to impact, without generating excessive anxiety about the exercise, it may be less conducive to improvement in the area of impact creation. Furthermore, the subject-specific evaluations carried out by the Research Council of Norway can either tangle or neglect the assessment of transdisciplinary research, affecting the valorisation of ‘productive interactions’ and transdisciplinary collaborations, relevant aspects of research impact introduced in section 2 (but note that submissions could point out an additional, secondary panel for references).

#### 3.4. European Union

Horizon 2020, the EU's research and innovation framework programme, include *ex ante* and *ex post* assessments of research and innovation projects, where impact on regions is a relevant criterion. Applications for funding in the EU's research and innovation programme (Horizon 2020 until 2020, and Horizon Europe in the next budgetary period) sets some expected impacts at individual, institutional and systemic levels. Marie Skłodowska-Curie actions, for instance, assess impact, together with excellence and implementation, as criteria for awarding funding. Impact assessment, with a weight of 30% (2017 call), considers the impact on researchers' future career as well as the strengthening of human resources regionally, nationally and internationally. It also considers and promotes transdisciplinary collaborations between academic and regional partners, as well as the communication and dissemination of research in society. Additionally, and beyond H2020, the EU supports projects related to research and innovation with societal impacts through Cohesion Policy (CP) and its Research and Innovation Strategies for Smart Specialisation (RIS3). CP is the core of EU's strategy for territorial development of regions, especially less favoured regions (European Commission, 2014). The impact criterion has entered the research assessment exercises conducted by the European Commission in order to fund and monitor research projects. There is a whole range of types of projects and funding calls tackling different aspects and themes in society, encouraging collaborations between academic and non-academic regional partners. The EU is covering different expressions of research impact through their variety of funded programmes, for which the assessment protocols vary too. However, there seems to be a wider focus on ex-ante assessments for allocating funds, and the tracking of research impact at the research projects implementation might not be receiving enough attention.

Other countries in which impact has been introduced somehow in the research assessment exercise include:

- **Australia:** Engagement and impact assessment (EI) in the framework of Excellence in Research Australia (ERA) (Australian Research Council, 2018).
- **Canada:** Payback System (Buxton & Hanney, 1996; Canadian Academy of Health Sciences, 2009).
- **Hong Kong:** Research Assessment Exercise 2020 (Hong Kong University Grants Committee, 2018)

- **Sweden:** Swedish Agency for Innovation Systems (VINNOVA) (Jacob, 2006; Lundequist & Waxell, 2010).
- **Japan:** National Institution for Academic Degrees and Quality Enhancement of Higher Education (NIAD-QE, 2018).

In addition to the above, also some research institutions have introduced their own approaches to research impact evaluation (for an overview of approaches taken by three European research institutes see: Gulbrandsen & Sivertsen, 2018, pp. 36-42).

Peer-reviewing seems to be the most common methodology for assessing the societal impacts of research, especially in *ex ante* assessments (Holbrook & Frodeman, 2011), which puts in evidence the importance of qualitative consideration in exercises of research impact assessment. Nevertheless, the different assessment systems described above ignore -to different extents- the multidimensional nature of research impact and do not pay sufficient attention to certain attributes of impactful research, which this paper takes charge of in the model described in the next section.

#### 4. Multidimensional Approach for Research Impact Assessment (MARIA model)

Given the increasing pressure on considering research impact when assessing research activity, it is important to put forward systems which achieve this in broader and accurate way, going beyond (but without dismissing) the measurable effects of research. In alignment with 1) the context-based perspective of research assessment (Spaapen *et al.*, 2007), 2) the transdisciplinary collaborations and “productive interactions” concepts in research evaluation and monitoring (Spaapen & van Drooge, 2011; van Drooge & Spaapen, 2017), 3) the need for a more holistic view in the observation and monitoring of interdisciplinary research (Anzai *et al.*, 2012), and 4) the need for a fairer treatment of Social Sciences, Arts and Humanities in research impact assessment (Benneworth *et al.*, 2016), this paper is an effort for joining and contributing to the ongoing learning process in research impact agenda, by proposing a multidimensional and flexible approach towards this issue. The **MARIA model** is described in this section.

##### 4.1. Dimensions of research impact

We propose a model which indicates six main dimensions of impactful research. These dimensions are attributes of research which may be considered in the assessment process of any research project at any stage: *ex ante*, mid-term and



*ex post*. The order in which these dimensions are presented does not represent their relevance or weighting within the model. This model is specifically designed with self-assessment in mind. We believe carrying out such exercise would be useful for scholars wanting to reflect on the 'impact' aspect of their work in considering the advantages and possible drawbacks, as indeed it has been for us (see section 5).

### Responsiveness

"Authentic thinking, thinking that is concerned about reality, does not take place in ivory tower isolation, but only in communication"

**Paolo Freire (2000)**

Impactful research should be **responsive** to real problems and issues in society. The isolation of academia from society leads to research which is not rooted in real-world challenges. Hence, research should target societal needs and face these problems in dialogue with affected stakeholders. Following Owen's *et al.* (2012) idea of policy responsiveness, impactful research should aim at: 1) anticipation, foreseeing topics and issues worth studying for their importance in society's future, 2) reflection, considering the real problem instead of what audiences want to hear or read about, and 3) deliberation, planning conscientious actions to respond to real needs through research. All three of these issues can be summarized in the concept of dialogue and external mediation, which have a critical role to play, especially in an academic environment, where internal thought processes are often prioritized over external responsiveness. Paolo Freire, in *Pedagogy of the Oppressed*, takes this one step further in discussing the importance of dialogic education as a way to create meaningful, equitable, and transformative educational experiences (Freire 2000); we extend this paradigm to research practice, by positioning responsiveness as the main requirement for dialogic research.

Impactful responsive research should be realistically **ambitious** too, by aspiring to make clear, specific and valuable contributions to current public debates and/or to the resolution of needs in society and industry. Ambitious research tackles issues at different levels in terms of geography, disciplines or actors, among others. The pursuit of ambitious research can take place in different ways: by engaging with global or long-term issues, involving stakeholders more integrally, embracing interdisciplinary, implementing collaboration with actors outside academia (e.g. industry, citizens), and in general, performing actions to generate a greater impact. Research should be ambitious and open-minded



while remaining realistic and testable. Responsiveness, as a dimension of impactful research, must contribute to achieving Responsible Research and Innovation (RRI). Therefore, responsive research should also be **responsible** “in the context of research and innovation as collective activities with uncertain and unpredictable consequences” (Owen *et al.*, 2012). *Ex ante*, mid-term and *ex post* assessments of research responsiveness can revise how the researchers argue, consider or take care of current needs and/or real problems in society and how this is – planned to be – achieved.

**Responsiveness example:** The body of knowledge on environmental sustainability and clean energies responds to the global warming and pollution problem that threatens society and which has been on the increase during the last two decades (Ostrom, 2009); this growing research stream is responsive to a relevant issue in current society. The environmental problem that society faces has been studied by several researchers from different disciplines within natural sciences and engineering but also within social sciences and humanities, trying to contribute to the understanding and solution of global warming and pollution generation from different bodies of knowledge and with different perspectives.

### Accessibility

“Making research results more accessible to all societal actors contributes to better and more efficient science, and to innovation in the public and private sectors”

**European Commission (2018)**

Impactful research should be **accessible** to stakeholders and society in general, within the limits of feasibility. This includes its communication and dissemination both within and outside the academy, ideally allowing all stakeholders to access and engage in the research. Accessibility among the general public is also important but may be limited, depending on research scope. The dimension of accessibility assesses how the research is planned to involve or be communicated to academic and non-academic stakeholders and the general public (*ex-ante* assessment) and how it ends up involving or being effectively communicated to both groups (*ex-post* assessment).

One example of accessibility includes public academics. Using Michael Burawoy’s definition, public academics are communicative in knowledge production, derive legitimacy from their relevance, are held accountable by the designated publics they interact with, and engage in public political dialogue (Burawoy, 2004). However, the challenge of being a public academic is to also

## Rethinking Research Impact Assessment

### A Multidimensional Approach

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ensure that research is reliable and consistent with all ethical standards. The recent case of Brian Wansink at Cornell University illustrates the damage that can be done when accessibility is valued too heavily. Wansink led the prestigious Cornell Food and Brand Lab, which was known for its revolutionary and highly accessible studies on the intersection of food consumption and psychology. This research lab regularly grabbed newspaper headlines in the United States with easily reportable headlines, mostly focused on ways humans can be psychologically queued to eat more or less food. These findings were regularly reported in magazines, newspapers, on the Food and Brand lab's website, and in Wansink's mass market paperback books. However in 2017, four early career researchers poured through Wansink's publications and created the Wansink Dossier: a list of over 50 publications with "minor to very serious issues" (Zee, 2017) that eventually resulted in an investigative journalist report (Lee, 2018) and Wansink's eventual resignation from Cornell for data manipulation and tampering (Rosenberg & Wong, 2018). His case makes clear how an extreme drive for accessibility while neglecting ethical standards can significantly damage research aims. For this reason, our overall model is holistic and includes other elements of research impact.

Accessibility may also link to the **Open Science** movement, a "movement to make scientific research and data accessible to all" (UNESCO, n.d.). This movement has most recently been typified by *The Amsterdam Call for Action on Open Science* which calls for open access for scientific publications, data sharing and reuse, alignment of best practices and policies, and, most notably, "new assessment, reward, and evaluation systems" (Ministry of Education, Culture, and Science, 2016). Accessibility refers to this type of focus, which does not just encourage openness in research communication/dissemination but proactively pursues it.

**Accessibility example:** *Why We Post – Social Media through the Eyes of the World* is a collaborative effort from nine anthropologists "researching the role of social media in people's everyday lives". (University College London, n.d.) The most extraordinary part of their research was how they communicated findings. The researchers created multiple free eBooks, made an entirely free MOOC online course through FutureLearn, kept a blog throughout the course of the research, had social media presences on Facebook, Twitter, and YouTube, and created a thoroughly interactive website with simplified discoveries, stories, videos, and interactive maps. This is in addition to the book chapters and journal articles published. Furthermore, *Why We Post* also ensured that these

materials were accessible in the languages of the countries where they conducted research, ensuring translation in English, Portuguese, Spanish, Italian, Turkish, Chinese, Tamil, and Hindi. Why We Post is an extreme but also important example of accessibility.

### Reflexivity

"Train PhD students to be *thinkers* not just specialists...  
put the philosophy back into the doctorate of philosophy"

**Gundula Bosch (2018)**

Most of the people who conduct research in academia are PhD students or graduates. In this sense, it is important to remember that PhD stands for Doctor of Philosophy, and beyond being experts or specialists in a given field, researchers should be, by definition, thinkers and theorizers (Bosch, 2018). To this end, reflexivity is concerned with **critical reflection**. In this dimension, the researcher may ask: 'has the process of theorizing and research design been comprehensive, well-planned, ethical, and critical?', 'have the research theories and conclusions been thoroughly broken down, evaluated, and critiqued?'. Impactful research should incorporate conscious and deep reasoning on the conducted research's objective, methodology and results, in order to understand how it contributes to certain body of scientific knowledge and to public debates. In this sense, the building of theory and analysis of research results is especially relevant for understanding the gap between intention and what has really been achieved (implications) in the conducted research.

While analysis and reflection are important, there is also a need to reflect critically. Brookfield (2000) points out that critical reflection involves a power analysis of the situation or context. This type of reflexivity is necessary from an ethical and even ecological perspective, to ensure that the research itself is not contributing to inequality. While critical reflection is important, it is also necessary to then act upon that reflection, not treating it simply as an academic exercise but one which encourages true change in the research design and otherwise. Critical reflection without social action can be seen as a "self-indulgent form of speculation that makes no real differences" (Cranton, 2006). This leads research impact back to the external focus of responsiveness, the first dimension in this model. Research activity can be critical and reflexive without diminishing its scientific value.

**Reflexivity examples:** Within the paper "Designs and (Co)Incidents: Cultures of Scholarship and Public Policy on Foreigners/Minorities in the Netherlands"

(Essed & Nimako, 2006), the authors argue for an increased level of reflexivity on Race Critical Perspectives in the Dutch academic community. They contend that these frameworks on race and power hierarchies have been disregarded in favour of what they term 'minority research'. Due this focus on ethnic minorities, an institutional culture of problematisation of the 'other' has developed. This example of meta-analysis is most prevalent within Critical Theory perspectives but can be incorporated into any discipline.

### Ecology

"What can be studied is always a relationship or an infinite regress of relationships. Never a 'thing'"

**Gregory Bateson (2000)**

We believe impactful research should be **ecological**, not only in its environmental conception, but also socially, culturally and economically (Scoones, 1999). An ecological approach to research is a **holistic** and **intersectional** one that considers and is aware of the relationships among different types of agents in the research activity, in the pathway from research to practice and in the implications of research themselves. In terms of impact, ecological research should consider not just the possible benefits for the affected community, but also the possible *disadvantages* which they may suffer in a short and long run. In a broader perspective, ecological research would favour a holistic orientation, which Deshler & Selener (1991) see as one of the primary indicators that the conducted research will be transformative or have impact. While researchers are often encouraged to focus on the micro or minutiae of a topic, a larger understanding of the overall research landscape in a particular field and of the interconnectivity among academic disciplines is essential for research to be deemed 'ecological'.

An ecological mind-set in research should also encourage **collegiality**, bearing in mind its effect on researchers and research stakeholders. Being collegial refers to being open to other researchers, supporting more junior colleagues, treating people in a non-instrumental way, and in general, considering the well-being of others, enabling and strengthening "learning on the job" (Little, 1982) for academics at universities. In this sense, we think that impactful research should support the position of the field and its impact on external communities, and ideally it should encourage and/or be the result of collaborative work.

Finally, the concept of ecological impact may refer to the position of outreach and dissemination in the researcher's own career plan and broader life perspective. We see increasingly how academic activities aimed at complying with governmental policies or preparation to evaluation exercises takes away valuable time from research itself. This can lead to impact activities becoming 'instrumental' – i.e. the impact itself is secondary to the advantage it generates in terms of research funding, assessment scores etc. Therefore, it is always worth reflecting on whether the paperwork connected to documenting impact is not driving us away from the 'core business' of academic work and if it is not affecting in a negative way our relationships with the stakeholders.

**Ecology example:** An impact case study submitted to the British REF (CS1698, Electropalatography (EPG) to Support Speech Pathology Assessment, Diagnosis and Intervention, Queen Margaret University) described a situation in which scholars working on a speech therapy device had too many volunteers for the experimental treatment. In order not to disappoint potential patients who would have to be turned away, the scholars decided not to publicize the experimental treatment at the current stage, despite the fact that this could limit their 'claim to impact', possibly resulting in a lower score in the REF evaluation (Wróblewska, 2018). This illustrates how dimensions which are not accounted for in existing models of evaluation can be reflected in the multidimensional model we propose.

### Adaptability

"Being open to the possibility that our understanding or definition of a research problem may be inappropriate or partial"

**Maureen G. Reed & Evelyn J. Peters (2014)**

We argue that impactful research is **adaptable** to different contexts and stakeholders. This dimension of research impact refers to the usability of the different research components, such as methods and data, in further studies or across different samples (Hill *et al.*, 1997), looking for possibilities for research impact. In view of the permanent development of research infrastructures (Ribes & Polk, 2014), together with the evolution of research objects and researchers themselves, there is a need for research activity to be more **adaptive** and **resilient**. Adaptive and resilient research methods "embrace the uncertainty and partiality of knowledge creation as well as the dynamism of the research process" (Reed & Peters, 2014). Accordingly, research resilience should

be understood as its ability to absorb perturbations (anticipation) and adapt to change (plan for change), in line with the **responsiveness** dimension. Adaptable research must take care of recording and reporting methods and data appropriately (Mesirov, 2010). Potential for adaptations of research can be assessed 1) *ex ante*, by ascertaining how the thesis, hypothesis, methods and analysis meant to be used have the potential to be applied in different contexts and how data and methods are planned to be tracked and recorded, and 2) *ex post*, by revising executed or planned adaptations of the research, and watching the accuracy in the track and record of extant data and methods.

The adaptability of research can be purposeful and serviceable, as it allows keeping research relevant and strengthening research-policy dialogue in the face of the changing needs of decision-makers in different scenarios. Impactful research can be reused or adapted in numerous occasions, achieving various impacts, or it can bring questions that must be answered several times in different contexts, with different stakeholders, serving different audiences. Consequently, we think that impactful research should be clear about its limitations, potential future research opportunities (including adaptations/reproductions) and unanswered or emerging questions that can lead to further research impact elsewhere. Impactful research can be stimulating both in the questions it answers and in the new questions it rises.

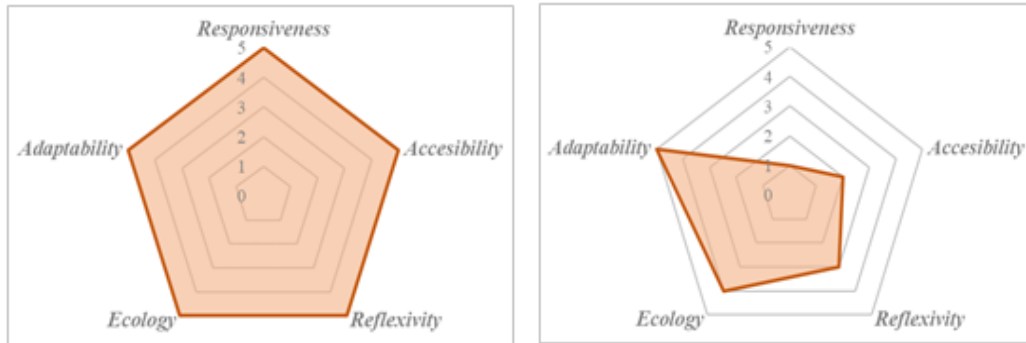
**Adaptability example:** The *Blue Ocean Strategy*, formulated by Kim & Mauborgne (2004), is a marketing theory that transcended academy and has been followed by many firms and entrepreneurs around the world. Such strategy proposes, in general terms, that firms aiming at developing strong competitive advantages should look for unexploited market spaces, avoiding competition and focusing on new innovative applications that generate new customers. This work has also inspired many research pieces including empirical applications or studies and further theoretical developments on organisational strategy.

## 4.2. The model in practice

The MARIA model which we put forward here is primarily designed for qualitative self-assessment by researchers. While this paper discusses other types of national assessment models, it is important to note that this proposal is not meant to be used by third parties, specifically in relation to funding decisions. While qualitative assessment is important, for a simpler visualization to assist researchers, these dimensions can be operationalised, and the

assessment quantified if necessary. Again, the meaning of these numerical values can and should be assigned in a way that is most meaningful to the individual researcher. Hence, we have not provided any recommendations for scale meaning, beyond the basic focus on a numerical (1-5) scale. Having looked at the different research impact dimensions separately, any research can be represented through a pentagonal figure – the “MARIA pentagon” - showing the grades given to the research in the different dimensions, as exemplified in **Figure 1**. Note that a similar radar representation has been used in the Impact assessment of the French National Institute for Agricultural Research (INRA, 2018), although there it represented different areas of impact (e.g. health, economy etc.).

**Figure 1 – MARIA Pentagon**



The MARIA pentagon of the left represents a hypothetical situation in which the self-assessed research is totally successful in all its dimensions, while the pentagon of the right represents a research assessment that goes in an ascending clockwise order from Responsiveness. The next section provides real examples of self-assessments using the model.

## 5. Self-assessment examples

We as authors of the MARIA model have put under consideration our own PhD projects using the self-assessment sheets found in this paper’s [Annex](#). *Ex ante* (dissertation in formulation), mid-term (dissertation in progress) and *ex post* (dissertation finalised) research impact self-assessments were conducted by Bradley Good (2018), Sergio Manrique (2018) and Marta N. Wróblewska (2018) respectively.



## 6. Discussion

Each author of a self-assessment has offered an outline on the experience using the MARIA model to assess research impact:

- **Bradley Good:** “Last year I underwent a major funding application with the Irish Research Council which contained elements of research impact and encouraged me to reflect on this issue. However, the treatment of this aspect seemed cursory and primarily focused on narrative utilization rather than a systematic treatment of this issue. I found that utilizing this more concrete approach gave my research planning additional focus and provided easily understandable ways that I could improve my project. Specifically, accessibility was lower than I would have anticipated, which now provides me with extra incentive to do more outreach and promote my research publicly. This exercise was incredibly helpful, and I plan to incorporate my self-assessment as an official part of my PhD eight-month proposal”.
- **Sergio Manrique:** “I had been exposed to assessment exercises at project/institutional levels, but those really didn’t allow me to reflect on my individual research impact. This exercise has brought issues I was not really aware of and might route my future actions towards developing the dimensions that can boost the impact of my research on my stakeholders but also on the general public. This self-assessment has also allowed me to realise that research impact isn’t achieved only through the research outputs themselves (publications, reports, patents, etc.), as impact can be generated by taking actions during the research process itself, actions that slip pass in the day-to-day of a researcher”.
- **Marta Wróblewska:** “In theory, every researcher wants to produce research which is reflexive, accessible, adaptable etc., but we rarely take the time to actually evaluate what we have done so far. This is also due to the continuous nature of scientific work: there is always that one more article to write, one more seminar to get to, one more dissemination activity before we can ‘wrap up’ and evaluate our current project. In this sense, approaching the self-assessment was an incentive to take a step back and reflect on what has been achieved and what still requires work. The most interesting discovery for me would have to do with the ‘serendipity’ of impact – the areas where my research has been influential are not necessarily the ones where I planned to have impact”.

Overall, we found that the utilization of our model to be simple and effective, with enough data visualized for researchers to know where to improve while keeping

the process unencumbered by lengthy narrative or complex metrics. With this initial 'field test' a success, our next step is to acquire feedback and continue to improve our operationalization, eventually distributing and testing it within a broader demographic of SSH researchers.

Future research opportunities within this paradigm are abundant but of primary importance are the consideration of additional research impact dimensions, exploring links and correlations between these dimensions, studying the operationalization of this model in different contexts, and identifying potential discipline-specific weighting configurations. In addition, other possibilities include refining specific dimensional indicators, providing further comparison to national systems of evaluations, and examining any differences in use and user experience between STEM and SSH researchers. The usability and usefulness of the model would ideally be tested empirically, for instance within one department or research project over a period of time – the authors intend to pursue opportunities of carrying out such a case study. Regardless, one must bear in mind that this model is in the theoretical stages of development, primarily utilized for self-assessment rather than an institutional focus. It might however be implemented as part of internal assessments (one of the authors of this study intends to implement it in this way – see above) and included as a supplementary document, even in more qualitative exercises (to account for the ethical dimension of impact. As mentioned before, this model proposal is a suggestion for broadening the debate on the existent research assessment systems and how these should be enhanced, tasks in which more insights and theoretical and empirical contributions are needed.

## 7. Conclusion

The inclusion of research impact criterion within the research assessment exercise in several national systems represents a relevant development in the valuation of research activity. However, the assessment and measurement of research impact is an ongoing process. A heavy focus on quantitative assessment, specifically for funding and allocation of other opportunities, can lead to a neglect of important qualitative factors. To provide an accurate depiction of research impact, recognition and understanding of these attributes must be encouraged. To this end, this research paper proposes and explains a ***Multidimensional Approach for Research Impact Assessment (MARIA Model)***, highlighting five impactful attributes of research: ***Responsiveness, Accessibility, Reflexivity, Ecology, and Adaptability***. These dimensions are presented as attributes of impactful research conducted in any area or discipline; however, this multidimensional model explicitly

## Rethinking Research Impact Assessment

### A Multidimensional Approach

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looks for a fairer treatment of Social Sciences and Humanities in the assessment of research impact. The operationalization of this multidimensional model has also been explained. To this end, a set of scales is proposed for self-assessing each of the dimensions, and a tool suggested to represent the general impact of a research: The **MARIA Pentagon**, which could be useful in collective exercises of research assessment where rankings and thresholds are required. Rather than suggesting a fixed model for research impact assessment, this paper aims at evidencing the existence of further impactful attributes that the research impact agenda might have been neglecting. The assessment of research impact can't avoid the qualitative implications of science, as reducing research value to its measurable effects would not be coherent with the nature of research practice, and therefore it would be recommendable to consider a broader perspective in the assessment exercise, like the one proposed in this work.

While there are several developed systems for external assessment of impact, we believe that what is lacking in the panorama of research evaluation is 1) a framework to systematically reflect on the impact of one's own work (self-assessment) 2) a multi-levelled model which recognizes the complexity of any impactful work, 3) a model which explicitly recognizes the ethical aspect of conducting impactful research and offers a clear framework for reflection on these issues. The model we propose aims to address the above-mentioned gaps. Finally, our model takes into account the serendipitous nature of research impact generation (Derrick & Samuel, 2016). It could be argued that a research project could fare very highly in the MARIA model scale, without actually realizing a 'change or benefit' to society (as the REF definition of impact has it), for instance due to lack of uptake of a potentially impactful innovation, lack of financing for implementation or many other factors which are beyond the academics' control. While this is a real possibility, we would stress that the MARIA model looks at the *process* of generating impact, rather than the final effects thereof. We would argue that a project which takes into account the five dimensions is very likely to produce research impact, doing so in a sustainable, and ethically-aware way.

Our proposal contributes to the ongoing learning process of research impact, in alignment with the context-based perspective of research assessment (Spaapen *et al.*, 2007) and in recognition of the need for a more holistic view in the observation and monitoring of interdisciplinary research (Anzai *et al.*, 2012). Rather than suggesting a fixed model for research impact assessment, this paper aims at evidencing the existence of additional aspects of conducting impactful research that existing research assessment systems do not fully recognise or represent.

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# Rethinking Research Impact Assessment

## A Multidimensional Approach

### Ex-ante research impact self-assessment example (Good, 2018)

#### Responsiveness

**Does my research respond to real problems and needs in society? Am I contributing to current public debates?**

Racism in the Netherlands is an under-researched topic within a race and diversity critical perspective. Also, literature on the pedagogical applications of transformative learning remains limited.

**Grade:** 5.0/5.0

#### Accessibility

**Are my research outputs accessible to different stakeholders and society in general? Do I communicate and disseminate them broadly and effectively?**

My research outputs will primarily exist in the form of journal articles and potential policy documents with direct access available to all participating stakeholders.

**Grade:** 2.0/5.0

#### Reflexivity

**Do I reflect on how comprehensive, well-planned, ethical and critical my research is? Have I evaluated and critiqued my theories and analyses?**

I regularly revise and update my research plan in accordance with new literature and theories. My analysis itself is based on a theoretical frame that encourages deconstruction and critical analysis.

**Grade:** 4.0/5.0

#### Ecology

**Does my research consider the relationships and connections among stakeholders and subjects? Was I collegial while conducting this research?**

My research subjects are also some of my most important stakeholders as improving their educational opportunities benefits them, as well as their instructors and institutions.

**Grade:** 3.0/5.0

#### Adaptability

**Is my research impact usable in different contexts and among different stakeholders? Am I aware of the limitations, and unanswered or emerging questions from my research?**

While my research focuses on a Dutch context, it could be adaptable to other higher education cultures in the future but only after multiple studies. This is due to the limited sample size and time constraints.

**Grade:** 3.0/5.0

#### Research Description

**Title:** Teaching critical perspectives – The transformative learning potential of diversity courses within Dutch higher education.

**Type:** PhD thesis.

**Dates:** September 2018 – Present.

**Objective:** Studying to what degree diversity education courses in The Netherlands successfully meet course objectives, incorporate critical perspectives, and reduce racist behaviours while encouraging further exploration of these issues beyond the classroom.

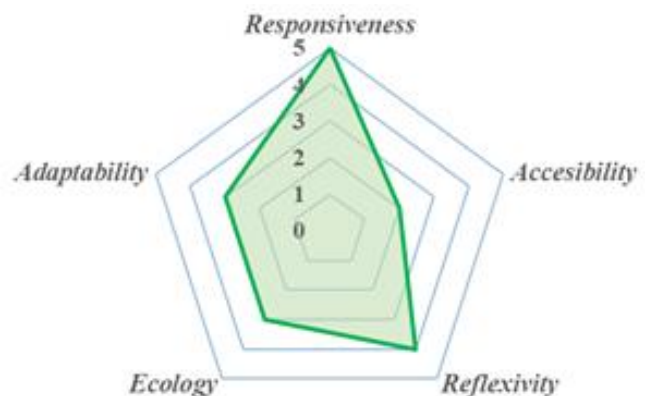
**Author:** Bradley Good.

**Institution:** Vrije Universiteit Amsterdam (NL).

**Status:** Formulation.

#### Self-Assessment Conclusions

##### Research Impact Pentagon



##### Assessment Conclusions

Overall my research seems to be successfully planned for moderate research impact. However, accessibility could greatly improve, with a secondary emphasis on ecology. While adaptability does not have a high score, this is primarily due to the limited scope of research, which is unavoidable.



# Rethinking Research Impact Assessment

## A Multidimensional Approach

### Mid-term research impact self-assessment example (Manrique, 2018)

#### Responsiveness

**Does my research respond to real problems and needs in society? Am I contributing to current public debates?**

University-firm collaboration can be a powerful tool for the performance of firms and for the development of regions, which can indirectly end up benefitting citizens. However, my research is primarily focused on the economic impact on industry.

**Grade:** 4.0/5.0

#### Accessibility

**Are my research outputs accessible to different stakeholders and society in general? Do I communicate and disseminate them broadly and effectively?**

Research in my project is meant to be published in Open Access outlets. I am active in attending conferences and workshops to communicate and disseminate my findings. Work in progress and other research outputs (blog posts, reports) are publicly available at the project website.

**Grade:** 4.5/5.0

#### Reflexivity

**Do I reflect on how comprehensive, well-planned, ethical and critical my research is? Have I evaluated and critiqued my theories and analyses?**

PhD topics within this Horizon 2020 project were mostly fixed. I have, however, spent a significant amount of time planning the methods and data I should use. In the end, I incorporated a qualitative approach to a project which was planned to be quantitative, and now I am conducting mixed methods research.

**Grade:** 1.5/5.0

#### Ecology

**Does my research consider the relationships and connections among stakeholders and subjects? Was I collegial while conducting this research?**

I make part of a team of junior and senior researchers as well as regional and non-academic partners. My project is one piece in the larger RUNIN proposal.

**Grade:** 3.0/5.0

#### Adaptability

**Is my research impact usable in different contexts and among different stakeholders? Am I aware of the limitations, and unanswered or emerging questions from my research?**

What I am doing using Spanish data can be readapted using data from other countries and regions, and for phenomena beyond university-firm collaboration. I always state research limitations in my publications.

**Grade:** 3.0/5.0

#### Research Description

**Title:** Assessing the impact of university-firm collaboration on firm performance and regional development (part of a horizon 2020 training network).

**Type:** PhD thesis.

**Dates:** February 2017 – Present.

**Objective:** Assessing the impact of university-firm collaboration on firms' innovation capacity and economic performance, and exploring how such impact translates into economic growth and social development in the regions where the interaction takes place.

**Author:** Sergio Manrique.

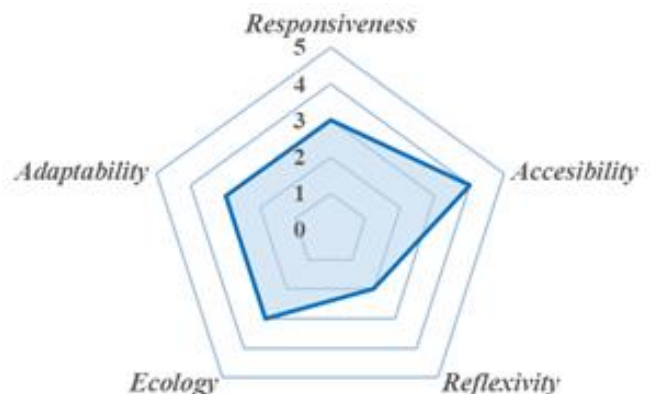
**Institution:** Universitat Autònoma de Barcelona (ES)

**Status:** In execution.

**More info at:** <https://runinproject.eu/sergio-andres-manrique-garzon/>

#### Self-Assessment Conclusions

##### Research Impact Pentagon



##### Assessment Conclusions

My PhD project's impact is boosted by being part of a Horizon 2020 training network, through which accessibility of research outputs is facilitated. Additionally, I make part of an established network of academics and regional stakeholders, which contribute to shaping my research in a responsive manner. However, by being a project planned in advance (before recruiting researchers), the range of action on the research design is limited, and there hasn't been too much focus on critical thinking.



# Rethinking Research Impact Assessment

## A Multidimensional Approach

### Ex-post research impact self-assessment example (Wróblewska, 2018)

#### Responsiveness

**Does my research respond to real problems and needs in society? Am I contributing to current public debates?**

My study of the Impact Agenda responds to a need of academics and policy-makers to tackle the question of impact evaluation, focusing on the under-studied aspect of language change and self-representation. Since I started my PhD, systems of impact evaluation have been adopted in several countries, generating considerable interest in my work's practical implications, particularly in the linguistic aspect of editing impact case studies.

**Grade:** 4.0/5.0

#### Accessibility

**Are my research outputs accessible to different stakeholders and society in general? Do I communicate and disseminate them broadly and effectively?**

I have drafted an 'executive summary' of the findings from my PhD work and shared it with the study's respondents and stakeholders. The reach of my findings remains limited, but I am seeking funding for a practice-oriented publication, ideally in open access.

**Grade:** 2.0/5.0

#### Reflexivity

**Do I reflect on how comprehensive, well-planned, ethical and critical my research is? Have I evaluated and critiqued my theories/ analyses?**

Reflexivity and ethics were at the core of my study. Still I question to what degree my critical standpoint is influenced by my academic background – one needs to be critical of 'critical theory' too!

**Grade:** 4.0/5.0

#### Ecology

**Does my research consider the relationships and connections among stakeholders and subjects? Was I collegial while conducting this research?**

To a large degree my work was solitary and individualistic. I might not have fully used the potential present in my research team. I also worry about the control I have over the application of my findings by stakeholders.

**Grade:** 3.0/5.0

#### Adaptability

**Is my research impact usable in different contexts and among different stakeholders? Am I aware of the limitations, and unanswered or emerging questions from my research?**

I've engaged with stakeholders in other countries (Poland, Norway) pointing to opportunities and challenges related to adapting impact evaluation. In this sense my research is adaptable, but the question remains to what degree can a scholar influence policy?

**Grade:** 4.0/5.0

#### Research Description

**Title:** The making of the Impact Agenda – A study in discourse and governmentality.

**Type:** PhD thesis.

**Dates:** October 2014 – September 2018.

**Objective:** Examining the change in academic discourse engendered by the introduction of the Impact Agenda and its link to practices of subjectivation (work upon one's 'self').

**Author:** Marta Natalia Wróblewska.

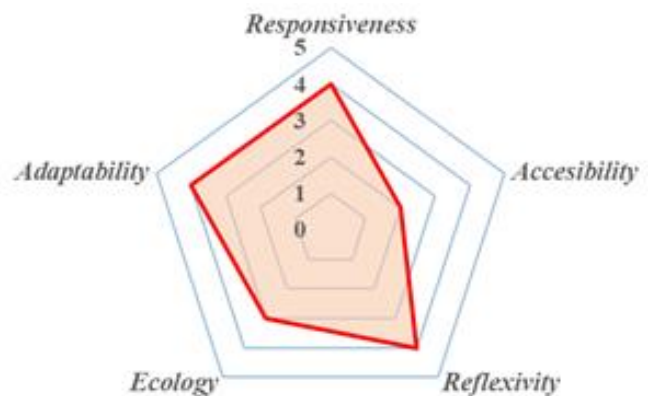
**Institution(s):** University of Warwick (UK)

**Status:** Concluded (now in dissemination phase)

**More info at:** <https://warwick.ac.uk/mnwroblewska>

#### Self-Assessment Conclusions

##### Research Impact Pentagon



##### Assessment Conclusions

Given that my work focused on the rise of 'impact evaluation', I was constantly questioned by audiences about the impact of my own work. This incentive, combined with resources offered by my institution for fostering responsible outreach, account for the fact that I have reflected on and pursued impact in my PhD project. The weakness of my project seems to be accessibility of findings and so I resolved to focus on creating open-access publications on the practical elements of my research findings, which would improve my score in this area.



# Rethinking Research Impact Assessment: A Multidimensional Approach

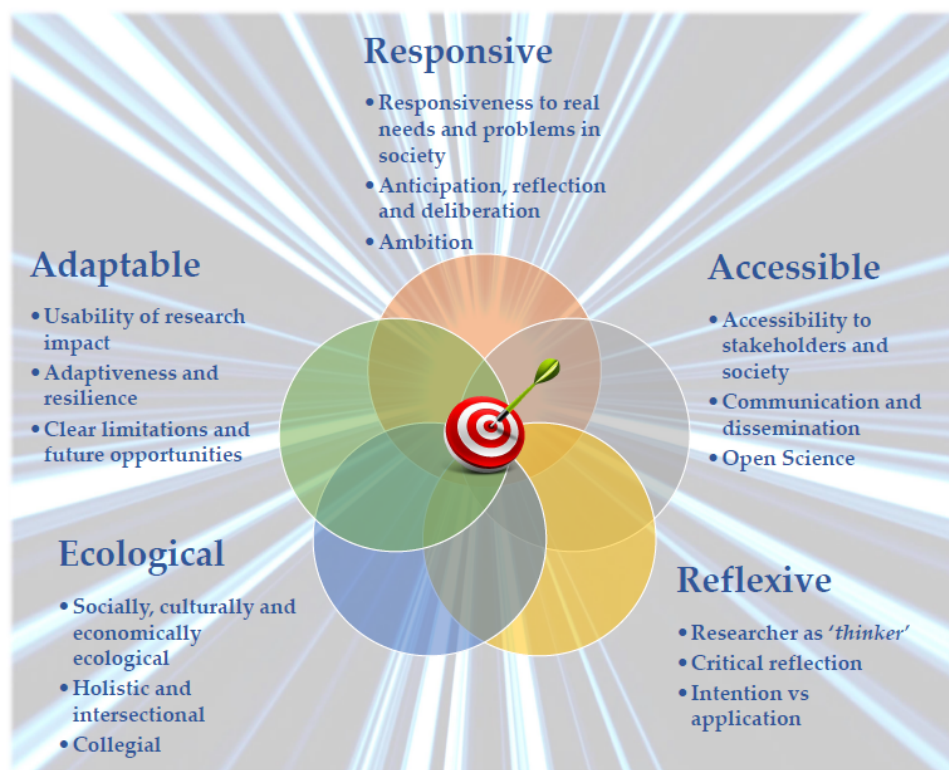


Austrian EU Council Presidency Conference  
Impact of Social Sciences and Humanities for a  
European Research Agenda – Valuation of SSH in  
Mission-oriented Research

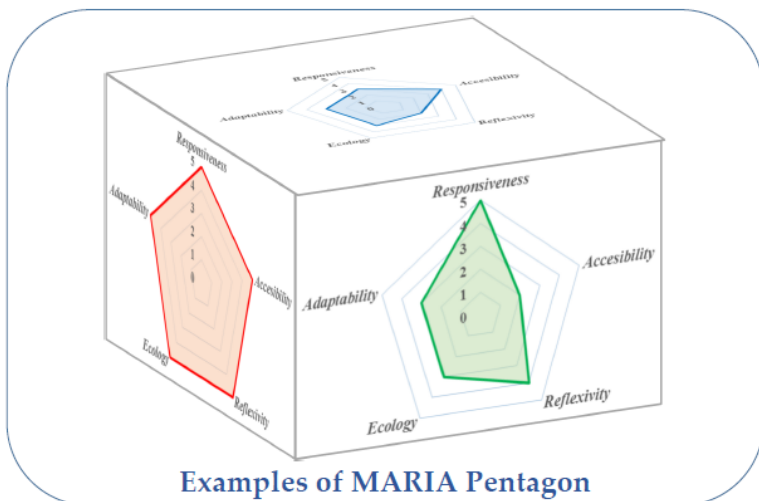
## Challenge

An interest in the **evaluation of research impact beyond academia** has been observable worldwide. Several countries have introduced national research assessment systems which take into account this new element. However, these systems do not always offer a space to reflect on the *ethical* and *reflexive* sides of the impact generation and tend towards a '*one size fits all*' model aimed at delivering measurable, quantifiable scores which can later be operationalized. We propose an *ethical research impact self-assessment tool*, as a contribution to the research impact agenda and with the aim of addressing the lack of models which stress reflexivity and ethics.

## Multidimensional Approach for Research Impact Assessment (MARIA Model)



## Self-Assessment in Practice: MARIA Model in Use



- ✓ Does my research respond to real problems and needs in society? Am I contributing to current public debates?
- ✓ Are my research outputs accessible to different stakeholders and society in general? Do I communicate and disseminate my research broadly and effectively?
- ✓ Do I reflect on how comprehensive, well-planned and ethical my research is? Have I evaluated and critiqued my theories and analyses?
- ✓ Does my research consider the relationships and connections among stakeholders and subjects? Was I collegial while conducting this research?
- ✓ Is my research impact usable in different contexts and among different stakeholders? Am I aware of the limitations, future research opportunities and unanswered or emerging questions from my research?

## Conclusion

What is lacking in the panorama of research evaluation is:

- 1) A framework to systematically reflect on the impact of one's own work (self-assessment).
- 2) A multidimensional model which recognizes the complexity of any impactful work.
- 3) A model which recognizes and reflects the ethical aspect of conducting impactful research.

The model we propose aims to address these gaps. Our proposal contributes to the ongoing learning process of research impact, in alignment with the context-based perspective of research assessment and in recognition of the need for a more holistic view in the observation and monitoring of interdisciplinary research. The article addresses pillars 1 (*Valuation*) and 3 (*Assessing Impact*) of the Austrian EU Council Presidency SSH-Impact Conference.