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ACcelerate CO-creation by setting up a Multi-actor PLatform for Impact from Social Sciences and Humanities

Coordinated by Sustainable Society University of Groningen (NL)

Principles for promoting the impact of SSH research by co-creation: key issues in research design and communication

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Section One: A framework for considering research design and communication

1.1 Introduction to this working paper

In order to encourage the valorisation of Social Sciences and Humanities (SSH) research, the ACCOMPLISSH project acts as a 'living lab' consisting of participants of what is known as a quadruple helix. This quadruple helix dialogue platform consists of 14 Universities in 12 European countries (including research leaders, researchers from all SSH disciplines, and research support staff), and representatives from industry, governmental organisations and a wide range of societal organisations. A key aim of ACCOMPLISSH is to:

> *'...foster a dialogue between SSH researchers and relevant stakeholders with the aim to identify the structural requirements and conditions that must be created to ensure an effective valorisation of SSH research. In particular, this should include such issues as research design, research communication, training of SSH researchers and their employability in the wider economy'* (ACCOMPLISSH project proposal, p.15)

This working paper draws on the experiences and knowledge of the participants of the ACCOMPLISSH dialogue platform and represents a consolidation of our shared learning so far, just over one year on. It also builds on the state of the art and stakeholder views that were explored in Work Package 2, in order to consider the implications, and translate this research evidence into a series of practical principles and steps that universities can adopt in enabling and encouraging co-creation for impact. It contains examples of practice across Europe and aims to assist Universities in strategic planning and the practical steps they need to take to create the conditions that can encourage societal impact via co-creation. Work Package 4 will continue this work by drawing on these principles to create and test tools for co-creation. Work Package 5 will further examine implementation processes for embedding valorisation across Higher Education Institutions. This working paper complements and anticipates this other work, by reflecting on what it will mean for researchers and universities to organise themselves and work in a different way, in both a macro sense (the necessary conditions for effective research design and communication) and a micro sense (specific approaches and methodologies for research design and communication).

A key challenge is that the impact of SSH university research is less than might be expected. There are lots of practical obstacles to be overcome: research is highly trusted by extra-university partners, but is often not easily accessible; and academics are often concerned with narrow metrics of success, such as publications and research income. Research evaluation has had a methodological bias towards the natural sciences and yet we do not know enough about the mechanisms for generating societal impact, which may take years to emerge. We still have much to learn about how societal impact is created and assessed (DeJong et al 2011). The extra-university members of the quadruple helix have valuable experience in their fields and are often those who need to use or implement the results of research. Co-creation would, therefore, seem in principle to be an effective way of enabling research to respond to real world problems, and enable partners to utilise research for maximum impact.

SSH research can have impacts that extend beyond economics, making a difference to people's lives, to society, to culture, and to understanding our own humanity, characterised as 'social innovation'. This social innovation 'results in more efficient and effective human services, more responsive public policies and greater cultural understanding' (Phipps and Shapson 2009, p.212). Yet the pathways to creating such impact in SSH research are non-linear and complex, and not easily measured. This raises issues to be addressed in terms of how Universities demonstrate their worth to society.

1.2   What do we mean by impact and valorisation?

In a review of the literature on co-creation, and in focus groups with quadruple helix members, Work Package 2 has found that a terminological vagueness exists. Across Europe, and across the domains of the quadruple helix, different terminology is used, which has different meanings and connotations. Traditionally in academia, valorisation has been narrowly understood in terms of economic potential, and has spawned such ideas as patenting, licensing and technology transfer. According to some, this has followed the rise in a discourse of the 'entrepreneurial university' and the dominance of the physical and life sciences due to the ease with which they can quantify their success (Benneworth and Jongbloed 2010). However, this narrow conceptualisation overlooks the potential impacts of SSH research, and does not help us to describe them. We take a wider view of valorisation, to include all the activities that can contribute to ensuring SSH research adds value, including knowledge exchange and co-creation of research with those outside the University domain. The very term 'valorisation' denotes a 'doing', a process, rather than a set of outcomes. We therefore see valorisation as a pathway to impact.

Figure 1.1   Valorisation

Idea   Change in society

Work Package 5 will continue to explore and refine the valorisation concept, looking at top-down and bottom-up processes from the perspectives of all lead-user groups in the quadruple helix.

1.3   What do we know already about co-creation of research in SSH?

The definitions of co-creation are varied, and the terminology used to describe the processes equally so. The general focus of co-creation, however, is on a process by which different people come together to work on common issues towards a mutually agreed goal. Connections between individuals and organisations are the first building blocks of co-creation to build productive partnerships. Structures that can support this, and tools and opportunities that develop and maintain those connections are essential. In an environment where many actors within the quadruple helix are under time pressure there is a need to consider what factors can help with the creation and maintenance of those connections, and what qualities and characteristics are needed of those working together effectively. Developing a shared sense of purpose is a key ingredient in a successful co-creation and if there are misunderstandings in the shared purpose

then misdirection can happen on the research pathway. Commonality adds persistence and can aid motivation and resilience to challenges. Commonality is important in terms of the power relations that inevitably form part of relationships. A quadruple helix model of effective research design needs to afford the opportunity for all partners to be understood and respected. Hierarchies of knowledge need to be treated with caution. Using terms like 'expert by experience' and avoiding using the term 'non-academics' can bestow value and respect for the positive benefits partners can bring to academia, rather than portraying them as somehow deficit, or lacking in knowledge.

The literature review conducted in Work Package 2, enhances our consideration of co-creation. It corroborates our position that the differing paradigm that SSH affords lends itself to a focus on processes rather than products, which has implications for how we identify, measure and reward our contribution to impact. The review concludes from the existing evidence that there is a need for diverse pathways to impact, and a need for the quadruple helix to operate in a culture of openness, utilising broader channels for dissemination, which enable impacts to emerge. Co-creation should be a negotiated shared problem solving space. Some examples of practice are starting to be presented in the literature, such as ways to incentivise impact, and methods for encouraging it (e.g. toolkits). There remains as yet, however, little consideration of how Universities across Europe can review their systems and structures to ensure valorisation from SSH research. While the literature advocates key approaches to valorisation such as capacity building, creating direct relationships with extra-university stakeholders, and creating networks and a culture of openness, there needs to be more consideration of how environments are created and sustained that enable these to happen, and the roles that individuals can play in this.

Further, quadruple helix members who took part in the focus groups conducted in Work Package 2 make clear that there can be challenging experiences when partners collaborate with Universities. People can come with inherent stereotypes and a wish for different objectives from the collaboration. What is needed is to build good relationships based on trust, openness, a willingness to compromise and a natural curiosity. Yet these relationships often need to be fostered against a backdrop of a lack of time and resources, discouraging organisational cultures towards collaboration and a lack of reward for working in such a way.

From this state of the art, there seem to be several key messages. Co-creation can be an effective way of creating valorisation from SSH research, but must be facilitated and supported in order to be effective at stimulating impact. Organisational cultures need to support and encourage collaborative ways of working, and there should be a clear justification for co-creation. There need to be places and spaces for interaction, accompanied by specific activities and/or tools to enable those spaces to be populated and used effectively. Relationships need time to build, and need to be sustained over time, and researchers need the skills and resources to be able to do this. A variety of ways of engaging need to be provided, and multiple and varied options for dissemination made commonplace. There is a key role for facilitators of relationships, people with the ability to understand different organisational cultures and provide a bridge between them, so-called knowledge brokers.

1.4   The state of play across Europe in respect of co-creation for the valorisation of SSH

Universities across Europe are situated within national and global policy environments and subject to changing relationships with their nation-states. This affects their levels of autonomy,

their funding mechanisms and the extent to which they have a wider steer, pressure or incentive to reach specific objectives (Goddard 2016). Although countries are subject to similar global pressures, the development of universities has differed, and the extent to which they are encouraged to contribute towards economic, social and cultural impact varies. In the Netherlands, for example, the national law on education stipulates that one of the main functions of universities is to provide service to society. By contrast, the UK government does not explicitly mandate a civic engagement function for universities, but seeks to incentivise it by the way funding is distributed to universities via the assessment of impact in the Research Excellence Framework. In addition, funding agencies routinely require an explanation of how the funded research will have benefit for society. Knowledge exchange and co-creation has therefore grown in importance in recent years (Phipps and Morton 2013).

Despite these incentives for co-creation in countries such as the Netherlands and the UK (among others), research demonstrates that there is a lack of awareness of the potential benefits of collaboration, and a persistent lack of knowledge about potential partners, and how to establish relationships among all four sectors of the quadruple helix. Confusion exists over which practices are most effective and how this kind of work fits with traditional notions of the role of academics. Early indications from Work Package 4 confirm this situation in respect of universities. Surveys of the 14 ACCOMPLISSH universities (across 12 European countries) indicate that there is a lack of resources and information for co-creation and that very little training or capacity building is provided in universities. This is made all the more salient when coupled with the lack of resources for co-creation that exists within smaller extra-university partners who may have weaker internal knowledge sources than larger organisations and thus have more to gain from quadruple helix collaboration (ESRC evidence briefing). Indeed, the findings of Work Package 2 indicate that there may well be work to do in respect of ensuring what could be termed 'societal readiness', in addition to ensuring the university itself has adequate structures, values and competencies to be able to encourage co-creation.

1.5   New approaches to research design

The context we have outlined thus far raises several key questions for consideration.

How are universities defined as a 'public good'? Do academics think about what they do in terms of producing findings rather than how they can make a difference? If so, how can we change this? How should the excellence of universities be measured? Legal and practical notions of Intellectual Property (IP) become less clear as research is conducted in partnership. How can this be negotiated and explained?

Who places value on knowledge production? How do partners in a quadruple helix come to agreement about the societal challenges and 'wicked problems' that are important?

Which knowledge is valued? Do we see the quadruple helix operating as 'supply' (of knowledge) and 'demand' or is knowledge 'exchanged'? Are we co-creating research or are we co-producing knowledge?

What is impact and which impacts are valued? Is 'impact' a product or a process? Are we looking for quick fixes or long term solutions? Do we agree on which impacts are valuable?

How can a cultural shift be encouraged? Does the capacity to change reside in individuals in terms of skills and competencies (and which individuals?) or do things need to change in institutions? How does institutional infrastructure encourage or inhibit co-creation?

What are the implications for project design? Should we be thinking in terms of research 'projects' or longer-term research 'relationships' and the needs of partners? Do we need better models of co-creation or do we need better awareness of existing models? What should be counted as 'gold standard'?

Relationships: Relationships are key, but who initiates them? How do relationships develop? Are these strategic or serendipidous?

Models of co-production: Do we need 'a model' of co-production, or do we really need a variety of models? It is useful to look at examples of what goes right, but also at examples of what goes wrong, yet research evidence displays bias to the discussion of success. At what stages of the research process is co-creation or engagement with stakeholders most effective and is it always needed in order to produce impact

We do not mean to provide concrete answers to these questions posed, but raise them as tensions and complexities that must be considered when thinking about possible approaches. How do we best distinguish discourse and theory around 'impact' from practical approaches? Do academics go into a project consciously and deliberatively seeking impact? Or do they look to develop useful and relevant research with stakeholders? The pursuit of impact is a noble ideal but can be subject to so many diverse factors including time or even serendipity and impact sometimes may be reported or unreported. Power relationships act on multiple levels including those between universities and their governments; between SSH and science research and differences in ontological understandings; between disciplines; and between individuals and institutions. Co-creation can be a place of disruption for these power relationships, challenging and consensus building, but can also lead to negative effects and manipulation, if these power relationships are not considered and taken into account.

Looking at models of co-creation that have been developed may foster an understanding of the enablers of effective co-creation approaches. Such models can concern the approaches to information exchange which are enacted in the research process. Pohl et al (2010) describe how researchers must consider three key issues when working with external partners: power; integration; and sustainability. In essence, this means that in a research relationship power relationships must be addressed, a common understanding must emerge, and a clear justification for co-production. Negotiating these can often necessitate researchers releasing power and losing autonomy over knowledge production. One approach to conceptualising how this can happen outlines the emergence of a new kind of 'boundary organisation'. This organisation does not belong in any one sphere of influence but involves participation from different spheres and is accountable to each. The process of knowledge production takes place at the intersection of the spheres as figure 1 demonstrates. In one scenario, a boundary organization can provide a bridge for university and external partners to be able to understand each other, but in the second scenario, co-production produces an overlap (the agora), a space of tension that disrupts established ways of doing and traditional roles.

Figure 1.2   Two approaches to interactive knowledge production (Pohl et al 2010)
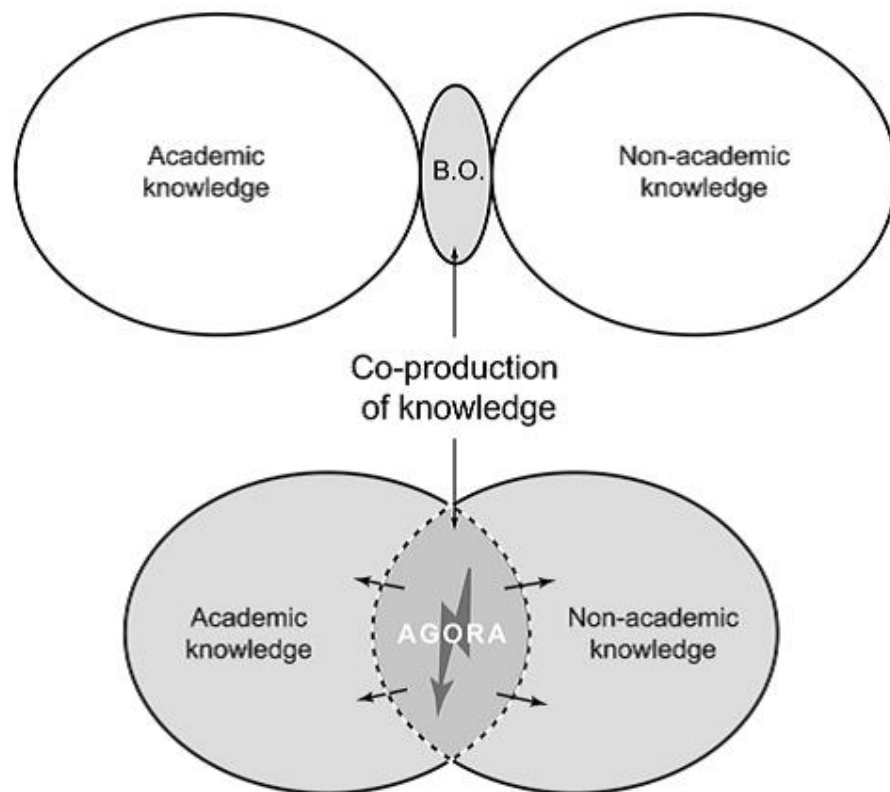
The notion of boundary organisations which Pohl et al describe bring the skills and expertise of different actors together to enable each to understand the other in a form of 'boundary crossing' (Akkerman and Bakker 2011) and supported by 'boundary experiences' (Clark et al 2017). Current debates around the concept of boundary crossing stress the importance of boundary objects in bringing people together to share understandings. Co-created work offers opportunities for boundary crossing, but another approach sees co-creation as having the potential to create new kinds of research. Such transformational potential necessitates a new way of thinking about research methodology. In reviewing studies which describe transformation processes Akkerman and Bakker (2011) note three characteristic elements typically occurring in sequence; confrontation, recognition of a shared problem space, and hybridization. In combination these frame the boundary as a problematic place between intersecting worlds which requires resolution. However, co-created research does not just aim to bring the quadruple helix together, but to transcend the boundaries between them to create new perspectives and new ways of thinking about the world that can be sustained and developed over time. This thus requires new ways of doing things, forms of methodology that can encompass this approach, and a process of critical enquiry based on a more dynamic, open ontology, and an epistemology that can take account of multiple constructions of knowledge (Brown, Harris and Russell, 2010). In many research projects, the boundary crossing is discretionary, and an additional element to the research processes rather than an integral part. Project design processes which require carefully worked plans may inhibit the kind of open ontology that is necessary for transformation (Clark et al 2017). In addition, researchers need to

develop the skills and capacities which enable them to engage in a more exploratory and collaborative research process, without sacrificing or weakening their own disciplinary contributions.

Reed et al (forthcoming) caution that is it important to investigate where co-creation does not succeed as well as study instances where it does, in order to be able to establish the circumstances in which co-creation is desirable and justified. They propose a typology of stakeholder and public engagement approaches which may assist in guiding the practice of co-creation for maximum effectiveness. They challenge existing notions of participation hierarchies (e.g. Arnstein, 1969; Hart, 1992) sometimes conceptualized in terms of ladders, which encourage participation as an essential goal for success, but instead recognize that not all participation is worthwhile, proposing that positive outcomes of engagement stem from *design* (systematically representing multiple interests and goals), *power* (management of different ontological understandings), *scalar fit* (matching the scale of involvement to the desired goals) and *context* (resources, experiences and attitudes). In order to ascertain good practice, tools and processes can be categorized in terms of how far they take these elements into account.

Figure 1.3   A theory of participation that explains how the outcomes of stakeholder and public engagement in environmental management are explained by context, process design, the management of power dynamics and scalar fit (Reed et al, forthcoming).
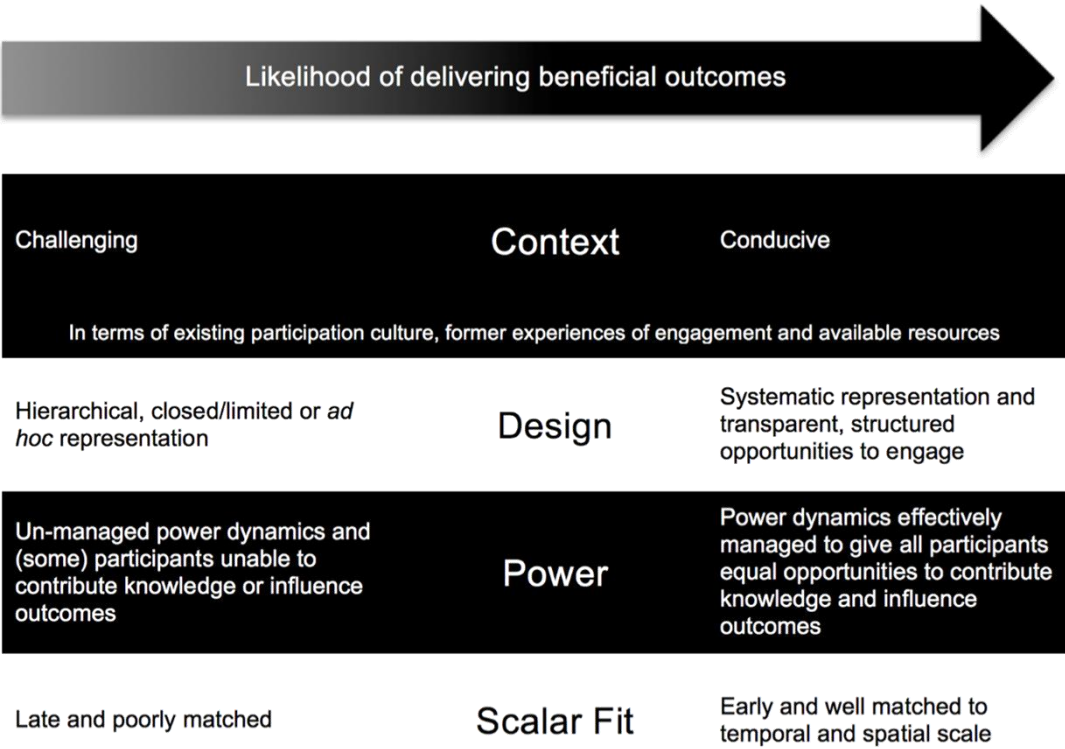
In contrast, Morton conceptualizes co-creation in terms of when engagement and dialogue is needed, based on the skills that researchers and external personnel can bring to the research process, based on their traditional roles (Morton 2012). Morton delineated all of the tasks needed in the research process, and indicated where these were the domain of the researcher, the partner, or could be both in her research. Morton's research indicated that partnerships are

important in order to achieve impact, and that co-created research was likely to be used by the stakeholder community for a long time afterwards. However, these stakeholders are likely to be involved in research in very different ways. The level of involvement, and how it is operationalized, brings different effects on the research process, and can lead to research better placed to meet the needs of the partners, and to be useable quickly. Morton has gone on to develop a manifesto for effective partnership which lists the principles she suggests for research with partners outside the university (Morton 2015).

Figure 1.4 Roles of researchers and partners in participation (Morton 2012)

Tasks of researchers	Traditional roles	CRFR/Childline
Develop agenda	Shared	Shared
Get funding	Shared	Shared
Define project	Academics	Shared
Collect data	Academics	Academics
Analyse data	Academics	Shared
Engage stakeholders	Partners	Shared
KE activities	Partners	Shared
Continued use	Shared	Partners

These recent models of co-creation raise further questions in respect of research design, in respect of the optimum conditions for co-creation, the roles of the parties involved and in which circumstances and by what processes co-creation can enhance impact from research. Not enough is yet known, however, about the processes that are involved in this. We don't know about with whom, and in which circumstances, different kinds of co-creation produce different kinds of effects. We cannot see from these models, how co-creation can best lead to valorization. We also cannot know about how these principles might apply to co-creation across the quadruple helix, with different kinds of inputs, multiple expectations and agendas, and different power relationships at play. Just as there are multiple beneficiaries from research, there seems to be no common set of mechanisms that can reach them (Upton, Vallance and Goddard 2014).

Nonetheless, irrespective of the inadequate evidence base for knowledge mobilization and an under-developed ability to identify impact, co-creation can produce social value for universities, researchers, students and their partners, and investments in knowledge mobilization for SSH research by universities are valuable (Phipps and Shapson 2009) and should be encouraged, particularly in a context which has prioritized economic value through initiatives that are sometimes incompatible with SSH research such as technology transfer services, and one in

which societal partners often do not have the resources to pay for such services. Academics do not operate in isolation from their institutional context, and activity is guided day to day by the policies and procedures adopted by their universities, in turn guided by national policies and international frameworks (Upton, Vallance and Goddard 2014). Nevertheless, there are several challenges for universities in this regard. The marketization of higher education in some countries has shifted costs away from the state and on to students, casting them as consumers of education. This is at odds with notions of the public value of universities. There is a growing emphasis on world rankings and competition for students globally, and this encourages notions of an entrepreneurial university which diverts resources towards league-table performance (Vallance 2016).

There are opportunities for universities to become proactive in defining and creating the conditions for effective research design for valorisation, such as embracing a civic university vision (Goddard et al 2016) if they adopt a broader view. Universities can play a role in deepening researchers understanding and developing practical approaches (Grand et al 2015). This working paper makes a contribution by defining a set of principles for research design and communication that can assist universities in building institutional capacity to increase the impact of their research.

1.6   New approaches to communication

In general linguistics and semiotics communication is often seen as a highly problematic concept, since its properties and functions usually fluctuate between information exchange and symbolic influence to other, between dialogue and manipulation, between confirmation of the shared values and reluctance, between domination and freedom. Human communication is always an interaction and for that reason strongly influences all the participants in the communication exchange. Further, every communication act is fulfilled with multidimensional aspects of communication process: functional, instrumental, affective, performative, purposefulness, pathemic etc. All these aspects form the communication flow and co-exist in time of its realisation.

As a complex and a little bit elusive concept, communication can be best described and explained by invoking different perspectives and views that stress its different properties and purposes. In that context, Italian linguist and semiotician Ugo Volli (1994) speaks of the six concepts of communication. They include:

1. **Original concept** (originating from Lat. communicatio, communicare; our own insights to the modern dictionaries reveal definitions that clearly link communication to the concept of information transmission, to public and masses, as well as to the geographical spaces and transportation)

2. **Communication as transmission of information** (immaterial idea of communication appears in the second half of the 20th century; definition of communication as the process of transmitting the information is called "mathematical theory" of communication associated with the names of Shannon and Weaver 1963. It was re-elaborated and adjusted to the human verbal communication by Roman Jakobson 1960)

3. **Communication as getting together** (idea elaborated by sociologist Barnett Pearce 1989; it puts less importance to the information as main purpose of the communication,

and stresses importance on sharing, uniting, joining of the human beings in the process of the construction of the social reality. In this process humans agree with the basic values which their activities rely on (coordination), construct the narratives of themselves and the world (coherence) and recognise what their cognition cannot comprehend (mystery))

4. **Communication as inference** (pragmatic perspective associated with Sperber and Wilson 1995 Relevance Theory where to communicate means to offer signs, indices to the hearer who, on his side, pulls out inferences, conclusions, implicatures. So, communication here is seen as a deductive activity and the key is construction relevance (pertinence). Message is not interpreted according to the language elements and literal meaning, but according to the knowledge of the actors in communication process, facts, and contexts.

5. **Communication as exchange** (elaborated within the semiotics of music; but also in the field of structural anthropology by Lévi-Strauss 1949 and within the Paris School of Semiotics, see Greimas and Courtés 1993; sender and receiver are both concentrated to the message-text and negotiate the values inscribed in it)

6. **Communication as hermeneutics** (the concept that stresses the importance of interpretation; Derrida 1969 and literary criticism propose that in the text one should look for reader's meaning systems, desires, impulses, attitudes; Eco 1962, 1990 disagrees (this would be arbitrary use of text according to his ideas, and not its valid interpretation), and firstly emphasises the openness of the text, its capability to produce limitless meanings; later sets some limits to the interpretation)

All of these multifaceted dimensions of the concept of communication equally apply to the concept of the research communication: it is the transmission of certain information, but it presupposes the idea of coming together in the all phases of the research process; it implies inferences and exchanges, and without the processes of interpretation could not be transmitted to the end users. It is highly dialogical and conversational:

"When people have the opportunity to come together, to share and debate ideas and learnings (including research findings), new knowledge – the capacity to take action – to engage in new performance – is enhanced." (Mosher, Anucha, Appiah, Lewesque, 2014)

From this quote one can draw the importance of the idea of engaged universities, knowledge transfer, co-creation and communication, including the research communication as well. In our perspective, the concept of co-creation cannot be completed without communication. It is in this segment that co-creation moves into direct action and acts as a concrete change.

Research communication itself has some specific features. Foremost, it is highly intentional activity: intention and awareness can be found in the basis of research communication. Subsequently, it has to be efficient in order to achieve its purposes. The problem of communicational efficiency leads us to the problem of translation. In order to be efficient, research communication implies the processes of translation to different users/agents (Lotman 1985; Petrilli 2002). This is the part where things become interesting, but also some dilemmas arise: research ideas, findings, outputs etc. in order to be accessible and relevant to the intended audiences must be translated, this might include cultural translation as well. Translation usually requires skills and know-how, also, it has to be – as well as the communication itself – strategic

translation: one could claim, it is the strategy and not the tactics (de Certeau 1984), or: it is the "purposeful communication" (Thorson 2013). Communicating usually means translating: from one sign to another, from one channel to another, from one mode to another, from one system to another... (Petrilli 2002). Translated can be the contents (meanings), but also the forms (modes). The translation involves, among other things, the need to define key messages; the need to decide who our targets are; there is also the need to establish audience as well as to select the appropriate mode(s) to communicate to these specific audiences; there is need to tailor messages/information; and, of course, the need to reflect critically upon our work constantly, to evaluate the effectiveness of the chosen mode(s) of communication. Co-creation presupposes the need to include all agents (between lead users, on the one hand, and end users, on the another) into communication about research, and from the beginning – when designing the research methodologies, theoretical frames, analytical processes.

Section Two: Principles of research design

2.1   Key principles for research design

Research design in SSH can be understood within a framework of considerations around the relationships between individuals, communities, and society encompassing the past, the present and the future. The perpectives of scholars working in SSH disciplines enable them to observe, pause and review topics in complex and multi-layered ways. This takes place within a framework and context of higher education policy and specific organisational contexts of universities which can facilitate or mitigate against the effective mobilisation of knowledge. There are many examples of how SSH researchers have been involved in multidisciplinary bids in order to strengthen the team, diversify the thinking and avoid disciplinary silos of thought and examples are starting to emerge across Europe of specific models that encourage the utilisation and mobilisation of SSH research activities. So, given the current state of the art in respect of co-creation and the valorisation of research, consideration is needed in order to ascertain what universities need to do in order to encourage the valorisation of SSH research.

As we have seen, it is not enough simply to provide more resources in order to make things happen, although of course these are important, but there is also need to change attitudes around the value of SSH to society, and how the valorisation of the impact can be supported. Following our analysis of the findings so far of the ACCOMPLISSH dialogue platform, we have developed a set of principles that we believe represent a holistic approach to encouraging the valorisation of SSH research. We have developed a framework in which to propose these principles by adopting the themes of: changing values and attitudes; ensuring supportive and effective systems and structures; and enhancing experiences and understandings, that Goddard et al (2016) suggest are the key issues for universities to address. These principles embody what is important in terms of a university vision and strategy for valorisation of SSH, and we go on to consider how these principles might be enacted in practice.

Figure 2.1 A design framework for co-creation
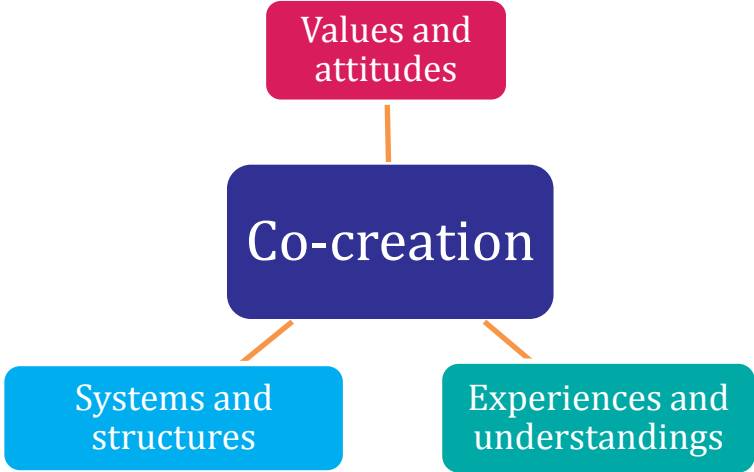
Figure 2.2 Key principles for the valorisation of SSH research: changing values and attitudes

CHANGING VALUES AND ATTITUDES
PRINCIPLE ONE
It should be recognised that SSH research has social, cultural, economic and wider social benefits
PRINCIPLE TWO
Universities should consider and articulate their civic purpose. What do they want to achieve and with whom?
PRINCIPLE THREE
Universities should have an important role to play in addressing big societal challenges, and co-creation is one important way of doing this
PRINCIPLE FOUR
Valorisation of SSH should be an important strategic goal and understood as a non-linear process

Figure 2.3 Key principles for the valorisation of SSH research: systems and structures

SYSTEMS AND STRUCTURES
PRINCIPLE ONE
Universities should develop and implement a university-wide strategy for encouraging open innovation and knowledge mobilization
PRINCIPLE TWO
Universities should adopt systems to recognise, incentivise and reward impacts beyond academia
PRINCIPLE THREE
Universities should recruit and/or develop specialist knowledge brokers
PRINCIPLE FOUR
Universities should provide/facilitate places and spaces for intersection of the quadruple helix
PRINCIPLE FIVE
Universities should actively foster the skills required for co-creation and open innovation through training, development and recruitment strategies
PRINCIPLE SIX
Funding strategies should consider pathways to impact.

Figure 2.4 Key principles for the valorisation of SSH research: experiences and understandings

EXPERIENCES AND UNDERSTANDINGS
PRINCIPLE ONE
Universities should investigate and record what is already happening in their own institution in respect of co-creation and valorisation
PRINCIPLE TWO
Open innovation does not lend itself as readily to quantitative metrics. New methodologies should be encouraged for assessing impact
PRINCIPLE THREE
Researchers should investigate ways of widening the evidence base for producing and measuring impact
PRINCIPLE FOUR
Researchers should explore the utility of different tools for co-creation in different contexts
PRINCIPLE FIVE
Researchers should share examples of good practice

2.2   Considerations for the university sector

The principles outlined above raise many considerations for the university sector. In order to enact these principles, a series of actions are necessary. Such actions can only follow from a thorough analysis of the current position in respect of those principles, followed by a clear theory of change identifying what the current barriers are, how these could be addressed in terms of specific actions, and what kinds of changes might be seen over time. This will only occur if university management has a clear justification for supporting impact generation activity such as co-creation in a quadruple helix. The following sections indicate issues to consider in action planning processes in order to maximise co-creation and valorisation of SSH research, and present some examples of practice from across Europe.

A justification for 'a third mission'

Although universities have a long history of a strong civic function and responsibility to society, in recent years, a dual mission of universities has become mostly located in the areas of teaching and research. Other activities (particularly those with impacts beyond academia) are often seen as secondary – desirable rather than essential – and are often not central to a university mission unless there are specific targets associated with them. This means that on the periphery of teaching and research, activities such as engagement and co-creation that can lead to SSH valorisation happen in spite of institutional support, rather than because of it. In notions of a 'civic university' these core and peripheral missions become blurred, and overlaps occur. For example, where teaching and engagement overlap, opportunities can be provided for augmenting student experience in the form of volunteering, or service learning, and outreach activities can result in widening the participation of excluded groups in university education. Similarly where research and teaching overlap, then teaching becomes linked to real world issues, and can become more relevant and rooted in practice for students, encouraging

reflexivity and critical thought. The overlap between research and engagement can result in solutions to the challenges in society, raising new questions and providing deeper insights. When all three domains of teaching, research and engagement overlap, the impact of the actions it takes becomes magnified and is greater than the sum of the parts (Shucksmith 2016). Where co-creation succeeds, this collaboration can be transformative for all parties. Academics are not the only parties concerned with knowledge creation, and the sorts of tacit knowledge created by partners is only accessible through close interaction (Lam 2000).
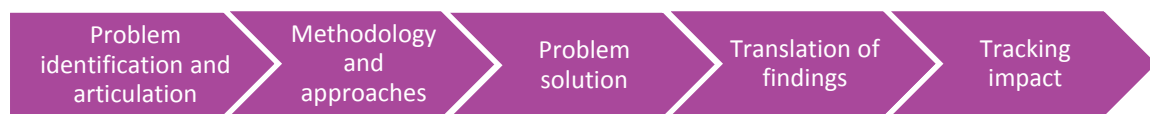
Different universities will have different contributions to make in respect of the three missions, just as individual researchers will have different contributions to make. In a time where the marketisation of higher education and increasing reliance on performance indicators to prove worth, a focus on valorisation can provoke a deeper thinking about the role of universities and the purpose of the Academy, and a questioning about what a university is for. Irwin (2017, p.70) makes the case for what he terms 'celebrating societal contribution and engagement'. He lists the benefits from this, including extending 'conceptual, political and institutional capacities'. In Work Package 2, societal partners reminded us that public universities have a responsibility to the public in their role as tax-payers, and thus the ultimate sponsors and beneficiaries of the knowledge creation, transmission and exchange of universities. In the age of the entrepreneurial university, this perception is sometimes not given due regard.

The justification for co-creation often lies in a regional or local context. After all, co-creation and relationship building is easier when it is centred around convenient travel routes, and face to face interactions. Adressing local challenges can be an impetus that draws people together with different experiences and understandings of a shared space (see for example http://www.newcastlecityfutures.org/). Although global relationships are becoming possible with the improvement in international travel options and new technologies for communication, how far universities see themselves as regional, national, European or International institutions will influence how they see their role in generating impact. Universities are place-based and intertwined in the cities and towns thay are part of. In an age of austerity throughout much of Europe and the coming and going of public services, they can be seen as 'anchor institutions', in other words, stable and constant resources, often major employers and contributors to the local economy, in communities undergoing flux and change. Universities therefore have a large stake in the success and vitality of their local communities, and with it notable responsibility. Collaborating to solve some of the major challenges facing local communities is thus an exercise in self interest as well as in public good. Internationalisation magnifies these local issues and introduces global challenges that universities are well placed to contribute to as part of collaborative quadruple helix arrangements. The recent encouragement of the international research community can only serve to make valorisation of SSH more attractive for universities to support. The European Commissioner for Research and Innovation stated in 2016 that research impact should be one of three core values (in addition to excellence and openness) for Europe's research funding programmes, and the League of European Research Universities (LERU) has itself recently advocated a return to a triple mission for universities that incorporates societal impact, in which the process of knowledge production incorporates both academic and stakeholder expertise (LERU 2017). They remind universities that embracing societal impact is thus compatible with their 'fundamental missions of knowledge creation and transmission', and that they should seek to support, promote, and reward impact activity.

Co-creation and valorisation as relationships and process

We often think of impact in terms of dissemination of our research. But as we have seen from the models presented, it is not a linear process where knowledge is transferred to others through the written or spoken word. Rather, it is more appropriate and respectful to talk and think of knowledge exchange, which can happen at any time in the value chain through co-creation, and is embedded in research design. The value chain can be thought of as a set of actions or inputs that form the process in leading to a product, service or outcome. In SSH research, these outcomes may be complex, wide ranging or take a long time to emerge.

Figure 2.5 An emerging value chain for research design

| Problem identification and articulation | Methodology and approaches | Problem solution | Translation of findings | Tracking impact |

We present an initial value chain in figure 2.4 as a way of conceptualising co-creation activity in research design, but we note that Work Package 5 will be exploring the meaning of valorisation in respect of different perspectives on the value chain, and are likely to present a more sophisticated analysis than that possible at this stage.

Knowledge brokerage

The role of the knowledge broker has come to be seen as an important one in stimulating and sustaining co-creation conducted with different stakeholders across the quadruple helix. It is a function that can be fulfilled by an individual (such as an outside facilitator, researcher or research support staff) or an organisation or structure (such as a technology transfer office). Knowledge brokers act as go-betweens, and occupy the space in the middle of the quadruple helix, encouraging equity and making sure all partners needs are considered.

Ward, House and Hamer (2009) outline three models of brokerage. In one model, *knowledge management,* the knowledge brokers role is to encourage the sharing of information, translating and interpreting different contributions, and encouraging better dissemination practices. In the *linkage and exchange* model they act to build up contacts, put people in touch with each other, foster relationships and stimulate effective communication. In the third model *capacity building*, a key function is to develop the analytical and interpretation skills of the collaborators. In practice, this often works as a deficit model, as it is often assumed that it is the extra-university partners who need this help. Seeing this third model as facilitating learning (Kubiak 2009) or as creating communities of practice (Wenger 1998) can help this capacity building to encompass all stakeholders in a more equitable way.

Nevertheless, a knowledge brokerage role can be difficult. It takes time and particular skills, and as yet, there is little firm evidence about how this role works in practice. The role is complex to describe and even more difficult to evaluate (Bornbaum et al 2015). It has remained a central plank of effective co-creation, however, and examples have indicated that it can play a part in

overcoming personal and institutional barriers to collaboration, and confirming commitment to partnership (Le Dantec and Fox 2015). Consideration must be given to analysing knowledge brokerage practices more thoroughly, exploring the mechanisms involved and the benefits they bring, as there is potential in the role, not just for prooducing and sharing knowledge but for transformative practice that creates new forms of knowledge (Meyer 2010).

During our dialogue sessions with the core dialogue platform in May 2017, knowledge brokerage and the role of different university staff in co-creation was explored further. One aspect that was considered was the size of the SSH sector within universities. In smaller universities, it was felt that it was easier to create relationships and engage in co-creation without the need for specific brokerage of those relationships. Tallinn University, for example, has a system of 'one minute videos' that are broadcast throughout the university meaning that the university community are aware of each other's work and ideas. The university heirarchy is described as 'flat' so that it is relatively easy to meet and communicate with decision-makers face-to-face, and thus learn about each other's priorities and understandings. Rather than a knowledge broker to share this information and make contacts, what is needed are tools for co-creation.

It was suggested that a useful role for knowledge brokers was that of translation, and changing the narrative of traditional linear research processes to one in which the problems and solutions are considered first, and then the role of science in that is considered alongside other inputs into that problem solving process. There was also an acknowledgement that much of what academics do already can be knowledge brokerage, such as adopting specific pedagogies for teaching, such as project-based learning or service learning. Encouraging new forms of pedagogy for brokering knowledge, and rewarding that has potential to change the culture of academia over time, and encompass technology and new tools.

UNIVERSITY OF NEWCASTLE, ENGLAND

'City Futures' is is an RCUK/innovate UK Urban Living Partnership led by Newcastle University that creates shared opportunities to shape the future of the city of Newcastle upon Tyne. Project ideas are shaped by groups of organisations in partnership, and are shaped by the big challenges the City faces, and the opportunities it can draw on. Innovative engagement methods, digital and technological tools, film and photography are used so that anyone can participate from across the quadruple helix. The university sees itself as a key partner in the process, and staff act as knowledge broker, bringing people together, maintaining dialogue, driving decision making and harnessing contributions. The university in this context is seen as trusted intermediary that can make explicit different mindsets, expectations, incentives and motivations of partners, and find common ground and broker consensus and learning. This involves high-level co-ordination, information sharing, collaborative problem-solving workshops and the ability to understand the different languages of specialisms. In this way, the university 'acts as incubator to generate common purpose within a fragmented governance landscape' (Goddard and Tewdwr-Jones 2016: 12). Further information can be found on the website **www.newcastlecityfutures.org**

Encouraging open innovation

Little attention has yet been given across Europe to the kinds of incentives that can be best used to encourage a culture whereby seeking social impact in society becomes as important as the functions of teaching and research. In order to do that, both top-down and bottom-up approaches must be considered. There are strategies that universities and those that fund them can use in order to incentivise co-creation and impact, such as critically analysing current examples such as the Research Excellence Framework in the UK, or introducing framework programmes that seek specific activity. In addition, institutions can provide inbuilt incentives through workload allocations, award ceremonies, promotions and such like. There is an inherent risk built in that achieving impact becomes an instrumental goal for those academics motivated extrinsically by their academic career, and can potentially risk abusing the contributions of stakeholders, and damaging relationships and ultimately the reputation of academia. Instead, the goal is rather for universities to establish a culture that celebrates impact, that values it and creates the conditions in which researchers with more intrinsic motivations such as curiosity, and wanting to make a difference to society can flourish. This means that top-down initiatives need to be accompanied by drivers that re-define the role of researchers, understand their motivations and put power and freedom into the hands of those academics to be able to engage in change-making work. This might mean expanding the role of early career researchers and research students, giving them a greater role in the research process, and sharing the impact with more experienced researchers. This might also mean widening our understanding of so that the rewards of academia are not perceived solely in the number and types of publication and the amount of grant income, but in incentives that encompass the totality of what academics do. This will necessitate a clearer understanding of effective co-creation and valorisation, codifying practices and establishing which practices work well.

Consideration could be given to promoting so-called 'boundary experiences' (Clark et al 2017), by providing opportunities for knowledge exchange secondments. These schemes can enable researchers to work in an organisation for a period of time, or also enable staff from external organisations to work in the university. This enables them to be able to understand more about each other, and how research can best be mobilised to suit.

Managing Intellectual property

One of the concerns often raised in respect of co-creation activity is the risk it poses to academic freedom and autonomy. When producing knowledge as part of the quadruple helix, claiming ownership of the process or of the impact it generates becomes tricky, as often they are shared among the group. Establishing agreements at the beginning of processes can help to ensure that all stakeholders involved are able to understand and agree the parameters of their relationship and the treatment of the research findings.

UNIVERSITY OF GLASGOW, SCOTLAND

Together with the University of Bristol and King's College, London, the University of Glasgow is a co-founding partner of Easy Access Innovation which is a collaborative project to promote new ways of sharing intellectual property with partners. The partnership was established in March 2011 following a Fast Forward award from the UK Intellectual

Property Office. The portfolios of Easy Access IP aim to increase the engagement between universities and industry, and accelerate the transfer of university knowledge and expertise into the hands of the best commercial partner who can develop it to benefit the economy and society.

It operates on several key principles including:

- Maximising the transfer of knowledge;

- Not solely driven by monetary aims;

- Simple transactions and agreements making it easier to work together;

- Retaining sufficient rights to pursue further research (academic and commercial);

- Retaining rights to publish widely, in order to disseminate knowledge widely.

One current example is the University of Glasgow's Football Fans in Training (FFIT) which is an innovative collaboration between academics, Scotland's top football clubs and the Scottish Professional Football League Trust. FFIT delivers gender-sensitised weight loss and healthy living programmes to overweight and obese men aged 35-65 at their favorite football clubs. Since September 2010, more than 2,500 men have already taken part – successfully losing weight, becoming more active and eating a healthier diet.

2.2.1 People and relationships

The role of a research leader

The valorisation of SSH research through co-creation processes needs support at the institutional level. Although academic staff often talk of 'the university', what is often meant in that context is actually the structures of leadership, governance and management that can facilitate or block change processes. Leadership is important, not just denoted by status, but also by the skills with which to guide and influence. A leadership role in Higher Education Institution is often a balancing act between teaching and learning and valuing knowledge production, and a focus on assessing outcomes via a series of metrics, indicators and targets. Leaders who can see the value of SSH research, and can encourage the pursuit of societal impact as a desirable goal, are likely to also be those who can influence how priorities are defined and are able to put into place, or stimulate the development of, the conditions for effective co-creation research design and communication, such as the design of interactive spaces, the allocation of resources, and the opportunities for staff. Professors can have a valuable role to play in this by acting as 'critical friend' to senior leaders, making clear the benefits and value of working in this way.

Newcastle University, like many others, has its roots in responding to the challenges of industrialization and urbanisation, having formed as a School of Medicine in 1834. It was a civic university in response to the regional demands of an emerging industrial economy in the 19th century that included shipbuilding, mining, heavy engineering and agriculture. This focus eroded over the twentieth century due to national agendas to prioritise research and teaching at a national level.

This has changed significantly since 2007. A strong institutional focus on the civic agenda was a rebalancing of excellence with *purpose* in 2007, led by Newcastle University's previous Vice-Chancellor, Professor Chris Brink, who brought a deep commitment to strengthening the relationship between the University and civil society. Newcastle was appointed a beacon university for public engagement in 2007, and was one of the first universities to appoint a Pro-Vice-Chancellor for engagement. This continues with the current Vice-Chancellor, Professor Chris Day, with the vision: "Excellence with a purpose – transforming lives".

University staff both professional and academic are involved in the valorisation of research. This is supported by a number of university structures including three university wide institutes related to societal challenge themes of Ageing, Sustainability and Social Renewal. The aim of the institutes is to respond to some of the most pressing needs of society. Faculties all have professional staff whose role it is to help with research impact, and academic staff take on posts of impact champions within each School. Resources are available from a range of sources within the university for researchers from the university to engage with stakeholders. This includes funding for engagement projects and events and many different kinds of training to assist staff in research valorisation. A policy academy was run this year for 20 staff, both professional and academic, consisting of 10 days training in how to influence policy, developed in collaboration with policymakers.

Leadership extends beyond those with decision making power in the governance of universities. Leadership is also about inspiring others, enabling them to have confidence and trust in you, and about making things happen. These skills are key for those involved in co-creation to nurture – being able to motivate and influence, both within and outside academia, work pro-actively and be reflective about the power dynamics involved in leadership. Leadership could form an important element of researcher training for SSH impact generation.

The role of the researcher

Researchers are often the people at the forefront of co-creation in Universities, communicating with external partners on a day to day basis, developing relationships and undertaking a variety of roles in respect of this kind of work. They work on the cusp of academia when engaging in co-creation, needing to retain academic credibility and finding interesting academic research questions among the problems they are presented with, but at the same time being able to portray themselves as approachable and trustworthy. This calls for skills and attributes that may

push researchers outside their comfort zone and which are not always nurtured within the simple confines of academia (Chubb 2014). Such attributes might consist of: cultural awareness; empathy; negotiation skills; good communication skills; people and project management; self-belief and enthusiasm. One way in which to encourage valorisation, is to have researchers involved that have, or wish to develop, these skills. This calls for the role of a researcher to be redefined somewhat.

Exploring the motivations of researchers is a good first step to understanding how co-creation can be fostered. There are many different motivations that drive researchers, ranging from simple curiosity about the world, and a desire to make a difference, to more instrumental motivations such as accolade, money, status and legacy. Research by Upton, Vallance and Goddard (2014) found that fewer than half of the researchers they surveyed described delivering public benefit from their research as important. In addition, researchers are often time-poor, and in insecure employment, meaning that establishing, nurturing and maintaining the relationships and engaging in the processes necessary for effective co-creation is challenging. In order to create the conditions in which valorisation can thrive, it would seem that a shift in social norms around what a researcher is, and what a researcher does, is necessary.

Some of this change in culture can be encouraged by top-down initiatives such as attaching reward to impact creation, and re-structuring workload. There is a risk, however, that these kinds of drivers appeal to those researchers motivated more by extrinsic factors than by wanting to make a difference to society. However, valuing the work of researchers, providing training to give them confidence and overcoming their fears, and managing the barriers they face (such as time, the availability of resources, and job insecurity) can encourage a new kind of understanding of the role of the researcher in academia. For example, the recent Career Tracking Survey by the European Science Foundation found that early career researchers with permanent jobs were nearly three times more likely to have had a significant impact on policy and practice than those on temporary contracts (ESF 2015). Paradoxically, it is often research assistants specifically employed on projects who represent the University, sometimes from the communities they are trying to work with, and yet they may be less experienced and confident and in a precarious position that does not encourage long-term relationships (Facer and Enright 2016).

UNIVERSITY OF GHENT, BELGIUM

Storytelling is a technique for enhancing communication skills for collaborative research forms and is delivered via workshops to researchers at the University of Ghent. The training in 'storytelling' enables researchers to be able to connect with people in a natural way and can be a tool by which communication can become more human and thoughtful. The workshop facilitator explained:

"*I call it meaningful encounters – you need to be authentic, but open minded and open to possibilities and opportunities in a respectful way. Not just I want something from you, but what can we do together? This is part and parcel of impact*".

The investment in researchers in this regard is not lost even if researchers go on to leave academia and enter a wider employment market. Research investigating the destinations of European researchers shows that many researchers who leave academia are to be found in positions that are supporting the research process and as such are involved in funding, policymaking, knowledge exchange and publishing, and so increase capacity within the quadruple helix for engagement with academia (Vitae 2016). Ensuring stable working conditions, high quality training and support, and career progression pathways for research staff can encourage co-creation and valorisation activity. Given the additional difficulty of measuring the outcomes of SSH research, then incentivising the process of SSH valorisation, rather than end products would seem a productive way of encouraging such co-created research, and new norms of acceptable practice.

The role of research support staff

There are several ways in which researchers can be supported in co-creation of impact by research support staff. In some universities specialist 'impact champions' have been recruited who can offer training and support to researchers. Administrative staff often have the skills required to manage co-creation effectively, brokering relationships, maintaining good communication, ironing out misunderstandings and negotiating. They act as a bridge – not an academic, but with a good understanding of how academia and researchers work. Many in our consortium report that their roles could be expanded to provide even more support, and that where they are included as part of a collaborative research team, they can make an important contribution to co-creation and valorisation. Current university structures often mitigate against their involvement, however, with a lack of understanding of what they can bring to the research process, and a lack of flexibility for workload management and reward. In Sweden, support staff for co-creation and impact have a network and meet regularly to learn from each other, This means that practice from across all universities in the country is shared and the support staff have a vital role to play in taking that learning back into their own institutions. Ways of promoting symmetrical communication between researchers and research managers and other staff can expose the value each brings to the pathway of research impact, and promote a friendly and supportive research culture in which everyone has an important role to play.

UNIVERSITY OF GHENT, BELGIUM

In Flanders, there are few top-down drivers for valorisation. Impact activity is rarely rewarded and rarely funded, but the University of Ghent were keen to explore how they could encourage impact, recognising it's intrinsic importance. They extended the remit of a university policy officer to develop a policy paper and identify areas to work on. The policy officer identified that the university needed to obtain more funding that would support impact activity; support more staff to become knowledge brokers; create freely available platforms to support co-creation; and ensure that co-creation and valorisation were being rewarded in recruitment and academic progress and assessment systems. Her role then turned to one of implementing this strategy and she now works on a range of activity such as encouraging a change in emphasis from quantitative measurements of outputs to more descriptive ways to describe SSH impact, utilising qualitative methods, case studies,

altmetrics, and running workshops on impact planning and workshops on social media. She organises staff exchanges and conferences to learn about promising approaches, and has documented existing practices for co-creation in the university, in order to act as a relationship broker and to share good practice.

Investing in the future

There is a dual approach to developing the skills and competencies outlined above for researchers involved in co-creation. One approach involves upskilling experienced researchers, and enabling them to thrive by ensuring the conditions for impact generation are supportive. Another approach is to stimulate those attributes in new researchers by developing research students. Many approaches can be effective in this regard, including opportunities for service learning, volunteering and placements with stakeholders, as well as creating specific training packages and reward structures, such as the one pioneered at Groningen as part of the ACCOMPLISSH project.

UNIVERSITY OF GRONINGEN, HOLLAND

The Institute for Sustainable Society, University of Groningen, decided to hold an Impact Award competition for PhD students. This award was for all PhD students at the University of Groningen to stimulate societal impact from scientific research. To win this award, PhD students were challenged to show in a 60-second video-pitch what their research was about and how society can profit from it. The Impact Award is all about creativity, innovation and of course impact. The 25 entries were judged by an expert team including the Mayor of Groningen and students were awarded cash prizes for the student to invest in expanding their work and were presented at the ACCOMPLISH dialogue platform in Rome late in 2016. The 2016 winners were: First prize: Steven Forrest, Faculty of Spatial Sciences; Second prize: Daniël Postma, Faculty of Arts; and third prize: Stephanie Jurburg, Faculty of Science and Engineering. All the videos are available to view on the website.

2.2.2 Research Systems and Structures

Funding co-created SSH research

Co-creation and impact activity is resource intensive. Influencing funding strategies locally, nationally and internationally is one way of creating the space, time and conditions for valorisation. Research projects need to be funded, as does support capacity, training and devleopment and often, partner collaboration. Societal partners (and often governmental and small industry partners too) do not have the resources to collaborate and this needs to be taken into account. Including stakeholders on funding committees can enable a greater understanding of the resource needs of co-created research. Involving stakeholders in internal decision-making about grant allocation or training priorities can instil a culture where co-creation is supported and celebrated. The National Co-ordinated Centre for Public Engagement (https://www.publicengagement.ac.uk/) acts as a united voice for UK universities and has tried

to influence large funders such as the Higher Education Funding Council for England to include funding for time and resources of university partners and support more co-creation.

Support for co-creation and valorisation does not need to extend to every project at all times, however. As we have seen, co-creation is not always appropriate at every stage of the research process, and there is a risk that universities can become solely demand-led which should be mitigated against. As one ACCOMPLISSH partner stated:

> *"there's always got to be space with university research generally, whether it's social science or anywhere, for them to do things that aren't necessarily demand led. I'm reminded that actually some of the greatest inventions in history that we all take for granted, there wasn't any demand for them. There was no demand for motor cars before they were invented, nor was there really any need for them".*

ACCOMPLISSH partners drew attention to the need to educate reviewers of funding applications. There is an awareness that the time and resources needed to undertake co-creation is often underestimated, and reviewers lack the expertise to identify effective impact pathways even where funding bodies are encouraging co-creation. There is a need to ensure that funding strategies act as a genuine incentive, and not tokenistic or a means of influencing the research agenda in ways that do not take into account the growing evidence around valuing impact.

UNIVERSITY OF DALARNA, SWEDEN

One example from Sweden shows how funding strategies and strategic leadership can guide a culture of co-creation. University leaders have much autonomy on how the funding they recieve for research is allocated. One committed leader is able to influence how academics use their research time as they need to apply to him for resources. One of the ways he can encourage collaboration is to allocate part of his budget to projects involving quadruple helix partners. He works with academics to mentor them to apply for projects that involve co-creation. He states '*You could say they are mentoring relationships. I try to push them in a certain direction, a few individuals realise it is possible, then they need information, then advice'.* He also organises matchmaking events for researchers and external stakeholders at the university and seminars on co-creation.

Ethical implications and integrity

For decades Social Sciences and Humanities (SSH) research has been under debate about how it should be regulated. These debates range from arguments that SSH research differs because it involves less risk of physical injury and therefore should not be governed the same way biomedical research is and therefore ethics review should not be used (Schrag 2011), to discussions that research should be regulated the same way, despite the field (Hunter 2014). Despite these ongoing debates much of what is required by researchers is regulated by what funders require. For instance the ESRC Framework for research ethics sees ethics review as a minimum requirement and the document also includes an ethics checklist (ESRC 2015). The European Commission (2010) has produced the document "Guidance Note for Researchers and Evaluators of Social Sciences and Humanities Research" stressing that rules should not be

followed blindly and context should be taken into account. This means that researchers should be able to recognize the complexity of ethical decision-making in SSH and what is needed is deeper understanding of SSH's ethical considerations.

The most common methodological approaches used in SSH are surveys, questionnaires, focus groups, interviews, observation, field experiments, ethnography etc. Different ethical considerations stem when taking into account that SSH research may also take place in interdisciplinary settings. Co-creation adds a new challenge to all of it. Co-creation requires new kinds of methods and the kinds of inclusive research that changes the emphasis of research from 'doing research on' to 'doing research with' others. Tools for doing this have begun to be developed by researchers interested in participatory approaches. Unfortunately the current infrastructure in place for academic regulation does not take into account this new relationship for, and with, society (Campbell and Vanderhoven 2016). Nowadays ethics committees require university academics to position those they work with as subjects, and this reinforces an inherent, and sometimes unhelpful, power dynamic in collaborative arrangements. These ethical regulations take no account of the new ethical challenges posed by co-creation or recognise the relative lack of power that researchers can hold in these relationships.

Consideration needs to be given as to how to encourage moving notions of ethics from 'doing unto' to notions of researcher as ethical practitioner and identifying ethical practice in co-creation and valorisation. One possibility to foster researchers and not only researchers, but all co-creators as ethical practitioners is shifting the focus from principle based approaches to virtue based ones. Whereas the first ones are focused on action and compliance, the latter are based on character and motives. This means that the researcher has internalized the relevant values and has appropriate attitudes and dispositions. Adopting a virtue based approach enables the particulars of the situations where decisions should be made to be taken into account. There are several views of the necessary virtues for example honesty, courage, respectfulness (Pellegrino 1992, Schaffer 2009 and Macfarlane 2009). In addition, Macfarlane speaks about the overall integrity of researcher including all the roles of the individual as it is artificial to separate the role of being a researcher from other roles. One should keep in mind that in co-creation process all involved parties may adopt the role of researcher during the process.

Facilities, places and spaces of interaction

Relationships need work. While knowledge brokers can act as key people in facilitating relationships, good interactive spaces can also encourage public engagement and participation, both initiating and sustaining relationships. Many such spaces build on the opportunities that physical proximity brings, such as the Gottingen Campus in Germany.

UNIVERSITY OF GÖTTINGEN, GERMANY

The University of Göttingen forms the central core of the Göttingen Campus, maintaining a dynamic and successful research and teaching partnership with the University Medical Centre and eight excellent stakeholder research institutions. At the Göttingen location, a campus structure - exemplary within the German system of science and academia - was

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established more than ten years ago and secured by framework agreements. Such agreements were concluded with the five Max Planck Institutes (the MPIs for Biophysical Chemistry, for Dynamics and Self-Organization, for the Study of Religious and Ethnic Diversity, for Experimental Medicine, and for Solar System Research), the German Primate Center, the German Aerospace Center, and the Academy of Sciences and Humanities.

The Göttingen Campus is complemented by Associate Partners in the form of commercial enterprises and further public institutions. The partnership is based on common interests, supporting structures, voluntarily entered commitments, physical proximity and trust. At this location, science and scholarship benefit from outstanding collaborative projects with third-party funding, and from joint professorships maintained by the University together with stakeholder research institutions. Joint graduate programmes and young cross-institute researcher groups are important elements in the fostering of young academics. This successful cooperation extends also into the domain of university studies and teaching. The outstanding scientific performance and the social fabric of the entire Göttingen Campus, which is characterised by diversity and internationality, are the basis for the 'Göttingen Spirit'. This stands out as a symbol for the special atmosphere of exchange and collaboration.

In order to encourage interaction, good spaces also need to be places that people have a reason to go to, and a reason to stay, and that are easy to engage with, so that they become meaningful. People thrive on safe, familiar, easily accessible places. To encourage co-creation in research, these places must further be flexible, have the right technology, support large and small group engagement and be conducive to creating a research 'community'. They must foster creative thinking but also be flexible enough to enable 'getting things done'. Such spaces can be digital as well as physical, and new technologies such as virtual worlds are creating new opportunities that are as yet underexplored.

UNIVERSITY OF GHENT, BELGIUM

Inspired by Antwerp as the 'smart city of things' Ghent is aspiring to become 'the smart city of people', creating the city as a space of innovation, a creative space. The city has invested in a new public library, called the Krook, which has more than 7000 visitors a day, so researchers from 'digital communications' and from 'rhetoric and literature' have co-located there, and see this is a great opportunity to create a living lab, a conversation between science and the public. They set up public engagement events around a societal challenge each year and the building forms the infrastructure, with all the resources that are needed – people, space, and information screens. It is a venue that can raise awareness in the public of what they are doing, but also gives opportunities for researchers to get ideas from the public. The university has plans to open a university museum in 2019. This will be a place of reflection, open to the public, where people can discover what science is going on at the University, and think about the big questions and challenges. A kind of atmosphere where you can sit on a comfy sofa, have a coffee and

hear a researcher talk about their work. There will also be temporary exhibitions, and it will be a place where researchers can learn about how to improve their public engagement.

UNIVERSITY OF GÖTTINGEN, GERMANY

Every two years, the University of Göttingen organizes the so-called "Nacht des Wissens", a large public event where the Göttingen Campus institutions open their doors for interested citizens.

Currently, the University of Göttingen is planning the "[Forum Wissen](#)", the future knowledge museum of the University of Göttingen. Forum Wissen will allow the public to share in the intellectual and material assets of the university. It invites people who have previously had relatively little contact with the academic world to access this world for themselves. It also gives people incentives to take up their own stance, make demands of scientific endeavour and get involved in the multifaceted process of "knowledge in the making". At the same time, Forum Wissen has an impact on the world of science and scholarship itself by creating space for interdisciplinary work with the objects from university collections and encouraging researchers to extend their horizons and be inspired by the methods used, questions asked and arguments presented by other disciplines and other academic cultures.

2.2.3 Research environment

Support structures

Several examples are beginning to emerge of structures that are ideally placed to support valorisation and co-creation. The University of Brighton, for example, has developed a specific unit dedicated to supporting partnerships that benefit the local community and the University, called the Community University Partnership Programme (CUPP)

https://www.brighton.ac.uk/business-services/community-partnerships/index.aspx

This unit run events, provides information and advice on partnership working, brokers relationships and provides materials and resources for researchers. The staff are made up of academic and stakeholder directors, a knowledge exchange development manager, research support staff and project staff. This means that the university can not only encourage its researchers to engage with external stakeholders, but actively provide support and resources for them to be able to do so relatively easily. Some universities have encouraged networks to form by holding regular events of interest to external stakeholders, so that relationships can develop over time, and mutual understanding can be fostered. These kinds of structures can be effective facilitators of guiding researchers, engaging partners, and instilling a culture of co-creation in universities.

These structures are a way in which communities of practice can be developed so that the learning generated within a university and beyond can be shared and built on. It enables a sense of what is happening to be monitored and entails a flexibility to respond to the support needs of staff and stakeholders.

UNIVERSITY OF NEWCASTLE, ENGLAND

The Newcastle Institute for Social Renewal (NISR) was set up in 2012 by the then Vice Chancellor, with the aim of focusing upon 'excellence with a purpose'. NISR challenges researchers to consider not just 'what we are good at' but 'what are we good for'? http://www.ncl.ac.uk/socialrenewal/

NISR champions these aims in a number of ways:

- o NISR Funding call which encourages but is not exclusive to engaged research and work with stakeholders

- o Sharing good practice in engaged research via papers and workshops

- o Leadership, advice and guidance on engaged research approaches

- o Brokerage and communication with academics and stakeholders (typically to develop joint research applications and/or joint projects)

- o Working in conjunction with national funding councils to jointly fund and administer grants that encourage impact creation

- o An External Advisory Board (with members from various sectors from the Quadruple Helix) and a stakeholder strategy to develop work with external partners

UNIVERSITY OF GHENT, BELGIUM

The University of Ghent has developed what they term a 'science shop'.This idea originated in the Netherlands and is a platform for stakeholders to ask a university to research something for them. Their question is put into a database, and they will be matched to a relevant researcher at the university who can then see if there is a masters student who is able to conduct a dissertation on that topic. The university currently has 15 postgraduate students doing dissertations inspired by this platform. Academic staff are also encouraged to develop projects with partners posing a question via the platform. The ACCOMPLISSH partner explained its value thus:

"It's a low threshold way to get people connecting with a university. We are seen as impenetrable"

The Bosch i Gimpera Foundation is devoted to promote and manage the transfer of the knowledge and technology generated at the University of Barcelona. It is the main service for connecting the quadruple helix needs and the research at the university. The Foundation is responsible for keeping a catalogue updated showing the expertise and services that university research groups can offer, for maintaining regular contacts with researchers and potential collaborators, and providing assistance and advice in knowledge transfer agreements between other functions. They are supported by research support staff across the university. It currently has nearly 2000 active projects.

Accountability and assessing impact

Mechanisms for the assessment of impact serve two key functions, firstly, to hold universities to account for their funding, and secondly, to incentivise such activity. However, given the range of impacts that can be created through the valorisation of SSH research, a simple system based on outcomes is unlikely to serve either of those functions. As we have seen, achieving the valorisation of SSH research via co-creation is best seen as a process, and one in which anticipated and unintended outcomes may not be seen for many years. This poses a challenge for accountability and measuring impact. Positivist methodologies for evidencing impact may not be fit for purpose in respect of SSH research and rather, reconceptualising impact measurement as 'evidencing value' may enable a wider range of evidence to emerge (Bamber and Stefani 2015). If the process of valorisation is more relevant to record than a product, then more qualitative methodologies need to be used, and less reliance on quantitative metrics needs to be fostered. To further complicate matters, in circumstances in which collaborations work well, then claiming ownership of any impact on an individual or institutional level is difficult and indeed may be inappropriate.

Section Three: Principles of Communication

3.1   Key principles for communication

Communication can be defined as a process of transfering messages, information and ideas to different agents. To explain how communication works, linguists use the shematics of communication cycle which involves the sender, the context, the message, the code, the channel and the receiver of the message as key parts (Jakobson 1960). Linguistics, as well as different social and humanistic sciences which deal with communication in some respect, all use different models in order to describe communication. Due to the rapid changes in society, there is a need to reinterpret the process of communication and to consider new models of communication.

Considering the communication cycle, one can see that the position of the sender and the receiver has become more complex since both the sender and the receiver have to act as if they were the interpreters in order to grasp the bidirectional and multidimensional aspect of communication. This way, the notion of audience is created with respect to social dimension and social dynamics, since communication has a key role not just in reflecting the social reality but also in shaping it (Pearce 1989).

In order to be accessible to the targeted audiences, the messages, ideas, outputs of research etc., must be translated (Lotman 1985). The translation often involves cultural translation and the result is an interactive model of communication where meanings are shared and created. In this respect, communication can be seen as a co-creation of meaning with high potential of passing the information to all knowledge users. Such a model requires certain skills and active participation not just from the researchers, but from stakeholders as well. However, if such a model is to function, communication should be implemented at all the levels of value chain, not just dissemination. The result should be an interdependent informational structure available to the stakeholders, and as such it could lead to the changes in society, innovations and many other benefits for the society and public in general.

Figure 3.1 An emerging value chain for research communication

Implementing communication through the value chain could lead to the understanding of communication as a process and a product. The implementation requires a new model of communication which is informative enough to lead to the stakeholder engagement and clear enough to lead to shared understandings. If the information is structured in an appropriate way and accessible to the stakeholders and public in general, it should enable an ongoing dialogue leading to the translation of information and messages. Through such a model, communication can be seen as a process resulting in an interactive model of meaning co-creation which is passed to the stakeholders and public in general through the dissemination.

Due to the aforementioned, key principles for communication should include the process of shaping the content of the message in order to be informative. The next step should be to meet the requirements of clarity in order to achieve shared understanding and after that to structure the information to enable an ongoing dialogue. The translation is always needed since communication is context specific and the goal is to create and share meanings. The last step is the dissemination and it should reflect the interactive model of communication as a meaning co-creation.

A set of four principles presented in the table below should strengthen the position of communication in process of co-creation. Communication should not be considered as a tool for dissemination but as a dialogical process of sharing and creating meaning. Messages should be clear and accessible to all the stakeholders. New models should be considered and they should incorporate new approaches as well as new technologies.

Figure 3.2 Key principles for communication

KEY PRINCIPLES FOR COMMUNICATION
PRINCIPLE ONE
Communication should be considered as an integral part of co-creation throughout, not just considered as a tool for dissemination but engendering ongoing dialogue
PRINCIPLE TWO
Communication should be clear to enhance understanding and facilitate dialogue
PRINCIPLE THREE
Communication should be accessible to all through shared language and meaning making
PRINCIPLE FOUR
Methods of communication should be tailored to the needs of the co-creation, and incorporate new technologies and innovative approaches

Although new models require time to investigate, implement and adapt, there is a need to move beyond existing recommendations for successful communication since research communication is directed towards change, transformation and improvement, i.e. impact. This implies that the best model for communication is tailor-made model of adjusted communication because it includes wider audience into conversational interactions about the research from the very beginning of the research. However, if we are about to conceptualise the new model of communication, the key principles must be taken into consideration, the theoretical background should be widened and we should learn from the past experience with existing models of communication – what are the advantages and the flaws.

3.2   Co-creation in action

Defining co-creation as a collaboration leads to the communication as a crucial process in the quadruple helix setting. To strengthen this position of communication, it is crucial to implement the satisfying, tailor-made model of communication within all the links of the value chain. This fosters a dialogue between partners of the quadruple helix and has a positive outcome in the sense of information accessement, the mutual understanding of standpoints of the research and

it bridges the gap between the academic and non-academic community, which is a precondition for achieving impact.

As the agents within the quadruple helix setting, the researchers should move from traditional academic work methods to problem-oriented research in order to achieve the goal of co-creation – impact. Their key role is to be actively engaged in co-creation of knowledge in an interactive way which can easily be translated and transferred to stakeholders. Nevertheless, the role of the researcher has changed due to the requirements of QH setting, shifting social dynamics and emerging new modes of communication, which are a consequence of social changes.

The meaning of co-creation is multilayered and in the literature the notion is used synonymously with the notion of co-production. This is quite problematic for the researchers and could be very confusing for the stakeholders, as it could result in a communication barrier or even in a misconception. However, considering the co-creation as a model and defining it in the broadest sense of the term – as a collaborative process, co-creation can be used as a model in social sciences and humanities because it enables the interpretation of different collaborative activities as co-creation (e.g. in linguistics communication can be defined as co-creation of meaning, in pedagogy, the process of learning can be defined as co-creation of knowledge etc.). Therefore it is not surprising that the notion of co-creation is preferred by social sciences and humanities better than the notion of co-production.

When coining new terms, as well as words in general, or transferring and translating the existing terms to suite different fields of sciences or sciences themselves, synonymy should be avoided in order to avoid misconceptions and miscommunication. Since trends in communication, as well as communication patterns, change due to the social changes, researchers should be careful in coining neologisms as they could, due to the constrained context of use, result in occasionalisms.

> **TERMINOLOGICAL PROBLEM IDENTIFIED BY ONE OF THE INTERVIEWEES**
>
> *Nomenclature – we use the same terms but they mean different things. If we don't understand that, we have a problem. When we say problem, it's not always problematic in the same way as others might see.*

The specifics of the quadruple helix setting and the requirements of co-creation changed the traditional role of the researcher and their working environment. In order to achieve impact from social sciences and humanities, the new professionals – knowledge brokers, become engaged by the universities in order to mediate between the researchers and policy makers. Such a profession requires communication expertize, among others, and stresses the importance of communication in co-creation, since their main role is to focus on research communication or dissemination; knowledge exchange or knowledge transfer; and/or professional training or continuous professional development (Knight and Lightowler, 2013). Since knowledge brokers are defined as agents who support interaction and engagement with the goal of encouraging knowledge exchange, supporting research use and strengthening research impact (Knight and Lightowler, 2013), this new profession can be seen as a a genuine result of collaboration and, therefore, an impact achieved through the process of co-creation, since the needs of researchers

and their quadruple helix partners met on a common ground and resulted in a profession of mutual benefit for all the partners in the quadruple helix setting.

> **THE ROLE OF KNOWLEDGE BROKERS DESCRIBED BY ONE OF THE INTERVIEWEES**
>
> *We need knowledge brokers with skills that maybe academics don't have - these super-people who can understand the scientists concerns, and can understand the stakeholders concerns and questions.*

3.3   Modes and Instruments for research Communication

Due to the requirements of co-creation in achieving the impact, researchers should use different modes and instruments for communication. Besides the traditional modes – dissemination through paper writing, conferences and (public) lectures, new modes are being used and they indicate the positive effect. Those include social media such as social networks, blogs, newsletters and different web pages which serve as information platforms. Although the effect tends to be positive, there are some challenges such as ethics, moderating the discussions (on social networks) and feedback (Bastow, Dunleavy and Tinkler 2014).

In order to understand the specifics and requirements of research communication within a quadruple helix setting, the data conducted by the interviews with ACCOMPLISSH university partners have been analysed. The results of analysis are not intended to be generalized, but ought to be considered indicative and serve the purpose of enhancing the communication between partners of the quadruple helix.

The analysis of the data shows that social media are used among the researchers and recognised as a good communication mode on an institutional level as well. Social media enable communication on different levels to different audiences. They have the capacity to reach the public more easily, due to the large number of users and the possibility to make networks in order to connect with people and share information. This indicates the positive effect concerning the increase of the public understanding of the social sciences and humanities and it reflects the intentions of researchers and their engagement in the process of communication to pass the information and enable knowledge exchange i.e., it reflects their active role in co-creation. Social media have changed the modes and the very concept of communication since they created the virtual public sphere (Wright, 2011) and allowed the communication to be conceptualised even as a space – space for the exchange of information and knowledge.

> **NEW MODES OF COMMUNICATION –**
> **EXAMPLES FROM THE UNIVERSITY OF GHENT**
>
> *Planning to open a university museum in 2019. This isn't a science centre, it's more a place of reflection, open to the public, where people can discover what science is going on at the University, but also what is their role, their place in this?*

> *A 'Living Lab' in the centre of the city. We have good links in the city and we are trying to put Ghent on the map as a 'smart city'.*
>
> *Workshop with 70 postdocs – I stress the art of storytelling, not just for writing better papers and grant proposals, but for connecting with people in a way that is almost natural. Talking to people in a human way, connecting with them. Storytelling is often put aside as a soft skill but it is really important.*
>
> *Also networking – the basics, there are so many different ways to do this. Need to find a way that works for you, your research area and your target audience.*

The researchers and institutions have gone beyond using the conventional modes of communication as examples of different events – open labs, science cafes, science shops etc., workshops and seminars are mentioned. They all stress the importance of sharing the experiences, not just information through communication. Alongside the informal, there are examples of institutional initiatives in organising mentioned events and such efforts indicate the need for an interactive model of communication which can be adjusted to different contexts – specific socio-cultural and professional contexts.

The results of the data analysis suggest that research communication which is authentic, strategic and interactive is considered effective and can achieve impact. One of the most often mentioned requirements for research communication was the one referring to simplication of messages. Although it is important to simplify messages in order for all the stakeholders to understand it and involve in communication, the importance of not over-simplifying the messages was mentioned as well. Oversimplification, using rhetoric's, manipulation and communicating as advertising oneself or an organisation/institution, have been mentioned as examples of poor communication praxis and should be avoided.

There is a need to do more training with the researchers, but with stakeholders as well. The advantage of such trainings is face-to-face communication and the exchange of information and experience. Such communication is more integrating for stakeholders, it is directed towards mutual understanding and problem solving and leads to the collaboration – joint projects or even co-authorship on publications. The need for additional training in communication – communication for specific purposes/audiences, has been stressed as well.

> **THE LACK OF TRAINING**
> **(a problem identified in almost every interview)**
>
> *One of the main barriers is that people are not trained to do it. They are trained as teachers and academics, but they are not getting skills for broader communication. There are optional courses on science communication, but nothing else.*
>
> *Training needs to be done with stakeholders, in order to understand them. We need to have tools to help people learn from examples of good practice*

The data suggest that communication is a crucial process in achieving the impact. However, if it does not meet the requirements of being authentic – to reflect different characters of partners and different realities, interactive and strategic – to be coordinated and goal oriented, it can be the biggest barrier to the process of achieving impact, since the mutual understanding is the condition *sine qua non*. In order to make the research communication more efficient, the data analysed are used to give recommendations for research communication in the final section.

Section Four: Ways Forward

4.1   Recommendations for research design

This working paper has covered a broad brush, considering research design within a holistic framework of values and attitudes; systems and structures; and experiences and understandings throughout the value chain. It has presented examples of practice from across Europe in order to stimulate thinking about the possible in respect of co-creation for SSH valorisation. We have outlined the principles that we believe are critical to consider in order to ensure effective co-created research design, and yet we realise that change needs to be stimulated in order for these to be implemented. Some of this change may consist of practical steps, but this change also may necessitate a change in the culture of the university, and of funding bodies and of the higher education sector generally. The ACCOMPLISSH project will continue to explore the implementation of co-creation models, and develop tools and training to support this (WP4), produce a database of best practice (WP2) and develop tools for impact planning (WP5). In the meantime, we have several recommendations to make to assist them in these tasks at this point, 15 months in to the ACCOMPLISSH dialogue platform:

1. Universities should be encouraged to develop a clear justification for co-creation and to value the contribution that SSH research can make to society, beyond economic development and academic outputs.
2. In stimulating change, consideration should be given to the holistic framework in which co-creation takes place: values and attitudes; systems and structures; and experiences and understandings. Emphasis should be placed on stimulating institutional capacity for knowledge mobilisation (top-down drivers), as well as individual skills development and awareness raising (bottom-up drivers).
3. A dual approach is needed to encourage individuals' development that incorporates both experienced researchers and early career researchers (including research students), through a variety of means including training, engagement opportunities, and recognition and reward structures.
4. Further work must be done to establish how effective co-creation works, for whom, and in what circumstances, and to consider approaches to ethical regulation, intellectual property, and other key issues that arise. This may constitute a focus on the processes and methodology of co-creation approaches and the links to valorisation, and identifying the critical points at which things happen, and the mechanisms for these.
5. Further consideration needs to be given to methods of assessment for co-creation and valorisation of SSH work. Outcomes are multiple, complex and sometimes elusive, and the process of valorisation is non-linear. A focus on narrative which can identify and evidence a clear theory of change is a valid technique.

4.2   Recommendations for research communication

The broadest definition of communication was suggested by Paul Watzlawick (1979) stating that *All behaviour is communication.* From this definition he postulated the first axiom of his theory of communication – that it is impossible not to communicate. The data analysed suggest that even the researchers prefer very broad definitions of communication, and there are many such definitions of communication since it is a phenomenon investigated by different social sciences

and humanities. Although different definitions and interpretations often overlap or complement each other, Wright (2011) argues that the problem with any definition of communication is that, in trying to be broad enough to cover the subjects' diversity, the explanatory power of the definition can be lost.

DEFINITIONS OF COMMUNICATION GIVEN BY THE INTERVIEWEES

Communication extends way beyond information. There is an over-belief that we can inform people to become interested in what we are interested in. Communication is about much more than that – it's about building relationships.

As in the other questions we can describe an experience as the example for a good practice in communication.

In order to be more effective and to achieve impact, communication should be authentic, strategic and interactive. Messages should be simplified in order to be understood by the stakeholders and they should be accessible to them. In order to enhance the communication between partners of QH, researchers use new modes of communication – the social media and different concepts of workshops and events where researchers and stakeholders meet and exchange information and experience.

RECOMMENDATIONS FOR COMMUNICATION
(based on the answers of the interviewees)

AUTHENTIC
I guess that the most important rule of communication is to be honest and authentic.
HONEST
First of all universities need to build a network based on trust.
INTERACTIVE
Doing stuff together: organizing a roundtable, having partners to talk in the same room, bringing them together with students. Some kind of a workshop, practical things with students or professors, different partners from the QH are brought together.
COORDINATED
Good practice is to coordinate communication with all your partners, so that you could really communicate on everybody's behalf.

New modes of communication have showed themselves to be quite effective and indicate that the satisfying model of communication would be a tailor-made model of communication with the ability to be adjusted to specific contexts. In order to achieve impact, such model should be implemented at all the links of the value chain.

Due to the process of globalisation, English has become a predominant language of communication worldwide. This refers to the use of English in written and spoken communication of different fields – science, law, economy etc.. Wierzbicka (2014) notes that the

problematics of the prevalent use of English in scientific discourse is that constructs embedded in English lexicon are often taken for granted and the fact that English, as any language, reflects culture specific ideas and assumptions is often overlooked. One could, according to Wierzbicka (2014) become conceptually imprisoned in English.

> *Disguised in this way as "scientific" notions, English folk concepts live on in many areas of contemporary global science, serving as props for theories that depend on English words but are divorced from ordinary intuitive understanding of what these words mean, and thus unverifiable and seemingly immune to criticism* (Wierzbicka 2014).

To get a better insight into the problematics of research communication, new approaches should be used and contemporary literature from different social sciences and humanities should be consulted. Such new approaches should reflect the interdisciplinary character of social sciences and humanities and they should be able to interpret the multidimensional aspects of communication as a social praxis central to human behaviour.

References

Akkerman, S. and A. Bakker. (2011) Boundary crossing and boundary objects. *Review of Educational Research.* 81(2): 132-169.

Akmajian, A., Demers, R.A. Farmer, A.K. and Harnish, R.M. (1979) *Language and communication*. Cambridge: M.I.T. Press.

Arnstein, S. (1969) A ladder of participation. *Journal of the American Institute of Planners*. 35(4): 237-249.

Bamber, V. and Stefani, L. (2015) Taking up the challenge of evidencing value in educational development: from theory to practice. *International Journal for Academic Development.*

Bastow, S., Dunleavy, P. and Tinkler, J. (2014) *The Impact of the Social Sciences: How academics and their research make a difference*. London: Sage.

Benneworth, P and Jongbloed, B.W. (2010) Who matters to universities? A stakeholder perspective on humanities, arts and social sciences valorisation *Higher Education*. 59: 567-588.

Bornbaum, C.C., Kornas, K., Peirson, L. And Rosella, L.C. (2015) Exploring the function and effectiveness of knowledge brokers as facilitators of knowledge translation in health-related settings: a systematic review and thematic analysis. *Implementation Science*. 10: 162.

Brown, V. A., Harris, J.A. and Russell, J.Y. (eds) (2010) *Tackling wicked problems through the transdisciplinary imagination*. London: Earthscan.

Cairney, P. and Oliver, K. (2017) Evidence-based policymaking is not like evidence-based medicine, so how far should you go to bridge the divide between evidence and policy? *Health Research Policy and Systems.* 15: 35.

Clark, J., Laing, K., Leat, D., Lofthouse, R., Thomas, U., Tiplady, L. and Woolner, P. (2017) Transformation in interdisciplinary research methodology: the importance of shared experiences in landscapes of practice. *International Journal of Research and Method in Education*. 40(3): 243-256.

Campbell H and Vanderhoven D (2016) *Knowledge that matters: realizing the potential of co-production*. N8/ESRC Research Programme www.n8research.org.uk

Chubb (2014) What skills are needed to be an impactful researcher? In Denicolo, P. (ed) *Achieving Impact in Research*. London: Sage Publications Ltd.

De Certeau, M. (1984) *The Practice of Everyday Life.* Berkeley: The University of California Press.

De Jong, S.P.L., van Arensbergen, P., Daemen, F., van der Meulen, B. and van den Besselaar, P. (2011) Evaluation of research in context: an approach and two cases. *Research Evaluation*. 20(1), 61-72.

De Jong, S.P.L., Smit, J. and van Drooge, L. (2015) Scientists response to societal impact policies: A policy paradox. *Science and Public Policy*. 1-13.

Derrida, J. (1969) *Della grammatologia*. Milano: Jaca Book.

Eco, U. (1962) *Opera aperta*. Milano: Bompiani.

Eco, U. (1990) *I limiti dell'interpretazione*. Milano: Bompiani.

ESRC Framework for research ethics (2015)

www.esrc.ac.uk/files/funding/guidance-for-applicants/esrc-framework-for-research-ethics-2015

European Commission (2010) Guidance Note for Researchers and Evaluators of Social Sciences and Humanities Research. http://ec.europa.eu/research/participants/data/ref/fp7/89867/social-sciences-humanities_en.pdf

European Science Foundation (2015) *Career Tracking of Doctoral Holders*.

Gensini, S (ed). (2002) *Manuale della comunicazione*. Roma: Carocci.

Greimas, A.J., Courtés, J. (1993) *Sémiotique. Dictionnaire raisonné de la théorie du langage,* Paris: Hachette.

Hunter, D. (2014) Can significant differences in regulating medical and non-medical research be justified? *Monas Bioeth. Rev.* 32:254-267.

Facer, K. and Enright, B. (2016) *Creating Living Knowledge: The Connected Communities Programme, community-university relationships and the participatory turn in the production of knowledge*. Bristol: University of Bristol/ AHRC Connected Communities.

Goddard, J. (2016) National higher education systems and civic universities, In: Goddard, J., Hazelkorn, E., Kempton, L. and Vallance, P. (eds) (2016) *The Civic University: The policy and leadership challenges.* Cheltenham: Edward Elgar Publishing Ltd.

Goddard, J. and Tewdwr-Jones, M. (2016) *City Futures and the Civic University*. Newcastle upon Tyne: Newcastle University.

Grand, A., Davies, G., Holliman, R. and Adams, A. (2015) Mapping public engagement with research in a UK university. *PLOSone*. 10(4): 1-19.

Hart, R.A. (1992) *Children's Participation: from tokenism to citizenship*. Florence: UNICEF International Child Development Centre.

Irwin, A. (2017) If the indicator game is the answer, then what is the question? *Engaging Science, Technology and Society*. 3: pp. 64-72.

Jakobson, R. (1960) Linguistics and Poetics. In Thomas Sebeok (ed.). *Style in Language*. Cambridge, MA: M.I.T. Press. pp. 350-377.

Kempton, L. (2016) Institutional challenges and tensions, In: Goddard, J., Hazelkorn, E., Kempton, L. and Vallance, P. (eds) (2016) *The Civic University: The policy and leadership challenges.* Cheltenham: Edward Elgar Publishing Ltd.

Knight, C. and Lightowler, C. (2013) Sustaining knowledge exchange and research impact in the social sciences and humanities: Investing in knowledge broker roles in UK universities. *Evidence and Policy.* 9(3).

Kress, G. and Van Leeuwen, T. (2001) *Multimodal Discourse: The Modes and Media of Contemporary Communication.* London: Arnold.

Kubiak, C. (2009) Working the Interface: Brokerage and learning networks. *Educational Management Administration and Leadership.* 37(2): 239-256.

Lam, A. (2000) Tacit knowledge, organisational learning and societal institutions: an integrated framework. *Organisation Studies.* 21(3): 487-513.

Le Dantec, C.A. and Fox, S. (2015) *Strangers at the Gate: Gaining access, building rapport, and co-constructing community-based research.* Paper presented at 18th ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW 2015). March 14-18, 2015. Vancouver, BC, Canada.

LERU (2017) *Productive interactions: societal impact of academic research in the knowledge society. Position Paper.* LERU: Leuven.

Lévi-Strauss, C. (1972) *Le strutture elementari della parentela.* Milano: Feltrinelli.

Lotman, J. (2005) On the Semiosphere. *Sign System Studies.* 33(1): 205- 229.

Macfarlane, B. (2009) *Researching with Integrity. The Ethics of Academic Inquiry.* New York and London: Routledge.

Meyer, M. (2010) The rise of the knowledge broker. *Science Communication.* 32(1): 118-127.

Morton S (2015) Creating research impact: the role of research users in interactive research mobilisation. *Evidence and Policy.* 11(1): 33-55.

Mosher, J., Anucha, U., Appiah, H. and Lewesque, S. (2014) From Research to Action: Four Theories and Their Implications for Knowledge Mobilization. *Scholarly and Research Communication.* 5(3): 0301161, 17 pp.

Pearce, B. (1989) *Communication and the Human Condition.* Southern Illinois University Press.

Pellegrino, E. D. (1992) *Character and Ethical Conduct of Research. Accountability in Research.* 2(1): 1-11.

Petrilli, S. (2002) Traduzione e traducibilità. In: Gensini, Stefano (ed). *Manuale della comunicazione.* Roma: Carocci. pp. 419-449.

Phipps, D. and Morton, S. (2013) Qualities of knowledge brokers: reflections from practice. *Evidence and Policy.* 9(2): 255-65.

Phipps, D.J. and Shapson, S. (2009) Knowledge mobilization builds local research collaborations for social innovation. *Evidence and Policy.* 5(3): 211-27.

Phipps, D.J., Zanotti, D. 2011. It's the basement not the belt. *Gateways Int'l J. Community Research and Engagement.* 4: 203-217

Pohl, C., Rist, S., Zimmerman, A., Fry, P., Gurang, G.S., Schneider, F., Speranza, C.I., Kiteme,B., Boillat, S., Serrano, E., Hirsch Hadron, G. And Weisman, U. (2010) Researchers' roles in knowledge co-production: experience from sustainability research in Kenya, Switzerland, Bolivia and Nepal. *Science and Public Policy*. 37(4): 267-281.

Reed, M.S., Vella, S., Challies, E., de Vente, J., Frewer, I., Hohenwallner-Ries, D., Huber, T., Neumann, R.K., Oughton, E.A., Sidoli del Ceno, J. and van Delden, H. (forthcoming, 2017) A theory of participation: What makes stakeholder and public engagement in environmental management work? *Restoration Ecology.*

Reed, M.S (2016) *The Research Impact Handbook* (Fast Track Impact).

Schaffer, M.A. (2009) A Virtue Ethics Guide to Best Practices for Community-Based Participatory Research. *Progress in Community Health Partnerships: Research, Education, and Action*. 3(1): 83-90.

Shannon, C.E. and Weaver, W. (1963) *The Mathematical Theory of Communication*. University of Illinois Press.

Schrug, Z. M. (2011) The case against ethics review in the social sciences. *Research Ethics*. 7(4): 120-131.

Shucksmith, M. (2016) *Interaction: How can academics and the third sector work together to influence policy and practice?* Carnegie UK, Dunfermline.

Sperber, D. and Wilson, D. (1995) *Relevance: Communication and Cognition*. Oxford/Cambridge: Blackwell Publishers.

Thorson, K. (2013) Strategic Communication. URL: http://www.oxfordbibliographies.com/view/document/obo-9780199756841/obo-9780199756841-0007.xml (accessed April 2017)

Upton, S., Vallance, P. and Goddard, J. (2014) From outcomes to process: evidence for a new approach to research impact assessment. *Research Evaluation* 23: 352-365.

Vallance, P. (2016) The historical roots and devlopment of the civic university. In: Goddard, J., Hazelkorn, E., Kempton, L. and Vallance, P. (eds) (2016) *The Civic University: The policy and leadership challenges*. Edward Elgar Publishing Ltd: Cheltenham.

VITAE (2016) *What do Research Staff do Next?* The Careers Research and Advisory Centre: Cambridge.

Volli, U. (1994) *Il libro della comunicazione.* Milano: il Saggiatore.

Ward, V., House, A. and Hamer, S. (2009) Knowledge Brokering: The missing link in the evidence to action chain? *Evidence Policy*. 5(3): 267-279.

Watzlawick, P., Helmick Beavin, J. and Jackson, D.D. (1974) *Pragmatics of Human Communication A Study of Interactional Patterns, Pathologies, and Paradoxes.* W. W. Norton: New York.

Wenger, E. (1998) *Communities of Practice: Learning, Meaning and Identity*. Cambridge: Cambridge University Press.

Wierzbicka, A. (2014) *Imprisoned in English*. Oxford: Oxford University Press.

Wright, S. (2008) Language, communication and the public sphere: Definitions. In: Wodak, Ruth; Koller, Veronika (ed). *Handbook of communication in the public sphere*.