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University of Applied Sciences

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Ethics as a resource
Examples of RDI projects and educational development

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Ethics as a resource

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Preface
Ethics as a core competence for sustainable RDI and education at Laurea

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Higher Education Institutions have a prominent impact on societies and environment through their education and Research, Development and Innovation (RDI) activities. However, everchanging societal conditions challenge institutions' ability to produce applicable knowledge for innovations. At the same time, the complexity of problems has made it difficult to assess all consequences of the solutions that are developed.

At Laurea UAS, ethics is a strategic theme, not just in the sense of responsible research, but from the perspective of all the organizational activities as well as their societal impact. Ethics challenge us not only to develop better solutions, but to also understand our impact.

The traditional research integrity needs new tools and approaches when promoting and fostering renewals and innovations in working life and its service and product offerings. Approaches such as Responsible Research and Innovation (RRI) and Societal Impact assessment (SIA) have complemented the practices of research & development ethics and its expected outcomes. Since 2005, societal impact has also been one of the focal points of the quality auditing of higher education institutions in Finland. Societal Impacts have also become an essential expectation by funders, policymakers, quality agencies and other stakeholders.

In EU policy guidelines universities have been challenged to respond to societal challenges, for example in complementary research funding instruments such as the Horizon2020 funding program. Sustainable development and Corporate Social Responsibility in turn have gradually been new norms of working life.

Impact as a value guides everything we do. Responsibility as a value means taking responsibility for the results of our own work and doing things together. At Laurea UAS, we consider economically, socially and ecologically sustainable development in all our operations. We create new sustainable development solutions through teaching and RDI activities.

Universities of Applied sciences have three tasks: education, (especially applied) research and regional development. At Laurea UAS we integrate the RDI projects into education. Students have a good chance to be part of the RDI activities and integrate their studies into real RDI projects with researchers and stakeholders. This approach is built in the LbD (Learning by developing) pedagogical approach that is developed at Laurea. Students have a good chance to gain ethical competences within RDI activities. This requires us to have high quality of teaching ethics too.

The purpose of this ethics publication is to demonstrate how we in Laurea UAS have embedded the ethics into our daily RDI practices and education. After a conceptual article on ethics we present projects in which various well-known ethical standards, tools and theories have been applied. After that we move the focus on education and RDI-activities. In third section, we scrutinize inclusiveness and participatory approach from as an ethical frame for our activities. Last section of this publication focuses on methodology and different approaches of RDI projects from ethics point of view.

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1. Ethics as a concept

Karoliina Nikula, Sari Sarlio-Siintola & Jaakko Tyni

Are ethics relevant nowadays? In this article, we claim that ethics are a fundamental and inalienable concept, study and practice. Furthermore, we will examine ethics as a concept: philosophically, etymologically and as an everyday life practice. In conclusion we provide an overview of ethics in this book and at Laurea University of Applied Sciences.

ETYMOLOGICAL APPROACH TO ETHICS

According to the Helsinki Term Bank for Art and Science, ethics is part of the philosophy that studies a moral and good life. Etymologically thinking, ethics (Greek, ἠθική, ēthos) means character. Morality is a close concept to ethics (Latin, moralis, mores) meaning, custom or manner. As a distinction from ethics, morality is the actions and choices done in practice by individuals or societies.

The roots of ethics and morality are alike (Helsinki Term Bank for Art and Science; see also Juujärvi et al. 2007). Nowadays, however, the meanings of ethics and morality are different. Morality means the understanding and view of people and societies about what is right and wrong; ethics investigate right and wrong. Ethics can be described as a systematic aim to understand the views of right and wrong. Ethics also refers to moral views that a person is aware and committed. As a distinction from morality, ethics means reflection and (thoroughly) thought about right and wrong. A moral problem can be more personal, an ethical problem more reflective. A starting point for professional ethics is that it is based on reflections and ponderings about right and wrong (Juujärvi et al. 2007, 13).

ETHICS – IMPOSSIBLE TO DEFINE?

Ethics and morality as concepts are defined multiply, even in philosophy (Clarkeburn and Mustajoki, 2007, 23). Philosophy is impossible to define; even philosophers themselves do not agree on the definition, not to mention the challenge of defining it so that a person who is not familiar with philosophy would understand what it actually is about (Haaparanta and Niiniluoto 1990, 91). This applies to ethics as well, as ethics is part of philosophy.

Defining ethics is often challenging. Ethics as part of philosophy is a field of study in academic universities. Ethics as a concept is not unambiguous nor simple. It is not always clear what actually is meant by ethics. In everyday language ethics and morality are often used as synonyms. In this article by ethics we mean philosophical ethics, that is moral philosophy.

In some ways, ethics are not like other "sciences" (Haaparanta and Niiniluoto 1990, 93). Ethics has not developed like, e.g., medicine or psychology. In ethics we are still dealing with some of the same questions as in ancient times, when Socrates started pondering moral questions (see also Haaparanta and Niiniluoto 1990, 93). Moral philosophical thinking that started a couple thousand years ago has not earned a consensus on the basic nature of ethics or the hierarchy of moral principles, not to mention how to apply those in present-day global situations (Baggini and Fosl 2012, 13). In ethics it is still relevant to use sources from ancient times: Socratic dialogue is still a valid tool for contemplating ethically compelling issues, raising ethical awareness, understanding complex issues, widen one's thinking, etc. For instance, Nicomachean ethics and Socratic dialogues are still valid sources in the study of ethics.

Unlike other sciences, ethics are often not looking for – not to mention offering – the "right answers", as that is not the main point of ethics. Ethics has value as such. In ethics it is more important to ask than to answer. Often it is said that ethics are more like a study of questions rather than a study of answers. Some ethicists themselves have argued that ethics might actually be closer to art than science.

As an academic field of study, ethics are similar to other sciences (Haaparanta ja Niiniluoto 1990, 93). Despite differences in the nature of ethics to so called "hard sciences", ethics is a study all its own at academic universities. It follows the methods of science, even though its nature differs. Still, it uses scientific methods: it is systematic and follows the principles of science.

Ethics as part of philosophy aims to answer the question of what is morally good and what is the right action. Furthermore, ethics aim to solve what is meant by the concepts of good and right – and if it is even possible to define them (Haaparanta and Niiniluoto 1990, 93). Philosophically thinking, ethics can be divided into metaethics, normative ethics and applied ethics. (Fieser, n.d.) Metaethics is interested in the language used when speaking about actions and situations, and where our ethical principles come from and what they mean. Normative ethics assesses actions and situations on a more practical level (Haaparanta and Niiniluoto 1990, 85; Fieser, n.d.). Applied ethics investigates specific controversial issues, for example abortion, environmental issues and animal rights (Fieser, n.d.).

TOOLS OF ETHICS – ETHICS AS A TOOL

Ethics as a field of philosophy applies principles used in the study of philosophy. When aiming for new philosophical outcomes ("results"), philosophy often applies an approach that can be described as problematisation, explication and argumentation (Niiniluoto 1984, 62; Haaparanta and Niiniluoto 1990, 95). Philosophy and ethics as part of it is based on critical thinking and arguing that is constructed not out

of definite and set knowledge and information but out of continuous aim to analyse, clarify and re-evaluate thoughts and concepts (Niiniluoto 1984, 66–67).

Traditional tools of ethics are concepts, which are crucial in ethics. Ethics are interested in what things actually mean. Ethical *theories* work as tools, as in other sciences. We see ethics as a *personal competence* that a student aims to achieve during one's studies at Laurea University of Applied Sciences. Central tools of ethics can be considered concepts, argumentation and thinking. The starting point for ethical thinking is concept analysis. Before we can say anything about what is a good life, not to mention how to live a good life, we need to define several central concepts, such as what is meant by "good", "justice" and "right".

Philosophical statements are not definite nor infallible. Instead, they are stopping points. To all philosophical problems, there are different, arguable views. Niiniluoto describes one important task of a philosopher to be to question conventional ways of thinking (Niiniluoto 1984, 10); as ethics is part of philosophy, that and the following apply to ethics as well. The point of ethics is to ask questions – including the ones that nobody wants to hear.

Ethics as part of philosophy can be described as more like the study (or science) of problems and arguments than answers (Niiniluoto 1984, 10). Ethics and ethical thinking have value as such. It is important both for individuals and organizations to ponder right and wrong, the consequences of one's actions and so on – even though we would remain in ignorance about what actually is right or wrong. Even though we would not find the answers, it is crucially important to raise the ethically relevant question and ask about and spread ethical awareness.

A PRACTICAL APPROACH TO ETHICS

Ethics can play a relevant role in the everyday lives of all human beings. Ethics are paradoxical, because at the same time ethics are quite simple yet very complex, abstract yet concrete. Accessibility to ethics can be seen as a very low threshold, since one does not need a high degree of education to take part in the discussion about what is right or wrong or good or bad. But then again, we can ask whether it is perhaps only moral thinking (not ethical) that is accessible to all – does ethical thinking demand systematic analytical thinking and reflection that is not easily accessible to all?

In this book, we understand and consider ethics as a possibility and a resource, not only demand. Ethics cannot be externalized but it is the duty of all agents to be ethically aware. At Laurea we aim to work according to many ethical principles. The values mentioned in our current strategy are openness, effectiveness and responsibility (Laurea Strategy 2030). The new Laurea UAS Ethical Code of Coduct has been published in August 2020.

Ethics can be seen as the ability to make decisions (Clarkeburn and Mustajoki 2007, 22). By ethics we mean more than anything a capability for clear thinking. Concept and argument analysis, ethical theories, codes of conduct and so forth provide helpful tools for such. Ethics will never become to an end. Even though there are different ethical tools or frameworks, the tools will have to be applied to a particular case at a given time within a given context. Ethics are not just a tick in the box: they demand profound thinking. Ethics as a concept is actually several concepts.

For us at Laurea UAS, ethics are truly a tool for building a better world. Ethics can be built in and are built into our RDI projects – not only as research ethics but as part of planning, implementing and evaluating the solution (outcome and innovation) throughout the entire process with stakeholders (see also Responsible Research and Innovation RRI).

As stated, we think that, more than anything, ethics are the capability to think. While not every one is born a great thinker, one can develop thinking skills. We at Laurea practice ethical thinking daily, such as in our RDI projects and teaching practices. In this book, we offer examples of what kind of ethical thinking and ethical approaches to the RDI practices and teaching practices have recently been applied at Laurea.

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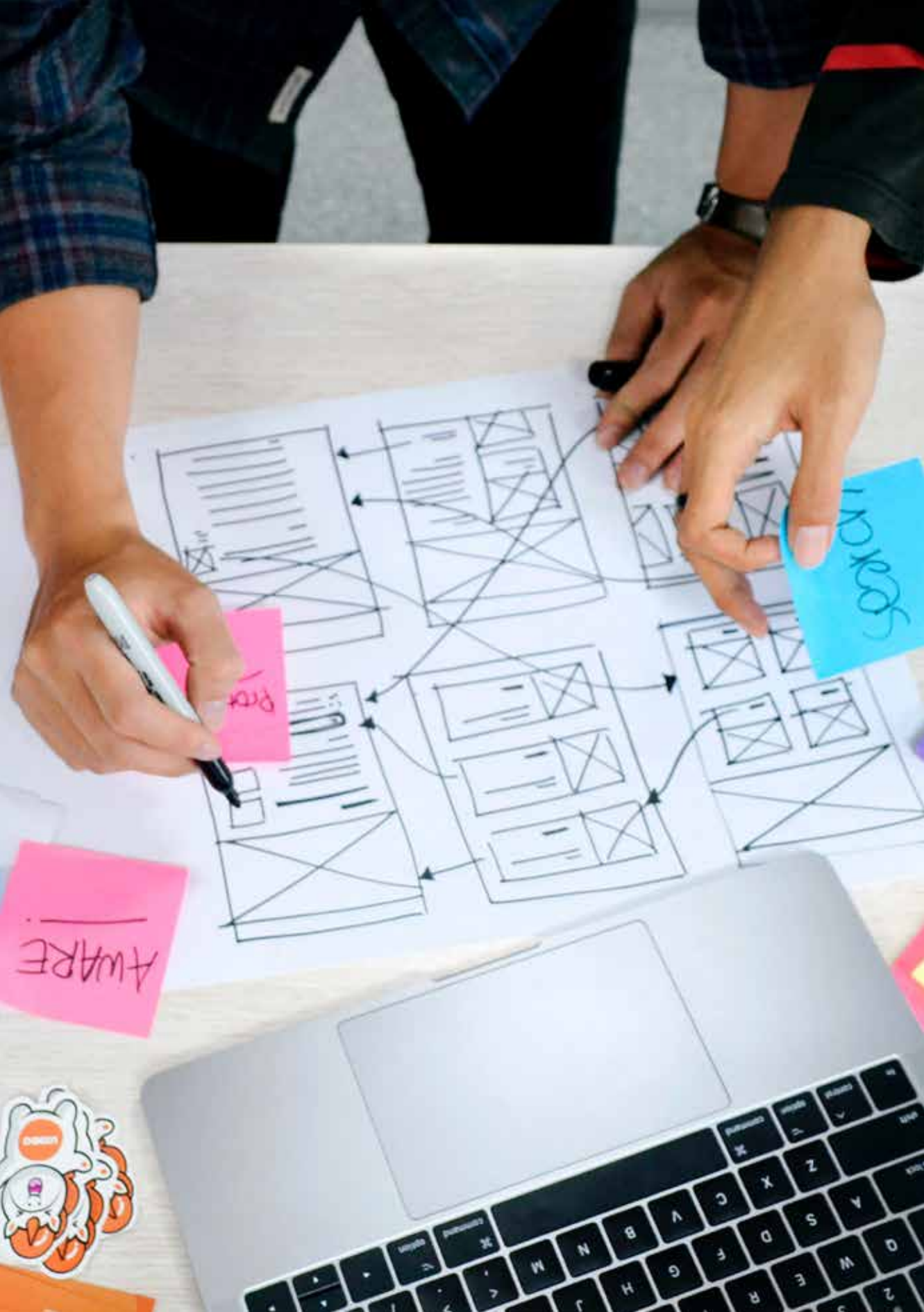
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Applying ethical theories and tools within RDI-projects

2. An ethical framework for maritime surveillance technology projects

Sari Sarlio-Siintola & Tuomas Tammilehto

Few aspects of life have escaped a vivid discussion of ethics. This is true in the field of security research and maritime surveillance too. For example, academics, researchers and practitioners, together and among themselves, have discussed in several forums various elements of ethics in maritime surveillance, notably when participating in European Commission-funded research projects. This thinking has materialised as numerous articles, reports and statements, obviously this paper and its earlier versions being ones too.

In the discourse, one key area of interest is the tension between privacy and security. Another impetus for ethical thinking is the need to develop solutions that do not pose a negative impact on human rights and civil liberties. A third is the implications of new surveillance technologies (Jeandesboz 2012). At the heart of all this is the fact that since EU law and various international conventions regarding, e.g., human rights, the rights of refugees, and SaR, all impose obligations on states to help and protect those in need (the duty of care). Thus, if and when new technologies increase the capability for situational awareness, this enhancement of capabilities will also lead to an increased responsibility to act. The same goes for other activities, such as crime: if and when crime occurs, authorities have the legal obligation to act.

The paper is organised in the following manner. In the next paragraph, followed by the short introduction above, we present our approach to ethics work; this covers both the actual research and development processes but also encompass the solution(s) to be created during those processes. Next, we present a methodology aiming to identify various ethical, legal and societal aspects of technology projects aiming to produce innovations for the market. Finally, in the last paragraph, we briefly discuss the operationalisation of the identified aspects, both as guidelines for technology and organisational arrangements but also as tangible ethical requirements.

ETHICAL DIMENSIONS OF TECHNOLOGY-BASED PROJECTS

RDI projects must consider a multitude of recommendations, guidance and requirements that derive from ethics, legislation and societal impact(s). Traditional research integrity must be followed naturally. Further, ensuring the comprehensive ethical and social sustainability of the solutions being developed is evermore essential. The reason for this is that, ultimately, only sufficient ethical sustainability ensures the social and political approval and market potential of any solution. Thus, all dimensions, i.e., research integrity, validation of the ethical features of the solution and the use of any versions of the developed solutions in real time settings, need to be addressed. This includes any test, pilot, trial or demonstration (see Figure 1).
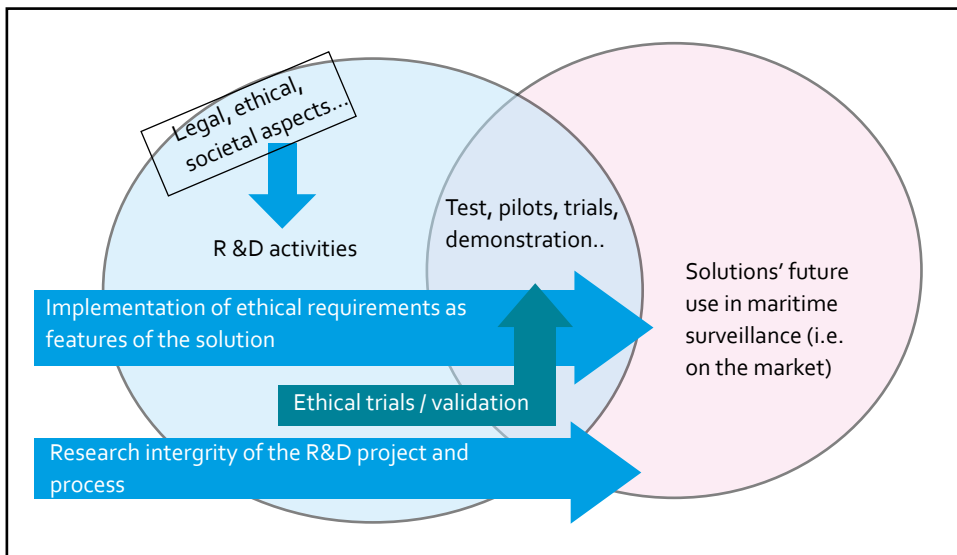
Figure 1. *Ethical Dimensions in Technology-Based Projects (Adopted from MARISA 2019)*

The current ethical guidelines of research and development focus heavily on traditional research integrity-related issues, followed by potential misuse and dual use (e.g., criminal or terroristic use). Regrettably, they do not fully cover all of what comes to ethical guidance or societal sustainability in the final product (the solution itself). This can hamper the development work, especially when building solutions requiring end-user information systems that process personal data. In these cases, the implications of data-protection-related requirements can look very different than in more traditional research and need to be addressed accordingly.

One critical point from the research integrity perspective is the rights of different end-users (and other natural persons) who participate in the project. In order to secure, for example, their right to privacy, specific emphasis must be put, e.g., on the collection of personal data or the dissemination of photos in which individuals could be identified. Further, the solution itself must comply with the many requirements set out in legislation, perhaps the most pivotal being the principles of Data Protection by Design and by Default. Thus, for example, privacy-enhancing technologies are not something auxiliary or supplemented; rather, the principles of data protection are deeply integrated into the architecture. Finally, data protection compliance cannot be neglected during the development phase, especially during any trials and/or pilots, since in this phase precisely, privacy and data protection features themselves are being validated too. Sometimes, one can

use fake or dummy data, but, often, meaningful piloting requires real data. Thus, data protection compliance is essential, regardless of whether data protection issues are a central focus or purpose of the project.

In the process of identifying the different ethical challenges and opportunities related to the solutions being created, a clear distinction should be made between: a) the layers of technology, b) user processes and c) business/governance models. This is highly important, since the implications of ethical, legal and societal requirements can be very different, depending on viewpoint. For example, requirements that can be implemented as technical features of the solution can be handled in the technical planning; implementation and validation again are analogous to end-user requirements. On the user-process level, the implementation of ethical requirements concern, for instance, user manuals or administrative arrangements, such as for the training of users. On the business/governance-models level, the relevant considerations could concern, for example, the division of responsibilities between different actors or various kinds of preparations. Further, feasibility considerations are recommended to be done before implementation of the solution in a specific environment.

A key aspect to consider, is the environment itself, with its feature in which the solution will be implemented: they might have implications for ethical requirements (on all levels). For example, both the MARISA and RANGER projects' solutions can be used stand-alone or as part of a larger architecture, e.g., Common Information Sharing Environment.

THE METHOD OF ETHICAL ANALYSIS

Many argue that ethics in security research must be seen as a way of putting critiques to work, not as a mere legitimising function of 'ethics approval' (see Leese, Lidén & Nikolova 2019). This argument was widely discussed both in Ethical, Legal and Social Aspects of Emerging Sciences and Responsible Research & Innovation (Zwart, Landeweerd & van Rooij 2014). The approach that we developed aims to provide a similar framework. The primary purpose is to maximise the benefits of the projects while preventing or minimising any ethical risks. The guiding principle of the work was to follow a so-called ethics-by-design principle (see Beard & Longstaff 2018).

During the projects (MARISA, RANGER and ANDROMEDA), we divided the analysis work into the following components:

1. a critical ethical analysis of the technology and its use in the relevant context (e.g., border control, customs, search and rescue, environment, and general law enforcement)
2. a legal framework for the project (including development, the solution itself, and its future use)
3. a *Social Impact Assessment* (SIA) and a *(Data Protection) and Privacy Impact Assessment* (PIA)

The results of the analysis were then condensed into a set of tangible ethical requirements for the projects. *A Code of Conduct* was also written; it contains the core ethical principles to be embedded in training material and business model documentation.

The analysis is largely a desktop study in which the content of various regulations, guidelines and policy papers are examined. Another pivotal element in ethics work is brainstorming. Usually, these sessions were held on particular topics, e.g., misuse or GDPR, but they also included general discussions on open topics. Further, ethics are discussed during the demonstration pilots, as many stakeholders are conveniently in attendance, thus providing the perfect opportunity for lively discussions. For example, the SIAs of each project

were conducted together with various stakeholders and experts in brainstorming sessions. The main results of these were related to risk management, since a large part of the SIA is to mitigate potential problems and promote positive impacts across the lifecycle of developments. As stated, the practice is participatory, and together with stakeholders it increases the understanding of change and the ways to respond constructively to such change (Esteves, Franks & Vanclay 2012).

Essential in the approach that we followed in the SIA is that various ethical issues (concerning both positive and negative societal impacts) were emphasised in the design phase of the innovation, i.e., the very early stages of the projects. Ethics are then not merely legal and moral constraints for innovation but active catalysts of innovation from which value can be derived. The PIA work in MARISA and RANGER was organised in collaboration with project partners, utilising a PIA tool provided by CNIL (Commission Nationale de l'Informatique et des Libertés). The same tool is to be used in the ongoing ANDROMEDA project.

The key ethical challenges identified in the projects are presented here below, in Table 1.

Table 1. *Examples of Ethical Challenges in the MARISA, RANGER and ANDROMEDA Projects*

CHALLENGES	LAYERS OF THE SOLUTION
Tensions between different rights and values, such as freedom and security, which are likely to become more pronounced as a result of new security technologies. Although the surveillance and other solutions per se do not violates anyone's rights, they do boost the discussion.	Business & governance models; User processes
Ethical and legal issues relating to privacy and data protection in both current and future configurations of MARISA, RANGER and ANDROMEDA, including both technical and organisational arrangements.	Business & governance models; User processes; Technology
RANGER's impact on wildlife and humans in the region where the radars are installed. Regardless of whether the risks are real or only feared, it is ethically and societally important to address the issue. The same goes with the installations of ANDROMEDA.	Business & governance models; Technology
Ethical and legal issues relating to Open Source Intelligent, big data and AI. These include the need for human agency and oversight; technical robustness; safety, privacy and data governance; transparency; diversity; non-discrimination and fairness (including awareness of and strategies to control subconscious biases); environmental and societal well-being; and accountability.	Business & governance models; User processes; Technology

Following the identification of various ethical aspects, the ethical, legal, and societal framework was built as a result of refining them into more detailed ethical requirements. These requirements were then clustered into three classes: 1) 'ethical awareness', 2) 'ethical analysis' and 3) '(any) activity'. At this stage, the requirements were specific and concrete enough to be associated with the relevant phase or layer of the project: pilots and trials, technology, user processes, business and governance model or generally on the solution. Finally, a specific *Code of Conduct* was formulated for each project, based on the results of the analyses. The code is designed for end-users, decision-makers and developers of the solution; the idea is that they shall be embedded both in training material and business model documentation.

Fundamental human rights, but also values and norms established in international and EU law, formed the value bases of the ethical requirements and the *Code of Conduct*. However, it must be added that the end-users and stakeholders raised many important ethical issues, especially on the use of technology. Their voices were particularly important when compiling the *Code of Conduct,* since it establishes the principles according to which development, deployment and use should be based on. Thus, the *Code of Conduct* covered the totality of ethical and societal considerations: the technology itself and how the technology will be used, as well as the whole business model as part of the European maritime surveillance ecosystem.

In Table 2, we list the main sections of the Code of Conducts.

Table 2. Contents of the Code of Conducts in MARISA, RANGER and ANDROMEDA

CODE OF CONDUCT (CHAPTER TITLES)	CONTENT
1 The Justification of the solution(s) is Based on Ethical Grounds	This is a starting point but also a justification for all: the project, the research and the end-results. If and when a project seeks to make a positive impact, it must be based on solid ethical grounds.
2 The Humanitarian Imperative and the Rights of the People at Sea	This is another key principle, more domain oriented that the first. It stresses the nature of the environment in which the solutions will operate.
3 Transparency, Liability and Human Decision Making	This is evermore important when AI is introduced to new applications.
4 Privacy and Data Protection	The importance of privacy has been heightened during past years and for a good reason. Many say that privacy will be the most valuable asset one can have.
5 Value for End-users Involvement	Another highly important aspect: because the projects are largely funded by European taxpayers, it is imperative that they create value too.
6 Moral Division of Labour in Maritime Surveillance and SaR	New solutions often change how we work and bear our responsibilities The duty of care can extend largely because of enhancements in surveillance technology, and this needs to be done ethically and sustainably.
7 Robustness, Accountability and Learning	These are essential for any solution and especially for solutions related to saving lives, e.g., in SaR missions.

Once defined, the ethical requirements must be considered in the technological development and organisational arrangements related to user process descriptions and training, as well as in governance and business modelling.

In Table 3 below are some ethical requirements of the MARISA project. In the leftmost column are the identified requirements. This is followed by the activity column, explaining what the action is about and where this requirement should be put into action. The work follows a need-requirements-action-feature continuum. For example, a need is first expressed, detailed and defined as an ethical requirement, and then the needed action is spelled out in necessary detail. Then, during the course of the research and development work, and especially during any trial, the fulfilment of the requirement could be verified and validated. Ultimately, this ensures the ethicality of the projects' outcomes.

Table 3. *Examples of MARISA's ethical requirements*

REQUIREMENT	AREA OF ACTIVITY / ESSENTIAL ACTIVITY
Recognise third countries in the sea as both end-users of MARISA and as partners in solving shared problems with the help of new technology.	The Advisory Board should include a representative from a third country. Address this in the workshops and the Advisory boards. (*Management*)
Provide transparency and proper functionalities to help estimate the quality, reliability and validity of various data to be used. Code this information for the end-user to help her in decision-making.	This requirement is translated into several requirements in the technical baseline. Specific KPIs have been defined to monitor the fulfilment of the functionalities during the validation. Rules can be configured by the users. (*Technology*)
Operational decisions shall never be made by a computer, not even the most efficient one: it must always be a human who makes the final decision. MARISA can only assist in operational decision-making, by providing information to the end-user/decision-makers. The end-users must be informed of liability issues in the training material.	The users will be always in the loop, and the toolkit will support decision-making and planning being the final decision lies on the end-users. This is explained clearly in the training and user manuals. *(Training)*
Organisational activities concerning data protection must be applied as part of the governance model for each new implementation of MARISA. Conducting a light PIA before the implementation is essential.	The final ethics deliverable D2.13 provides basic guidelines for the organisational activities. These are to be embedded in MARISA exploitation/ business modelling and in training material. (*Business Management/General Management*)

CONCLUSIONS

It should be evident that proper implementation of ethical requirements is essential for any project. In spite of this, ethical compliance has long been near synonymous with proper research ethics and other important dimensions granted a more or less anecdotal status. The problematic nature of such a narrow perspective is often particularly heightened in cases in which a project's subject matter falls under the topic of security. The MARISA, RANGER and ANDROMEDA projects are illustrative of this. When technological

advancements lead to an increased surveillance capacity (in this case of RANGER, in the form of novel over-the-horizon radars, or with ANDROMEDA and enhancements to command and control), so do the moral and legal duties to act against ill will and to help those in distress; with great power comes great responsibility. Furthermore, the technology can fundamentally change practice and customs: the moral division of labour can be altered, a change that calls for holistic ethical considerations.

To answer these challenges, together with addressing challenges of misuse and dual use, we have attempted to avoid a narrow perspective by developing a systematic framework for identifying ethical aspects. It exceeds the traditional science and research integrity perspective and offers a wider viewpoint. The goal is to help developers and practitioners of technological innovations turn these aspects into tangible sets of ethical requirements to be addressed during all phases of the project and on all layers of the solution being created.

Ethics are not about declaring principles. Rather, they are to be intertwined in every aspect of a project and beyond, from the proper development of products and services, to their use and all the way up to business and governance processes.

Finally, it must be stressed that the ethical work is never done. New ethical areas and issues arise continually, since everything cannot and will not be covered. As Søren Kierkegaard has so adequately put it, "One cannot seek for what he knows, and it seems equally impossible for him to seek for what he does not know. For what a man knows he cannot seek, since he knows it; and what he does not know he cannot seek, since he does not even know for what to seek." Therefore, it is impossible to be fully cognizant of all possible ethical issues and produce a complete framework, but we must try our best. The pursuit of such is indeed a requirement too.

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3. Privacy and data protection in open source intelligence and big data analytics: Case 'MARISA'

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Open Source INTelligence (OSINT) is intelligence collected from publicly available sources, including the internet, newspapers, radio, television, government reports and professional and academic literature (Glassman & Kang, 2012). Local and national law enforcement authorities, intelligence agencies and the military commonly take advantage of OSINT. An important aspect of law enforcement authorities' use of OSINT is social media, which aggregate huge amounts of data generated by users who are in many cases identified or identifiable. Combining social media with other datasets creates a technological landscape in which big data analytics can be used to implement predictive social surveillance systems (Staniforth, 2016). The line between espionage and OSINT is thin (Hribar;Podbregar;& Ivanusa, 2014), and caution and double-checking are advised before combining OSINT with big data analytics. Law enforcement authorities must always ensure that their use of OSINT and big data analytics falls within national and international legal frameworks, including General Data Protection Regulation (GDPR) and the Law Enforcement Directive, which focus on privacy and data protection.

From a privacy point of view, the use of social media in surveillance is a notable topic. Police and other law enforcement bodies are able to access private information without interacting with users on site. Trottier points out that on social media we're moving towards asymmetric relations of visibility between police and the public. Individuals are not aware that they are under watch (Trottier 2016). What is interesting about law enforcement using social media is that the awareness of such surveillance varies, based on the type of platform. In many countries, police are already visible, for example, on Facebook, and for that reason, it should not be a surprise that the information available will be used for surveillance purposes. The challenge is that law enforcement bodies are also using other social media platforms such as Twitter, and this might be surprising to some individuals. This is what brings challenges from a privacy point of view. Should individuals nowadays assume that if they post something on social media, that information could be used for purposes

other than what the platform is intended for? Or should individuals still be able to trust that their information is not used for a purpose that might be surprising? This is how the GDPR expects personal data processing to work, and this is a question discussed in the MARISA project from an ethical point of view: Is it surprising to citizens that law enforcement bodies are using social media for their own purposes, or is it something that individuals should already expect, taking into account the public nature of many social media platforms? Social media provides valuable information to law enforcement bodies, but the question remains of how it should be used so that it can build trust between citizens and authorities. Should there be common rules for this usage, and where should this kind of information be provided – on the law enforcement side, on the social media site, or somewhere else?

In 2019 the European Commission introduced their Ethics Guidelines for Trustworthy AI. The Privacy by Design approach is recommended when solving privacy issues in the development of AI systems. According to the Commission, privacy protection should be a fundamental assumption for all AI systems, and it must be ensured throughout the lifecycle of the AI system. This must cover all data the users provide the system and the data created over the course of their interaction. The information gathered on the users must be handled in such way that it does not cause any harm to the user, and the data cannot be used to discriminate or to be used unlawfully in any way (European Commission, 2019).

This article analyses privacy and data protection issues in open source intelligence and big data analytics carried out by law enforcement authorities. The empirical case explores these challenges in the MARISA project. The overall aim is to accelerate the discussion on the problem of privacy and data protection with regard to law enforcement technical tools, which may lead to restrictions of individual liberty and erosion of society's foundations of trust.

MARISA SERVICES AND PERSONAL DATA

The MARISA Toolkit is built atop a big data infrastructure that provides the means to collect external data sources and operational systems products and to organize and exploit all incoming data as well as all the data produced by the various services. The MARISA toolkit provides a suite of services to correlate and fuse various heterogeneous and homogeneous data and information from different sources, including internet and social networks. MARISA also aims to build on the huge opportunity that comes from open access to big data for maritime surveillance: the availability of large to very large amounts of data—acquired from various sources ranging from sensors, satellites, internal sources and open source,—improves knowledge. The MARISA toolkit provides new means for the exploitation of the bulky data silos, leveraging on the fusion of heterogeneous sector data and taking advantage of a seamless interoperability with existing legacy solutions available across Europe.

The MARISA toolkit has two relevant data sources: 1) data coming from the sensors and 2) data coming from OSINT/social media. Data from sensors: These sensors are embodied in the operational environment of the legacy systems. In these environments, owned by participating Member State governmental entities, we can presume that the data are used on the basis of need-to-know and need-to-share. Thus, the privacy of the data can be taken for granted. Data from open sources: This case is more problematic, since the origin of the data is not controlled by any public entity. Nevertheless, there are two possibilities: 1) A system performing in a classified environment (as could be the case in managing EU-restricted data). Here the data coming from open sources enters, by means of a cross-domain exchange devices, in a highly regulated environment, where again the privacy of the data managed can be taken for granted on the basis of need-to-know and need-to-

share. 2) A system performing in an unclassified environment (this will be the most common case) (MARISA, 2018).

When Automatic Identification System (AIS) data is linked to crew lists, locations of persons will be exposed, and this is personal data covered by the GDPR. As well, the end users' operational systems connected to the MARISA toolkit can include personal data or anonymized personal data. The first-phase MARISA service description document (MARISA, 2018) defines the following open-source- or AIS-data-related services: AIS verification, Twitter, OSINT and GDELT. Table 1 presents those services.

Table 1. *Personal Data and Open Source Related MARISA Services (adopted from MARISA, 2018)*

NAME OF THE SERVICE	DESCRIPTION
AISVerificationService: ProcessLocations	Verifies the claimed position in an AIS message against measurements from a radio locating system; accesses a file system that contains results from the radio locating system.
TwitterService: GetRelevantTweetsInArea	Retrieves a list of relevant tweets in a given area and time period and computes an appropriate risk.
GDELT: GetRelevantEventsInArea	Takes OSINT sources such as GDELT project data/news and filters the results using natural language processing in order to identify possible events related to the maritime domain such as naval incidents, piracy, pollution, etc.
OSINT: GetTweetsByParams	Retrieves a list of relevant tweets in terms of keywords, given area and publication date.

PRIVACY CHALLENGES OF MARISA SERVICES

Data generation and collection

Table 1 presents personal data and open-source-related MARISA services. AIS without crew lists does not contain information that can be used to identify a private person. OSINT service mainly collects its information via Twitter and DGELT. From a data collection point of view, the MARISA GDELT service may not have privacy concerns, because professional journalists should have considered that issue when producing a report. On Twitter, several technical features and tweet-based social behaviours may compromise privacy. Tweets are complex objects that, in addition to the message content, have many pieces of associated metadata, such as the username of the sender, the date and time of the tweet, the geographic coordinates the tweet was sent from, if available, and much more (Glasgow, 2015). "Most metadata are readily interpretable by automated systems, whereas tweet message content may require text processing methods for any automated interpretation of meaning" (Glasgow, 2015). "Direct Messages" are the private side of Twitter and "retweeting" is directly quoting and rebroadcasting another user's tweet. Someone might unintentionally or intentionally retweet a private tweet to a public forum. Other behaviours include mentioning another user in one's tweet talking about that user. According to Rumbold and Wilson (2018), when one puts any information in the public domain—whether intentionally or not—one does not waive one's right to privacy, but one can only waive one's right to privacy by actually waiving it. The GDPR requires that a person knows for what purposes their

personal data is being used. Considering that personal data should not be used for unexpected purposes, one could ask if this requirement is fulfilled when Twitter data is used for surveillance. Although there may be legally acceptable reasons why data could be used for such purposes, the ethical question remains: Will such data usage build trust between citizens and authorities, and what kind of actions should be taken to avoid potential mistrust?

Data analytics

Big data may be analysed by artificial intelligence (AI), which can provide detailed, personalized characteristics of an individual and a prediction of his or her future behaviour (Moallem, 2019). The MARISA toolkit includes big data infrastructure, and AI-anonymized data can be de-anonymized quite quickly in certain conditions (Campbell-Dollaghan, 2018). Algorithms tell computers how to solve a certain problem step by step. However, predictive algorithms are often unpredictable (Wójtowicz & Cellary, 2019). According to Rahman (2017), the first problem comes from algorithmic bias—AI algorithms being a reflection of the programmers' biases—and may possibly give rise to the risk of false alerts by AI surveillance systems, thus resulting in wrongful profiling and arrest; the second problem is that AI profiling systems utilise historical data to generate lists of suspects for the purposes of predicting or solving crimes. Machine learning (ML) techniques including neural networks run in two phases (the training phase and the prediction phase), and the quality of predictions is absolutely dependent on examples used for the training phase. ML systems are only as good as the data sets that the systems trained and worked with (Rahman, 2017). Here comes the challenge when social media is used as a source: How can one ensure that the data does not provide misleading results?

Use of data

Data analysis does not directly affect the individual and may have no external visibility. According to Dignum et al. (2018), three ethical issues are particularly concerning to AI systems: accountability, responsibility and transparency. They state that these three values are important to discuss when trying to ensure societal good. How the AI system follows these ethical principles depends upon what kind of reasoning is possible. If we believe the AI system is incapable of ethical reasoning, it means we should always have human supervision. That also means that the supervisor should have sufficient knowledge and the means to do the job. This approach is called human-in-the-loop. Another approach to the ethical reasoning of the system is in designing the environment itself in such a way that deviation is impossible and the moral decision-making of the system is unnecessary. Ethics by Design considers the AI system to be an ethical agent itself; these agents are known as artificial moral agents. That means the AI system is able to include moral reasoning into its deliberation and decision-making and explain its behaviour in terms of moral concepts. This approach requires complex decision-making algorithms based on deontic logics. The system design requires explicit and complex design based on reinforcement learning to be able to act as a moral decision-maker (Dignum et al., 2018, 1-3).

PRIVACY DESIGN FRAMEWORK IN THE MARISA PROJECT

The implementation of privacy-by-design in the MARISA toolkit is an overall requirement or constraint for the development of the MARISA project (MARISA, 2018). Ethics by Design and Values in Design became key values when considering designing ethical and trustworthy MARISA services utilising big data analytics. Their

goal to ensure that ethical matters—including privacy and data protection—are considered from the earliest stages of the project and throughout the full development and design process. Technical infrastructures and technology often reveal human values mostly because of the tensions, failures and counter productivity. The Values in Design approach tries to create discipline that includes values in the socio-technical designing process (Knobel & Bowker, 2011). Ethics by Design in artificial intelligence is concerned with methods, algorithms and tools needed to ensure that autonomous agents with capability to reason take the path of ethical decisions and that their behaviour stays within the moral boundaries provided to the system (Dignum et al., 2018).

Privacy by Design is a part of the same continuum of Values by Design and Ethics by Design that emphasizes taking ethics—in this case privacy—into the design process from the beginning. This means a proactive method for preventing privacy issues from happening by defining privacy as the system's default setting (Cavoukian, 2012).

Applying the Privacy by Design approach was part of our systematic framework for identifying ethical aspects of the MARISA solution (see the article "An Ethical Framework for Maritime Surveillance Technology Projects" in this publication). Based on that holistic approach, privacy and data protection requirements for the technology and for the organizational arrangements were defined. The validation of technical features was a part of the MARISA validation process. In addition, a Privacy and Data Protection Impact assessment was performed in order to identify potential technical and non-technical risks related to privacy and data protection. The need to conduct this kind of impact assessment as part of each new MARISA implementation was also codified in the MARISA Code of Conduct and MARISA implementation documents.

ACKNOWLEDGEMENTS

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II

Ethical approach within development of education

4. The ethics of care and justice in nursing education

Soile Juujärvi & Mikko Häkkinen

The ethics of care and justice provide two complementary viewpoints on everyday ethics in human services and healthcare professions. The ethic of care is centred on maintaining relationships through responding to needs of other people and avoiding hurt, whereas the ethic of justice is centred on maintaining duties, equity and fairness through the application of ethical principles, rules and standards (Gilligan, 1982). Both the ethics of care and justice are manifested in the international codes of ethics for nurses. In accordance with the ethic of care, the codes explicate the promotion and restoration of health, prevention of illness and alleviation of suffering as fundamental responsibilities of nurses. The ethic of justice is inherent in respect to human rights and self-determination, with emphasis on impartial treatment of patients regardless of their background (ICN, 2012). The aim of this article is to describe how the ethics of care and justice can be integrated into the education of nurses to promote a holistic approach to everyday ethics. We wish to elaborate upon the role of ethics of justice and care in nurses' ethical decision-making and training based on the results from the COPE project, one aim of which was to develop a new pedagogical model for ethics education (Juujärvi et al., 2019).

Besides those expressed in the code of ethics, the ethics of care and justice represent lay theories that constitute different modes of problem-solving in nurses' ethical decision-making. According to the current view in moral psychology research, care-based and justice-based reasoning have developmental paths of their own and, consequently, the quality of one's moral thought depends on the current stage of one' moral reasoning development. At the most advanced stage of the care ethic, the individual is capable of balancing both the needs of oneself and several others and minimize hurt in relationships. Respectively, at the highest stage of the justice ethic, one is capable of taking a critical stand against unjust laws and practices in society and treating other people with dignity and respect (Juujärvi & Helkama, 2020). Both require critical and reflective thinking, which are also learning outcomes on Level 7 of the European Qualifications Framework, for master-degree programmes in higher education (see European Parliament Council, 2008). Because healthcare

professionals regularly encounter care- and justice-related issues in their professional practices, advanced ethical thinking is one of their core competences.
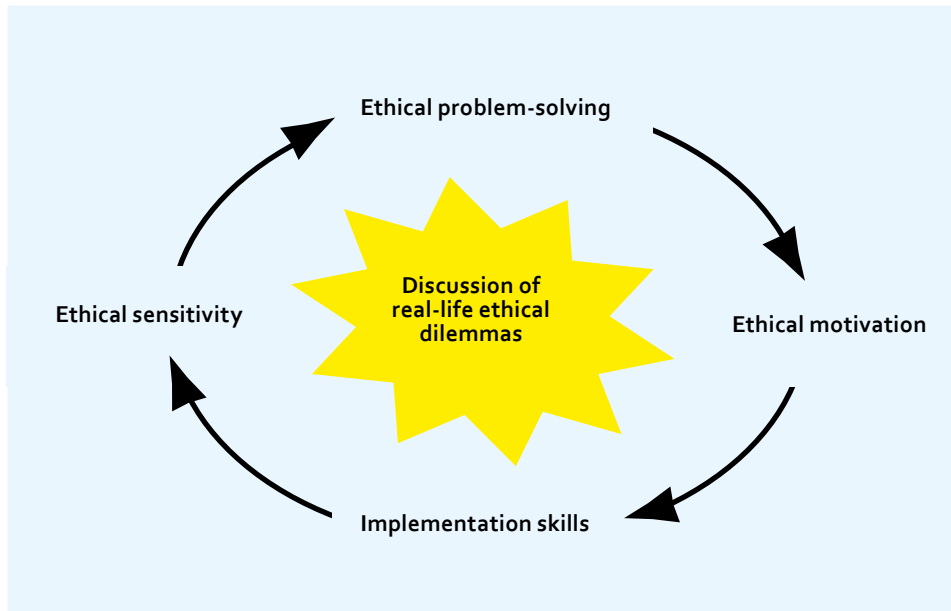
Figure 1. *The four components of ethical action*

According to Rest's (Rest & Narváez, 1994) four-component model, ethical action consists of ethical sensitivity, moral judgment (ethical problem solving), ethical motivation and implementation skills, and all of them are necessary for realizing it (see Figure 1).

As an example, consider an account of ethical dilemma provided by Sofia, who works as a nurse in a day-care centre for elderly people.

> *Sofia was concerned about a couple in their eighties. The husband, Tauno, is in the early stages of Alzheimer's and still has a driving license. The driving license is important to his masculine identity as a "gentleman" and an owner of a quality car. The car is also necessary for everyday and free-time activities, such as shopping, going to see the doctor and socialising. Sofia has observed that Tauno cannot manage to drive perfectly anymore, but the couple ignore the issue. She wonders what her responsibilities are and how she should intervene in the situatio*n (Juujärvi, 2018).

Above all, Sofia needs sensitivity to recognize an ethical issue hidden in ambiguous contexts of everyday life. She needs to notice that the husband cannot drive properly anymore, and this may cause danger to other people in traffic. In addition, situations with potential accidents would multiply over time at the pace of the disease. She may also notice that the wife seems to ignore the situation. Ethical sensitivity requires capacities in empathy, that is, putting oneself in the husband's and wife's shoes: how do they see the situation and feel about it? It also involves imagining future scenarios and considering potential consequences of alternative lines of action (Bebeau, 2002). What happens to each person involved in the situation if the husband continues driving and, alternatively, what happens instead if the doctor revokes his driving licence? In order to resolve

an emerging ethical dilemma, Sofia needs to determine which line of action would be ethically justifiable: to intervene or to not intervene in the situation. Consequently, she needs to assume responsibility for taking action and to determine how to feasibly carry it out. While this dilemma seems relatively simple on paper, it is rather complex to recognize and resolve in real life, because doctors, not nurses, are legally accountable for making decisions about drivers' health in the first place. In order to execute an ethical action, Sofia needs to reflect on her responsibilities as a nurse, such as preventing harm and suffering or protecting the right to live, and she has to decide to prioritize these values over other values and motivations, such as self-indulgence or compliance with prevailing practices. Finally, she may also need good negotiation skills to assure other people of the appropriateness of her proposal and to have the courage and perseverance to implement actions, despite potential impediments, such as opposing opinions from the couple or colleagues.

It has been argued that effective ethics education encompasses each component of ethical action (Juujärvi & Pesso, 2008; Rest & Narváez, 1994). Empirical studies on ethics education have focused primarily on the component of moral judgment (Bebeau, 2002). Discussions on ethically difficult situations, called *dilemma discussions*[1], have proved to be the most effective pedagogical tool to advance students' moral judgment and ethical problem-solving skills (Mayhew & King, 2008). Juujärvi and Pesso (2008) observed among students at Laurea that online discussions guided by teachers were more effective than face-to-face peer discussions or role-playing exercises based on real-life cases. In their study, students discussed ethical dilemmas they had encountered in their internships and had found hard to solve; nevertheless, their capacities in ethical sensitivity and in moral judgment increased. In ethics education, hypothetical dilemmas and cases are widely used to stimulate students' ethical reasoning. We argue that using discussions of real-life dilemmas as stimuli are more effective, because they also touch upon ethical sensitivity, motivation and implementation skills.

We have currently developed a pedagogical model for professional ethics education based on the blended learning approach, combining asynchronous online dilemma discussions with traditional classroom methods of lectures and group work (Juujärvi, 2018). Face-to-face discussions in a classroom enable brainstorming and dealing with complex issues, whereas networked interactions enable shared reflection, regardless of time or place (Graham, 2006). While online discussions as a method of blended learning has been discussed elsewhere (Juujärvi, 2018), we concentrate on the role of ethics of justice and care in nurses' ethical decision-making and training in the following sections.

THE ETHIC OF JUSTICE

Whereas the ethic of care is focused on maintaining relationships through response to the needs of others and avoiding hurt, the ethic of justice is focused on maintaining obligation, equity and fairness through the application of standards, rules and moral principles (Gilligan, 1982). Psychologist Lawrence Kohlberg (1984) argued that the evolving conceptions of justice provide the most valid framework for individuals' development in moral reasoning. Development in moral reasoning takes place through fostering of one's capabilities in role-taking, which results in understanding increasingly complex modes of co-operation between people.

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1 In everyday language, 'dilemma' refers to a situation in which a choice has to be made between two equally undesirable alternatives, or more generally, to a difficult situation (Oxford Dictionary of English). In the research tradition of moral psychology, moral dilemmas have usually been defined as difficult situations in which two or more moral values collide and the individual is unsure about the right thing to do (Juujärvi & Helkama, 2020).

According to the recent understanding by Rest et al (1999), individuals' comprehension of justice issues progresses through three successive schemas from adolescence to adulthood, which are described briefly as follows:

The personal interest schema focuses onpersonal advantage and interchange with others. Co-operation and reciprocal relationships are limited to one's own group and close people. A person thinks it is morally binding to keep promises and to fulfil expectations in family and work roles. *The maintaining norms schema* emerges when a person recognizes that co-operation among strangers is inevitable for social order. Co-operation needs to be governed by common agreements, rules and laws that must be uphold and respected. A professional feels obliged to follow duties and codes of ethics, to keep mutual agreements and contracts and to advance the welfare of other people, clients and communities. Finally, *the postconventional schema* emerges when a person realizes that laws and social practices, even though commonly agreed in the society, can be biased against certain groups and individuals and may violate their fundamental rights. Therefore, maintaining status quo in society is not justifiable for its own sake, but laws and practices are open to rational critique and can be challenged by emerging knowledge and evidence. A professional believes that communities and societies should be built on moral ideals sharable by all members. She or he can distinguish ethical values from other values and advance them through her or his work (Juujärvi & Helkama, 2020, Rest et al., 1999).

According to Bebeau and Thoma (1999), the above moral schemas provide a general framework within which ethical codes and concepts are understood and interpreted. The moral schemas make different aspects of professional ethics salient and prone to learning, as Figure 2 illustrates. Professionals' moral stances and ethical decision-making on the same issue may vary, depending on the moral schemas accessible to them. Effective ethics education should promote students' progress towards the schemas beyond their current understanding. This means that educators need to identify schemas behind students' thinking and courage them to adapt more encompassing perspectives embedded in higher schemas. Thought-provoking discussions and debates reveal students' different conceptions of justice and justice-related ethical concepts, such as the right to self-determination, confidentiality or informed consent and thus transform their thinking, helping it become more inclusive. Achieving the postconventional schema is a critical step for professional development, because it equips nurses with critical understanding of prevailing healthcare practices. In the hierarchical healthcare contexts, nurses' decision-making is often subjected to doctors' decision-making. Previous studies show that nurses tend to conform to current norms and practices, even when those compromise their personal values and patients' rights (for a review, see Goethals, Gastmans, & Dierckx de Casterlé, 2010).

In the COPE project (Juujärvi, 2018), we have observed that grasping moral theories emphasising common good, such as Kantian ethics, utilitarianism and theories of social justice, aids students to shift from conformist thinking towards the postconventional schema. Dilemma discussions are again useful, because they provide students the opportunity to hear arguments from their peers and teachers that may be more comprehensive than their own. Teachers can also recommend that students apply a specific theory for solving the targeted ethical dilemma under discussion.
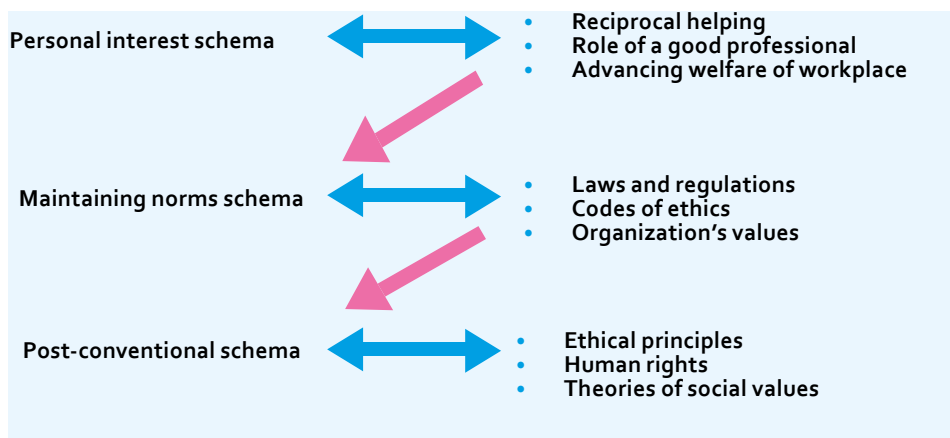
Figure 2. *Developmental schemas of justice reasoning*

As an example, let's take the ethical dilemma generated by Sofia for the online dilemma discussion. Tauno is in his eighties and has been diagnosed with Alzheimer's disease. Sofia knows that people with early stage Alzheimer's, especially those with a long history of driving experience, are eligible to operate a car, but she has observed that Tauno's skills have deteriorated, causing close calls on his way to the day-care centre and in the neighbourhood. While she has recognized an ethical dilemma, she must decide what she should do and justify her decision. The ethic of justice also involves legislation and ethical codes authorized by professional communities. Therefore, it is important to get to know what the law obligates and what her duties as a nurse include in the situation. When looking into the ethical codes of nurses, the principles of self-determination (respecting Tauno's will) and fair treatment (preventing violation of other people's rights) are relevant to the case, but they contradict each other.

When pondering the ethically most appropriate line of action, elaboration of ethical theories would be helpful for Sofia. In particular, Kant's ethics shed further light on the issues of self-determination, and utilitarianism provides justification for restricting individuals' rights at the expense of the common good (Juujärvi, Myyry & Pesso, 2007). The ethic of justice emphasizes that professionals' choices must be based on reasoned laws and ethical principles, and they must be arguable to others, clients and colleagues. The professional understands that as an occupant of the official role in a public organisation, she or he also has duties towards all citizens, such as respecting human rights and enhancing the reputation of the healthcare institution.

THE ETHIC OF CARE

The ethic of care has been defined as 'an approach to ethics originating predominantly from feminist writing, which focuses on close personal relationships and emphasises emotional commitment as a basis for acting, rather than reliance on abstract rules and principles' (Tadd, 1998). The ethic of care has typically been viewed as a counterpart to the ethic of justice, providing complementary viewpoints to the same ethical dilemma. In short, the ethic of justice represents *universalistic* thinking aiming at a generalisable solution that can be applied to other similar cases, whereas the ethic of care represents *particularistic* thinking that considers unique features of people and situations in detail (Blum 1988; Juujärvi & Helkama, 2020).

The care vs. justice distinction originates from the studies by Gilligan (1982), who observed that moral conflicts women faced in their everyday lives were centred on issues of care and responsibilities in relationships; these conflicts were not captured by the academic research of that time centred on issues of justice. Since

then, an extensive body of research has evidenced that people apply both care and justice ethics when solving moral conflicts in their everyday lives, and these considerations complement rather than contradict each other (Juujärvi & Helkama, 2020). In the COPE project, Juujärvi, Ronkainen, and Silvennoinen (2019) recently found that primary nurses in geriatric rehabilitation wards used both the ethics of care and justice when facing ethical dilemmas related to the discharge of frail patients. Within the ethic of care, they used empathic understanding to build rapport between nurses, patients and their families, whereas particularistic thinking was important in discharge planning when nurses gathered detailed knowledge on patients' idiosyncratic features and situations at their homes. Consequently, nurses considered the ethic of justice when assessing whether a prolonged stay at the hospital was justified or not, in light of diminishing resources of public healthcare services (Juujärvi et al., 2019).

Following Lawrence Kohlberg (1984), who established the developmental stages for the ethic of justice, Gilligan (1982) also proposed developmental stages for the ethic of care. Eva Skoe (1993) constructed the Ethic of Care Interview to measure the level of care reasoning development. The accumulating research has validated three main stages: (1) caring for self, (2) caring for others and (3) caring for both self and others. In addition, there are two transitional stages (1.5 and 2.5), when the person's moral reasoning is more or less out of balance. Central to the development of care is the increasingly complex understanding of interdependence of self and others and responsibilities in human relationships (for a review, see Skoe, 2014).

In her dissertation study, Juujärvi (2006) showed that nursing and social services students followed the developmental path, and two-thirds of them progressed in care development across a two-year period. In their longitudinal study, Juujärvi, Myyry and Pesso (2012) pointed out that the capacity of affective empathy predicted students' care development. In other words, students who were more empathic at the beginning of their studies achieved greater gains in care development during education. Juujärvi, Pesso, and Myyry (2011) specified that nursing and social services students solved ethical dilemmas through care reasoning, and their current developmental stage was reflected in their solutions. Students at advanced stages (2.5 and 3) were more capable of integrating the viewpoints of several people and of using social networks as a recourse for clients' well-being than students (Juujärvi, Myyry & Pesso 2011).

Despite the enormous popularity of Gilligan's ground-breaking book In a Different Voice (1982), many scholars in ethics and moral psychology took the stand that the ethic of care does not represent an independent theory of its own but instead describes an ethic of relationships as a part of justice or virtue-based theories. This would suggest that ethical conflicts in relationships could be adequately handled through issues of trustworthiness, promise keeping, sympathy and goodwill. According to care theorists (e.g., Noddings, 1984 and Tronto, 1993) this is not, however, the case. Let us again consider Sofia's example. While the ethic of care aims to enhance people's wellbeing and relationships and prevent their hurt and suffering, the nurse needs to employ particularistic thinking in mapping the ethical dilemma. Sofia would piece together specific characteristics of Tauno and his situation, rather than see him as a standard case of a male patient with Alzheimer's disease. She would recognize Tauno's vulnerabilities and further consider how she and other healthcare workers could optimally respond to Tauno's authentic needs, both immediately and in the long run. While relationships are crucial for the ethic of care, she would assess how alternative lines of action would affect Tauno's relationships with his wife and other people, especially if his driving licence were revoked. If Sofia adopts the reflective ethic of care perspective in her decision-making, she would likely think that the occasional offense of a client to be inevitable at the expense of others' needs. Hurt should, however, be minimized, and additional efforts to repair and maintain relationships needs to be made. Nevertheless, in the scope of the care ethic, nurses' actual deeds and their consequences are those that count, rather than their rational judgments.

THE ETHIC OF CARE IN EDUCATION AND ORGANIZATIONS

To summarize so far, previous studies indicate that care reasoning constitutes a conceptual bedrock for nurses' ethical decision-making. The ethic of care, however, does not receive the attention it deserves in nursing education. This partly reflects the development in academic nursing research since Gilligan's 1982 publication. The ethic of care was initially regarded as essential for nursing ethics, because it described difficulties nurses encountered in healthcare contexts dominated by medicine and justice-based ethical theories (Woods, 2011). The nursing practice builds on careful consideration of the nurse-patient relationship, which is not only natural behaviour for nurses as a female-dominated profession but also an intentional professional accomplishment, requiring ethical competence (Tschudin, 2003). Martin Woods (2011) concludes in his review that, despite its promise, the ethic of care has been interpreted as a recommendable attitude for nurses, rather than as a proper mode of ethical decision-making, and consequently, justice-based ethical theories continue to overrule care-based ethical theories. While the ethic of care has traditionally been relegated to the individual sphere of women's lives, the ethic of justice governs the public sphere, including professional obligations. The dominance of the ethic of justice has led to a distorted view of human beings as rational and autonomous individuals, ignoring vulnerabilities and dependencies such as sickness and frailty in old age (Barnes, 2011; Tronto, 1993).

We argue that the ethic of care is an important aspect of nursing practice, and consequently, it should be a legitimate part of nursing ethics and education. According to our observations in further education, nurses often apply the ethic of care to ethical issues they encounter, but they refer to it as 'human thinking' or 'personal opinions', as opposed to professional thinking and evidence-based practice. It seems that the ethic of care is not fully appreciated as a basic value of nursing, and managers and employees in healthcare organizations have not yet understood its relevance to the quality of service. The tendency to see ethical issues in caring as inferior to organizational efficiency demands has intensified, especially in institutional elderly care, and has manifested in severe ethical and managerial crises in Finland (Juujärvi & Häkkinen, 2019) and other Western countries (Woods, Phibbs, & Severinsen, 2017). Nurses feel desperate when they are not allowed to satisfactorily respond to the needs of patients due to organizational constrains such as strict procedures and tight schedules, narrow job descriptions and a lack of multi-professional collaboration (Salin & Juujärvi, 2019). Unresolved ethical conflicts in the workplace further deteriorate nurses' occupational well-being and predispose them to job transfer (Juujärvi, Nummela & Sinervo, 2020).

In order to amend the continuing shortage of nurses, healthcare educators, practitioners and managers, we need to acknowledge the ethic of care as the core value of nursing and make special efforts for it to flourish in educational institutions and work organizations (Tronto, 2010). In this article, we have proposed online dilemma discussions as one viable method for exploring ethical quandaries, in term of the ethics of care and justice and equipping nurses with improved argumentation skills needed for decision-making in healthcare organizations.

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5. Towards ethically sustainable societal engagement of higher education. Case HEISE challenge-solving projects using arts-based methods

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The Higher Education for Societal Impact (HEISE) project (funded by Erasmus+ from 9/2016–8/2019) aimed to build a roadmap for higher education institutes (HEI) for societal engagement, including a toolkit for teachers to plan and implement challenge-based learning activities utilising arts-based methods. The roadmap is founded on the premises that higher education institutions' engagement with other actors in society will lead to societal impact in the longer run. The roadmap is designed for both managers and teachers. It introduces novel ways to increase intercultural understanding and social inclusion, including practical examples and tools for learning and managerial activities. For HEI managers, the roadmap provides ideas and examples for how to understand and assess the societal impact of HEIs. (See Ateca-Amestoy et al. 2019.)

During the project, bachelor students of social services at Laurea University of Applied Sciences carried out dozens of challenge-solving projects with different stakeholders, such as children, youth, immigrants, mental health rehabilitees, substance abusers and the elderly. Altogether 145 students took part in the project. Challenge-solving teams used arts-based methods to find new perspectives on the challenge at hand, to create a shared understanding of the issue and to learn different actors' experiences.

In this article, we elaborate on the concepts of societal engagement and societal impact to open up a wider perspective of challenge-based learning with arts-based methods. Next, we discuss the ethical issues related to social work, arts-based methods and challenge-based projects. Then we proceed to reflecting on how the innovative educational approach of challenge-solving projects utilising arts-based methods manifests the ethical codes of the professional practices of HEIs. Finally, we present our conclusions on HEIs' societal engagement and impact related to challenge-based learning emphasizing the ethical aspects of HEI practice.

SOCIETAL IMPACT AND SOCIETAL ENGAGEMENT IN THE CONTEXT OF HIGHER EDUCATION

The concepts of social and societal impact are often perceived as synonymous. However, in the HEISE project we considered societal impact to be a broader concept than social impact. It comprises but also goes beyond social impact (see, e.g., Belfiore and Bennet 2008). Analysis of the current definitions of societal impact also suggests that a comprehensive and theoretically founded definition of societal impact seems to be missing from the literature. The definitions are too narrow with regard to the type of impact (e.g., intended vs. unintended); they disregard causality, or they are defined in a way that leads to partly overlapping definitions. (See Ateca-Amestoy et al. 2019.)

There is also a lot of ambiguity associated with the term impact: the distinction between impacts, outcomes and outputs can be difficult. It may be proposed that the term "impact" can be used both for short- and long-term consequences. We maintain that it is essential to separate outputs and outcomes: "The outcomes are the difference made by the outputs" (Mills-Scofield 2012).

The aim of societally engaged HEIs is to influence and do good, to help people and society and to make a change in society. Furthermore, it is the responsibility of each higher education institution to safeguard and promote the highest level of integrity and ethical behaviour (IAU-MCO Guidelines 2012). In Finland, the accountability of HEIs to their financiers and to society requires that HEIs understand, evaluate and report their societal impact and view anticipated societal impact as decision-making or evaluative criteria within HEIs when making decisions on future activities.

According to the country reports produced as part of the HEISE project, HEIs consider societal impact highly important. They have established procedures for managing and evaluating societal impact. The interviewees emphasised the need to develop qualitative indicators and to pay more attention to unpredictable and unintended negative and positive impacts. The challenge, however, remains how to evaluate long-term impacts and any causalities.

Societal engagement is an integral part of social interaction and an important prerequisite for HEIs' societal impact. Societal impact is a consequence of collaborative activities performed with different actors in society and thus has instrumental value. In addition, social engagement activity itself can create value and contribute to societal impact by enabling citizens to participate in development work with creative methods. Hence, societal engagement has intrinsic value (for more see Ateca-Amestoy et al. 2019). In the HEISE project, students used arts-based methods as a means to elaborate on the challenge together with the challenge-owners; that is, organisations and citizens outside their own higher education institutes (e.g. a day-care center and an association for mental health rehabilitees).

ETHICAL ISSUES AND THE VALUE OF ARTS-BASED METHODS IN HEISE CHALLENGE-SOLVING PROJECTS

The social work profession's core mandates include promoting social change, social development, social cohesion and the empowerment and liberation of people (International Federation of Social Workers 2019). Social workers respect human rights and value the idea of collective responsibility: people should take responsibility for each other and the environment. Moreover, social workers acknowledge the importance of building reciprocal relationships within communities.

In a similar vein, when using arts-based methods in learning or in professional social work, core ethical principles can be described as different rights: self-determination, participation, holistic treatment, privacy

and development of professional skills and personal wellbeing (Talentia 2019). The critical issue is to respect these rights from the beginning of the challenge-based project by listening to every actor's needs and priorities.

HEISE challenge-solving projects are based on the value that citizens are active participants of society rather than objects. HEIs play a key role in educating young people to understand the underlying value systems of society and cultures and in fostering social integration into today's diversified world. HEIs need novel ways to gain knowledge and skills on how to enhance intercultural understanding and a sense of belonging to a community.

Ethical principles and codes of ethics do not always offer direct solutions to dilemmas but rather serve as a guide for reflection (Talentia 2019). Arts-based methods can open up a free space, one without a sense of right or wrong and limitations and preconceptions, thus providing room for open discussions and joint exploration of different phenomena (Känkänen & Bardy 2014).

According to Gladding (2016), arts-based methods enable participation, interaction and cooperation, and they empower people. Arts can create chances to see the challenges and opportunities in one's life through creativity and play. Art provides an opportunity not just to explore new things but also to see familiar things from another perspective (Winner, Goldstein & Vincent-Lancrin 2013) and thus create understanding and enable us to be empathetic.

IMPLEMENTATION OF CHALLENGE-SOLVING PROJECTS

Student teams carried out multiple challenge-solving projects with a variety of stakeholders, such as disabled children, mentally disabled adults, mental health rehabilitees, the elderly, immigrants, multicultural families and children. As an example, student groups used arts-based methods such as music, visual arts, drama and handicrafts to maintain and support the physical capacity of the elderly. The objectives of the challenge-solving projects were jointly agreed on with challenge-owners. A written contract between the challenge-owner, students and their teacher is a good tool in building a joint understanding of the challenge and the different actors' expectations and tasks. Work-life partners were mostly non-profit organisations and associations but also public service providers, such as day-care centres.

When planning and executing challenge-based learning projects with stakeholders in the context of HEISE project, students were asked to reflect on four basic values: responsibility, honesty, respect and fairness (Anttonen et al. 2016, 55–58). These values should form the basis of decision-making and should guide actions in challenge-solving projects.

During the challenge-solving projects, students encountered some challenges, too. For example, in the housing community of mental health rehabilitees, there were different views on the challenge to be solved, and sometimes the students' views were different from that of the rehabilitees. The more time spent in dialogue at the beginning of the challenge-solving projects, the more conflict is prevented during the implementation phase (see more on dialogical approach in Anttonen et al. 2016, 58–61).

One of the major challenges for most of the student teams was to find ways to get those persons who have long been "on the outskirts of our society" involved in the collaborative activities and thus strengthen their feelings of belonging and increase their participation. It takes time to build trust between clients and students in learning projects. Alongside one-off projects, higher education institutions should build collaboration; for example, art-based methods could be used for long-term development. This would allow for responsible co-creation and development, paying attention to the perspectives of all the actor.

As an outcome, arts-based challenge-solving projects created positive impact. Students found that music is a powerful channel for interaction with elderly suffering from memory problems. The same elements were also present in the anti-racism workshops for children and wellbeing workshops with mental health rehabilitees. Different client groups were able to express their thoughts and feelings through creative activities. Arts-based methods were regarded as tools to strengthen interaction between participants. Doing things together with the students created joy and strengthened the feeling of belonging not just to the surrounding community but to society as a whole. Hence, we argue that arts-based methods can strengthen the sense of belonging not only on an individual level but on a societal level.

It can be concluded that arts-based methods enable the sharing of one's feelings and thoughts, even if it had been previously considered impossible. Music and visual arts enable communication and expression for those who have challenges in everyday communication. The most meaningful learning outcome for the students was that arts-based methods do empower people. Creativity can help vulnerable people realise that they can influence the surrounding community. Arts-based methods enable them to be seen and heard and on an individual level improve their functional capacity. The creative activity that takes place in dialogue enables the client to become involved. The customer is seen as a subject and actor, not an object.

REFLECTIONS ON THE MANIFESTATION OF ETHICAL CODES OF THE HEI PRACTICE IN CHALLENGE-SOLVING PROJECTS

The outcome of the HEISE project, the roadmap for societal engagement, will help HEI professionals plan new educational activities to enforce the societal engagement of their own higher-education institutions. Next, based on the above discussion on the implementation and outcomes of the challenge-solving projects, we will briefly elaborate on their alignment with the ethical codes of HEI professional practice following the Council for the Advancement of Standards in Higher Education's Statement of Shared Ethical Principles (2015).

Table 1 presents seven ethical principles: autonomy, malfeasance, beneficence, justice, fidelity, veracity and affiliation. The second column provides a brief description of each ethical principle, and the third column provides examples of how each principle was manifested in HEISE challenge-solving projects. The description of each ethical principle relies on the statement released by the Council for the Advancement of Standards in Higher Education (2015).

Freedom of choice is a vital aspect in the first ethical principle, *autonomy*. As HEI professionals, we consider individuals responsible for their own behaviour and learning; we hold ourselves and others accountable. Our task is to design learning environments that empower students and other actors to make decisions. HEISE challenge-solving projects are prime examples of such learning environments.

The ethical principle of *non-malfeasance* emphasises that in the collaborative activities with actors outside our own HEI, we, both the professionals and students, must strive for the good of those whom we serve. We act in a manner that respects the rights and property of others without exploiting or abusing power. Following this principle was critical, as most of the challenge-solving projects were implemented with people with impairments or with those who are in vulnerable positions.

All the HEISE challenge-solving projects aimed at promoting wellbeing and empowering people; thus, they were aligned with the principle of *beneficence. Justice* refers to actively promoting human dignity and endorsing equality and fairness for everyone. As a novel educational approach, challenge-solving projects planned and implemented by the students and clients foster equality and fairness, simultaneously balancing the power between teachers and students.

Table 1. *Examples how the ethical codes of HEI practice (Council for the Advancement of Standards in Higher Education 2015) were manifested in HEISE challenge-solving projects.*

ETHICAL PRINCIPLES	AS HEI PROFESSIONALS...	MANIFESTED IN HEISE CHALLENGE-SOLVING PROJECTS
1. Autonomy	We take responsibility for our actions and both support and empower an individual's and group's freedom of choice.	Students' projects are based on the needs of clients (challenge-owners), thus respecting their right to self-determination. Students, together with the challenge-owners, made decisions on how to proceed with the challenge and which arts-based methods to use. The teacher's role was to support and provide guidance when needed and after the project help the students evaluate the impacts and their own learning.
2. Non-malfeasance	We pledge to do no harm.	Special needs of clients were considered; client-centricity was the guiding principle in students' work. When working with citizens with disabilities or impairments or with people in vulnerable positions, special attention was paid to the choice of methods to ensure that the actors would be able to participate according to their own abilities.
3. Beneficence	We engage in altruistic attitudes and actions that promote goodness and contribute to the health and welfare of others.	All the HEISE challenge-solving projects aimed at promoting wellbeing and empowering people.
4. Justice	We actively promote human dignity and endorse equality and fairness for everyone.	Human dignity and human rights were the main focus of the challenge-solving projects.
5. Fidelity	We are faithful to an obligation, trust or duty.	Students followed the ethical code of conduct. Ethical issues were reflected on at HEI during and after the challenge-solving projects.
6. Veracity	We seek and convey the truth in our words and actions.	Transparency was emphasised in the challenge-solving projects. Students documented their projects from planning until the final stage. Project outcomes were reflected on together with the stakeholders.
7. Affiliation	We actively promote connected relationships among all people and foster community.	Building and strengthening relationships with citizens and their communities is at the very core of challenge-solving projects. With the use of arts-based methods, it was possible to foster community and a sense of belonging.

The ethical principle of *fidelity* concerns confidentiality, trust and commitment. Reflective discussions on issues related to ethical codes of conduct were held among students and teachers both during and after challenge-solving projects.

As to veracity, we wish to highlight that students documented project activities from the very beginning until the final stage, thus emphasising *transparency*. The outcomes of the challenge-solving project were reflected on together with all the participants and other stakeholders.

When acting according to the principle of *affiliation*, we create environments that promote connectivity. Using arts-based methods in a group or within a community strengthened the sense of belonging as regards the group or community and the larger society. Moreover, affiliation refers to promoting authenticity, mutual empathy and engagement with human interactions. All the activities of challenge-solving projects were organised at the premises of the challenge-owners (e.g., at youth houses), not at HEI campuses, thus supporting the empathic and authentic approach.

CONCLUSIONS

A team of students was responsible for planning and implementing arts-based activities in close collaboration with the representatives of the challenge-owner. Discussions on the ethical codes of conduct were important during the learning process. Based on our experiences in the HEISE project, we recommend that all stakeholders agree to follow jointly established rules on ethical codes of conduct, research ethics and integrity, copyright and intellectual property rights

We conclude by maintaining that arts-based methods can be used as a means to reflect ethical aspects of the challenge solving projects to empower individuals and organisations. Arts-based methods enable us to deal with delicate situations. They provide a non-verbal means for communicating complex and ethically challenging situations. Through arts-based methods, we can build bridges and promote new ideas.

Moreover, we wish to highlight the need to develop new types of learning environments in collaboration with other actors in society to provide higher-education students authentic and empowering learning experiences. The complexity of our society is continuously increasing; thus, more attention should be paid to strengthening the capabilities of dealing with complexity with profound understanding of ethical codes of conduct.

If seen from a distance, students' challenge-solving projects might seem microscopically small. However, we should not underestimate their impact. Challenge-solving projects not only affect the individuals that take part in them; through the participants, the effects spread to their families, peers and community. For example, discussions of ethical codes of conduct during the planning, implementation and evaluation stages of the challenge-solving project might lead to changes in care professionals' attitudes towards their clients and result in amendments to their work practices. Thus, in affecting one person, we create a positive impact on society.

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6. Building a more sustainable business realm through education

Maria Ekström

Business growth has been the foundation of a thriving and prosperous society. Through business growth, our societies have received the necessary revenues to maintain important functions such as health and social care, research and education, and infrastructure, to name a few. In 1970, Friedman questioned the discussion of the social responsibility of corporations (Friedman 1970) and stated that the main purpose of companies is to create profit for its shareholders, a perspective that is often seen as the only role of companies. The more profitable, the better. On the other hand, obvious or not, companies should continue to follow the path of profitability, as it translates to efficient use of resources and creation of viable products and services. By being profitable, companies have to be innovative and create with an entrepreneurial attitude. Innovations that are viable create growth, and growth creates employment possibilities, which makes improvements in people's lives (see, for example, Baumol and Strom 2007; Hitt, Ireland, Sirmon and Trahms 2011). Companies can create important societal value, but there are also examples of them harming and destroying value, especially if we look at business practices from an ecological or natural resources perspective. One could even say that a key problem is that the connection between business practices and society has been nonexistent or lost.

In 2011, Porter and Kramer put forward the need to redefine capitalism and create shared value, stating, "The moment for a new conception of capitalism is now; society's needs are large and growing, while customers, employees, and a new generation of young people are asking business to step up" (2011, 4). Now, nine years later, we are in a situation where earthly resources are showing their limits and companies are trying to create new business models that combine the important goal of profitability with actions that consume less and use resources in eternally circular loops. We also need a new perspective on business growth and on the development of a corporate moral. In their early model about corporate morality, Reidenbach and Robin (1991) uses Kohlberg's model on individual moral development (1964, 1976), adapting it to a corporate context. When educating future actors within business, we need to aim at knowing what is demanded to attain at

least a level of emerging ethical (balances ethics and profit and has ethical artefacts) morality (Reidenbach and Robin 1991, 274; Brinkmann and Peattie 2005, 164). In other words, in business education we should strive for the perfect balance between understanding of what profitability brings to our society and corporate morality. In addition, we should be aware of how climate change urges us to include a view on resources. Our earth demands immediate action to remain safe and sound. According to the majority of publishing climate scientists, climate change is caused by human action (Cook et al. 2016), so we have to correct errors from the past and find new solutions for the future. This view cannot be left out either.

In the following paragraphs, I will elaborate on how a new possibility to learn for a future, considering the perspectives mentioned above, emerged. I aim to create a coherent picture on the steps to take as a learner and what we consider relevant in a master's degree programme called Sustainable Growth Leadership, a programme we developed based on 17 sustainable development goals and a model for creating transformative education opportunities (Setó-Pamies and Papaoikonomou 2016). The sustainable development goals were chosen as a framework for development, as they aim to change in social, economic and environmental issues (Sustainable development goals, 2020). I will also discuss how different central concepts – the pillars for learning how to lead sustainable business growth – were chosen. I then proceed to describing the programme syllabus, which includes different levels of actions for creating a more sustainable business world.

What I am presenting here is nothing new, as such, because the discussion about education for sustainability and awareness of it, as well as its societal impact, has been ongoing in different forums for a while. Determining when it all started is not an easy task, but perhaps we could start by mentioning the 1977 intergovernmental UNESCO conference on environmental education in Tbilisi, Georgia. The delegates agreed that understanding the complexities of the environment, as well as the "economic, political and ecological interdependence of the modern world" (United Nations 1978, 12), is crucial. Also important was to be aware that such as perspective must be holistic as well as interdisciplinary. In creating the Sustainable Growth Leadership programme, the basic idea was to anchor the curriculum in the realm of business growth and create a new growth paradigm that is better connected to an understanding of sustainability in connection to environmental boundaries. Following the research and thoughts of the economist Raworth (2017), who rephrased the economics discourse to better connect with the reality of today, we aim at redefining business growth. We underline renewal, circularity and a perspective on growth that includes them in their business models. Profitable companies are, on the other hand, important for society, but a too-narrow view of profit maximisation could be to the detriment of those in a vulnerable position.

The developing team decided that the programme should include elements of an ethical perspective, corporate social responsibility (CSR) and sustainability. It is important to understand that these concepts are interrelated but that their roots lie within different contexts (see Setó-Pamies and Papaoikonomou 2016). Corporate social responsibility is, for example, defined in several ways, but according to Dahlsrud (2006), social, economic, stakeholder, environmental and voluntariness are the most prevalent dimensions. For practitioners, it is more important to understand "how CSR is socially constructed in a specific context and how to take this into account when business strategies are developed" (Dahlsrud 2006, 6). It is possible to see CSR and ethics as strongly interrelated or overlapping concepts, but, according to Setó-Pamies and Papaoikonomou (2016), the concepts are different. The team shares this perspective. Ethics is more about moral judgment, right and wrong and about actors' decisions. One could even talk about ethical agency, which demands "individual ethical and moral foundations and beliefs" (Matherne, Gove, Forlani and Janney 2006, 107) or could simply create an organisational culture of constant moral reflection upon actions.

Sustainability, and maybe in this context corporate sustainability (hereafter CS), is closely related to CSR, with similar actions and values. According to Garavan and McGuire (2010, 493), CSR fits better within a business discourse, and CS better reveals the relationship between business and society. Garavan and McGuire (2010, 493) also put forward that "[t]he economic dimension focuses on economic prosperity through value creation", which can clearly be seen in the circular economy discourse (see, for example, the discussion of value creation and sustainable business models in Lahti, Wincent and Parida 2018).

With these concepts in mind, we designed our framework for the programme, which is created for the business context or any commercial activity defined as follows: "Any activity or service that produces income for any person, group, business or entity, including any activity or service by any non-profit entity where a fee is required or requested" (Law Insider 2020). This means that we aim to developing skills that leaders in organisations or entrepreneurs need in order to enable results that correspond to their sustainable development goals. In the programme, we see that there is knowledge that focuses on the individual, organisational/company level and societal level. We are mainly addressing sustainable development goal 8 (decent work and sustainable growth), 11 (sustainable cities and communities) and 12 (responsible consumption and production) while remaining aware of the interrelatedness of all the goals, which aim to build "a better world for people and our planet by 2030". Individual resilience, or the ability to be both flexible and strong in times of change, is important, considering that we aim to educate can indivudalswho can drive the change that is required to accomplish sustainable development goals. To be able to face disappointments as well as disasters, the ability to "bounce back" (Graham 2013) comes into focus; this skill lies at the core of the programme, and we have dedicated a course to developing individual resilience.

In sustainable development goal number twelve, the aim is to create sustainable consumption and production patterns. Our students, after completing the course in sustainable consumer behaviour, should know how to be responsible for changing consumption patterns towards deeper sustainability. They should learn how to influence social norms that create sustainable consumption and understand the dialogue between cognition and emotions in consumer behaviour. Altogether, students should be able to create and develop new models for sustainable consumption and communicate it to a larger international audience.

Having prepared our students on an individual level, we move our focus to companies or the organisational level, and for this we chose two themes that we consider important in this phase. Our students, after graduating from this programme, should understand and be able to employ sustainable and circular economy business models. What we consider extremely important is that students learn what possibilities exist to develop ecologically, economically and socially viable business models within companies and other organisations. Sustainable business models include a financial perspective, and in this programme, one theme is to understand ethical and responsible investments in the context of small and medium-sized enterprises. In addition, the students will learn how to analyse the financial condition of a company, which will support an understanding of responsible growth patterns.

Last but not least, we focus on the societal level. Students will learn how to cope in new situations where networks and social innovations strive to solve severe problems. They will also create an understanding for what our society needs and are tasked with solving wicked problems (see Rittel and Weber, 1973) by developing new social innovations (we define social innovations as new solutions for social problems; see, for example, Phills, Deiglmeier and Miller 2008). Students will also learn by co-constructing with the communities, challenging stakeholders through reflexive dialogue (Lahtinen and Yrjölä 2019) and finding solutions to problems through collective intelligence and networks.

With these themes in the 30 study units of core competences, we want to prepare our students for a challenging environment that can be described as unstable, unpredictable, complex and vagueIn picture 1 below, we summarised the programme.

	SUSTAINABLE GROWTH	
8 Decent work and economic growth	11 Sustainable Cities and Communities	12 Responsible consumption and prodcution
Sustainable Development	Ethical Agency	Corporate Social Responsibility

Picture 1. *Overview of important goals in the program and concepts in focus (Image: Maria Ekström).*

We will continuously improve the curriculum through the feedback we receive from our stakeholders, relying on the various steps of the Deming circle (plan-do-check-adjust). The first student group starts its studies in the autumn 2020, and we look forward to sharing the results from the first edition of the Laurea UAS master's programme in Sustainable Growth Leadership next year.

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III

Inclusiveness and participatory approach as an ethical frame

7. Participatory action research as a value-based approach to community development

Soile Juujärvi & Virpi Lund

Participatory action research (PAR) is a well-known approach in social sciences but is seldom used in urban development projects. It represents a community-focused approach that is deeply grounded in ethical values, especially that of social justice. This paper analyzes experiences from two PAR projects, conducted in a disadvantaged municipal district. We worked as project managers and researchers in the projects Caring and Sharing Networks (2013–2015) and Participatory Budgeting in Neighbourhood Development (2016–2018) in the city of Espoo. In this article, we share the lessons learned from PAR. In particular, we focus on the question of how to reach, motivate, engage and empower citizens to participate in community development. Participant empowerment is crucial for successful PAR projects. This means that priority should to be given to participants' voices at all stages of the project, and researchers must acknowledge and reflect on values underlying and guiding the research process. This makes PAR a fundamentally ethical enterprise.

BACKGROUND OF PAR

PAR has two main historical roots: the traditions of participatory and action research. Firstly, it originates from liberation theology and neo-Marxist approaches to community development and liberal human rights activism emphasising empowerment through collective action. In contrast with mainstream research in human sciences, PAR research acknowledges that research is not 'objective' but guided by values and states that it should serve ethical aims. Following Freire's pedagogy of the oppressed (1970), PAR is aligned with the values of social justice and inclusion, with the aim to promote positive social change for disadvantaged people. (Nelson & Prilleltensky, 2005).

Secondly, PAR traces back to the action research approach initiated by social psychologist Kurt Lewin (1946) in academic settings. Lewin proposed iterative cycles of problem-defining, fact-finding, goal-setting,

action and evaluation to simultaneously solve problems and generate new knowledge. Whereas the above-mentioned cycle depicts action research from an external point of view, there is also a parallel iterative cycle of self-reflection, describing researchers' internal processes: planning, acting, observing and reflecting, replaning, and so on; here, acting refers to concrete, not abstract practices (Kemmis & McTaggart, 2000).

While participatory research gives PAR its ethical values, action research provokes the demand for scientific rigor, and those should be integrated into the research process. PAR combines participation, which means that research is not done on people but with them, and action, which means concrete problem-solving. According to this, participants should become co-researchers and agents for change through participation. In practice, this means enacting local, action-oriented approaches to investigation and applying small-scale theorizing to specific problems in particular situations (Stringer, 1999; Berg, 2007). PAR often starts as a bottom-up process and gradually fosters a collaborative enterprise, which is characterized by shared ownership of research projects, community-based analysis of social problems, and an orientation toward social action (Kemmis & McTaggart, 2000). In other words, PAR strives to share researchers' power with participants; therefore, researchers need to adopt equality, rather than scientific authority, as a primary attitude towards participants.

Our experience with PAR is based on two projects that aimed to enhance residents' participation and residents' and stakeholders' collaboration in terms of community and urban development. The projects took place in one of the suburban areas within the city of Espoo. In light of social and economic indicators, it represented the least-advantaged district in the city. These projects were initially motivated by two main observations: low levels of resident involvement and a lack of systematic collaboration among stakeholders in various previous community development endeavours. Within the first project (Caring and Sharing Networks), residents, civil servants, NGOs, and enterprises were invited to develop new forms of collaboration for enhancing positive urban development (Juujärvi 2016). Within the second project (Participatory Budgeting in Neighbourhood Development), residents were engaged to brainstorm and develop ideas for community development (Lund & Juujärvi, 2018a; 2018b). Engaging citizens was the most critical and time-consuming task in the both projects. We have reported the process and outcomes in detail elsewhere (Juujärvi, 2016; Juujärvi & Lund, 2015; 2016, Juujärvi, Lund & Salin, 2019, Lund & Juujärvi, 2015; 2016; 2018a; 2018b; Lund & Kerosuo 2019). In this article, we elaborate on the ethical aspect of PAR: values and their realization in the research process.

Picture 1. We invited people to join the project at a local event (Photo: Anna-Leena Mutanen).

VALUES OF PARTICIPATORY ACTION RESEARCH

What makes PAR different from the mainstream of community research is that it relies on the so-called critical paradigm that, in contrast to positivist and hermeneutic paradigms, aims to create social change, rather than maintain the prevailing state of affairs in society (see Habermas, 1971). Knowledge that results from such research seeks to comprehend unsatisfying or difficult situations as outcomes from human choices and considers how things could be reconstructed to enable different choices for those involved, leading to improvements in situations (Nelson & Prilleltensky 2005; Kemmis & McTaggart, 2000).

Nelson and Prilleltensky (2005) have identified four core principles underlying research within the critical paradigm PAR. These principles reflect the underlying values of PAR that needs to be acknowledged by researchers and participants. First, *self-determination* and *participation* mean that research is focused on empowering disadvantaged people through different methods. Research should begin by mapping the disadvantaged experiences and concerns and striving for maximizing their participation in all aspects of the research. Qualitative interviews provide a valuable tool for creating contacts with residents and other stakeholders and offer a channel for participants to express their opinions, as well as an opportunity to enhance interviewees' sense of self-worth and to be taken seriously as informants. The primary objective of social change is to amplify the voices of silent citizens, which succeeds best through collaborative methods such as workshops.

The second set of principles, *community* and *inclusion*, means that research strives to develop authentic and supportive relationship among researchers, disadvantaged people and other stakeholders. Researchers need to enhance trust and solidarity by inviting participants and creating a welcoming and open atmosphere for participation and to facilitate communication between different groups (Stoecker, 1990; Nelson, Ochocka, Griffin & Lord, 1998). Adapting the role of research expert to that of collaborator means a shift towards a more equal relationship between researchers and participants, which creates a more balanced exchange of knowledge. This further means that results must be delivered as a part of the ongoing research process and must be communicated in understandable language, free of research jargon (Nelson & Prilleltensky, 2005).

The third principle, *social justice*, should be practiced at all levels of research, including project planning and funding. In the most successful cases, the research budget is directed at increasing training, education and employment opportunities for the disadvantaged, and research results are utilized for creating social change (Nelson & Prilleltensky, 2005). Researchers must be sensitive to the needs and opinions of participants and help them to become agents of change through a participatory process.

Finally, the fourth principle, *reflexivity*, encapsulates well what is special about PAR practices and its scientific reasoning. Researchers need to be aware that knowledge is not neutral but value-laden, and they therefore need to practice continuous self-reflection and transparency with regard to their own values and social positions. All relevant stakeholders must be involved in the interpretation of findings, generating recommendations and choosing lines of action for promoting preferred change. It is also strongly recommended that they co-author and co-present research reports to reach wider non-academic audiences (Nelson et al., 1998; Nelson & Prilleltensky, 2005). For example, in our projects, we have regularly published co-written articles in local bulletins to inform residents about project achievements.

Enhancing social justice is a fundamental purpose of PAR. Academic literature speaks about the least advantaged or disadvantaged people as a main target group. We would like to emphasize that while doing so, we refer to people's social positions rather than their personal characteristics. As examples, language barriers, poverty across generations and unemployment influence an individuals' possibilities for well-

being and prospering, fostering instead passivity and isolation. PAR's major strength lies in its emphasis on empowerment of lay people as participants, which is crucial for social mobilization in suburban areas. Empowerment can be defined as a socially shared process by which people gain mastery over their lives, acquire a critical awareness of one's situation, and the capacity to act on that awareness (cf. Lundy, 2004). Within PAR, it begins with engaging potential participants in research activities in local settings. According to our experiences, reaching, engaging with and empowering lay people is a great challenge, but it can succeed with careful planning and perseverance (Lund & Juujärvi, 2016).

PHASES OF PARTICIPATORY ACTION RESEARCH

Phases of PAR can be conceptualized as self-reflective and repeated cycles of planning, acting, observing and reflecting (see Figure 1). In practice, the cycles are intertwined and difficult to understand without one another. The aim of the projects used for the research was to promote innovative social initiatives (Juujärvi & Lund, 2016). Next, we focus on describing the processes and methods for bringing residents and stakeholders together to express their thoughts about developmental issues, raise their consciousness of the current state of the neighbourhood and enhance solidarity and sense of responsibility.
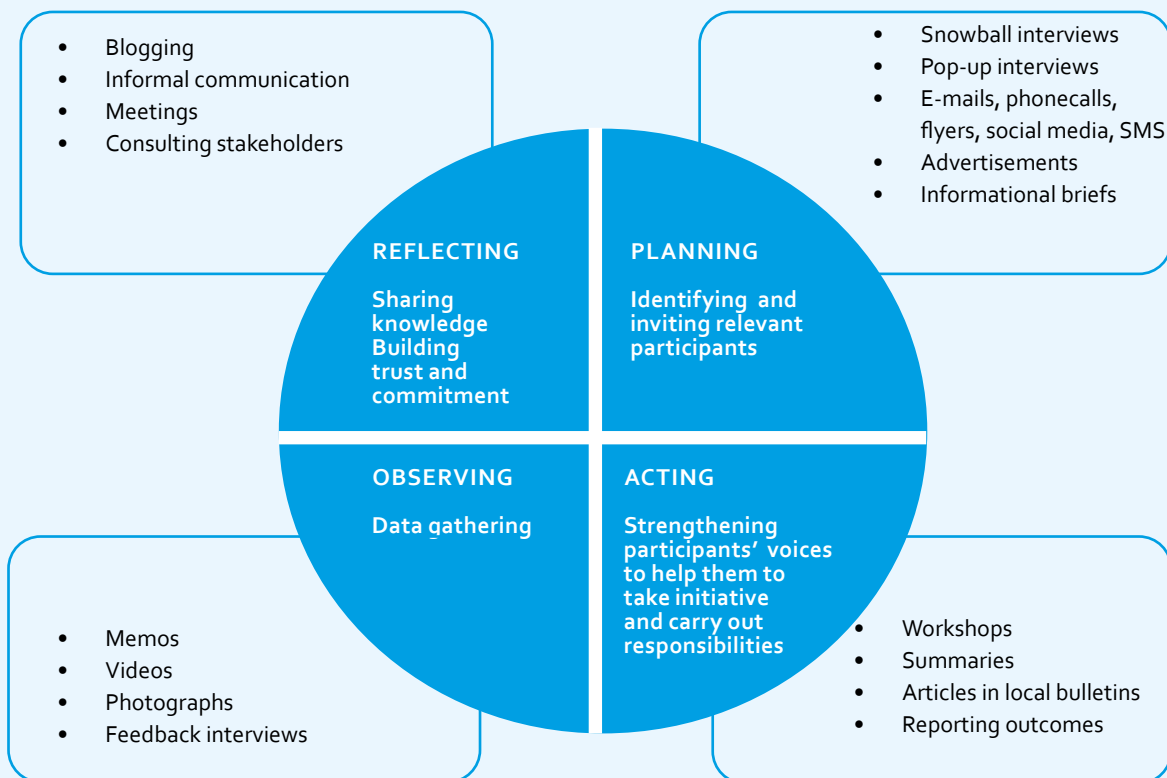

Figure 1. PAR phases and examples of methods in community development

PLANNING

Participants needs to be involved in PAR in the planning phase. From the perspective of community development, the most important groups to reach are those for whom achieving the project's goals are highly relevant and whose lives will be affected but who are not active participants in civic society. The second most important groups are stakeholders for whom goals are highly relevant and who are already active. Stakeholders and people with low relevance but who are active in stating opinions must be taken into careful consideration: their opinions should not give too much weight, because otherwise they will overrule silent citizens. People with low degrees of relevance and activeness may participate but should not be granted an abundance of energy or resources (Langlet, 2011; see Friedrich, Karlsson & Federley, 2013). In our projects, we identified immigrants, especially women, as the most important and hardest group to reach.

We recommend snowball sampling as a method of identifying and engaging relevant participants for the project. With snowball sampling, people denote and refer to others that might find the project useful and meaningful and would be interested in joining. Interviews based on snowball sampling help engage potential citizens, groups and stakeholders (including residents, city planners, public servants, NGO representatives, and development managers). Advertising at public meeting places, through email and on social media is necessary but challenging due to the mass of information people usually receive. We also distributed flyers in public places such as day-care centres, schools, offices, cafeterias, NGO meeting places, libraries and even in a swimming hall. We conducted informal 'pop-up' interviews at the local events in order to raise interest in current issues in community development and succeeded to get them involved in the project. In addition, we provided briefs on the project at a local library.

ACTING

Workshops played a major role, lending a voice to participants and engaging them in developmental activities. They were designed to be bottom-up processes that would capture residents' interests and document their needs for neighbourhood development. They were scheduled to allow enough time for participants' group tasks, reflection and socializing. Workshops were facilitated by researchers. Still, we aimed to keep the researchers' talk to a minimum and allow residents to talk freely throughout the sessions. The outcomes of each workshop were summarized by researchers and delivered in a timely fashion to participants. We also wrote articles for a local bulletin to feature the outcomes of project, raise the spirit and improve the image of the neighbourhood.

Through this process, we gradually encouraged participants to take initiative and responsibility in one's own hands. They were encouraged to invite their acquaintances and other people who might be enthusiastic about the issue to join the process. In the active phase of the project, they innovated and experimented with new ways and tools for community development (Juujärvi, 2016). As a part of this process, some participants grew into co-researchers; for example, they wrote the notes as homework and performed observation, either photographing or interviewing as a part of their project responsibilities. Finally, participants were encouraged to take further steps and establish interest groups in order to continue their initiatives with other stakeholders.

OBSERVING

In terms of PAR, observing refers to gathering different types of documented data that are analysed later. In our projects, participant observation has proved to be a key method for a successful PAR process. Participant

Picture 2. *Team work at the workshop (Photo: Anna-Leena Mutanen).*

observation refers to a method where a researcher is involved in real-life settings as a 'natural' participant and also carries a role as a researcher conducting observation and making notes (Berg, 2007). Researchers participated in the workshops as group facilitators and were members of a local multi-stakeholder group, which reported on workshop outcomes. To ensure trustworthiness of observations, workshops were video-recorded and materials produced by residents (schemes, illustrations) were photographed. Stakeholder meetings were recorded as well. Finally, all participants were interviewed by telephone in order to get feedback and check the validity of observations. Nuanced data-gathering was time-consuming but inevitable for tracking different types of bottom-up processes for research reporting.

REFLECTING

Reflection is a vital part of PAR, and it took place at multiple levels throughout the project. First of all, participants with similar interests found each other and co-planned the following steps of the project: visiting local places and offices, carrying out small surveys and organizing meetings with stakeholders. Feedback interviews revealed that the participants had especially enjoyed encounters with new people, and a high degree of mutual trust was formed during those encounters. Disclosing in-depth thoughts with each other seemed to strengthen participants' commitment to continue the project.

Shared reflection among researchers took place informally at workshops and team meetings, but, additionally, blogging by researchers was another valuable tool for sharing knowledge with a wider audience and pondering about further lines of action and their possible consequences. The blog proved to be a convenient tool for intertwining empirical observations with some theoretical viewpoints. Regular team meetings provided a forum for planning and re-planning, based on shared observations and reflections. In

addition, reflection took place through informal discussions and official meetings with stakeholders. Timely delivery of research findings to stakeholders (civil servants, city planners) made them eager to support the project and join activities. Stakeholders gradually became a vital part of the research process, because they assumed responsibilities to implement the project outcomes and uphold innovative methods for future collaboration.

CONCLUSION

The strength of PAR lies in its capacity of getting lay people engaged in developing their neighbourhoods and communities. Our projects have evidenced that PAR is well suited to induce and guide a bottom-up process in which residents and stakeholders are stepwise engaged and goals gradually clarified from various interests in neighbourhood development.

Successful projects, however, require that researchers be aware of and reflect on the values and principles underlying PAR, which emphasize empowerment, flexible designs and shared knowledge. This makes PAR a thoroughly ethical approach that stretches beyond the limits of conventional research ethics. PAR supports the development of community belonging, participants' involvement in joint activities and access to knowledge, and it gives a voice to participants as local experts. Therefore, it builds long-term social sustainability in communities.

As a research approach, the PAR cycle offers a valuable device for organizing the phases of research and sorting results. The societal impact of PAR can be measured in terms of how it succeeds in empowering the most disadvantaged groups and in engaging citizens in joint activities to create social cohesion. The ultimate goal of PAR is for participants to grow into the role of co-researchers and become activists in their lives and surroundings.

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8. Ethics of emotions: Emotional diversity as part of inclusion and diversity management in higher education

Tiina Wikström

For a realized Buddhist master, emotions are but fleeting clouds in the ever-blue sky or temporary visitors that quickly pass before the face of the serene moon, being thus of little importance. For the rest of us, with a less controlled mind, emotions are an essential part of our daily existence and at times can enhance our well-being: however, they can also cause much turmoil and hinder, for example, our plans or success in our studies.

In this article, I discuss the importance of understanding how emotions affect our learning, how awareness of emotions can promote our learning results and how it can enhance inclusion of diverse learners in higher education, thus being a relevant part of any ethical teaching and learning process. After providing some theoretical points of view on this matter, I apply these thoughts in connection with the LbD learning model of Laurea University of Applied Sciences and, as an example, I refer to one of Laurea's renowned innovations, the open learning environment Multisensory Space, presently developed in the international Erasmus+ project DISC. Finally, referring especially to R. Pekrun's research, I draw some conclusions, based on aspects that are important to (re)consider when we wish to meet ethically diverse learners in higher education, with their diverse cultural and other backgrounds and diverse emotional and learning profiles.

IT'S ALL ABOUT EMOTIONAL DIVERSITY

By nature, humans are emotional beings. It is often said that despite our great rational capacity and the many recent scientific advancements – from nanotechnology to advanced forms of AI – we still make many decisions, even the most important ones, based on emotions or our so-called gut feelings. Even in our academic lives, sadness, happiness, anger, pride, fear, awe and many other emotions are our constant

companions, in addition to our curriculums, courses and learning strategies. Also, in the hectic modern society of 24/7 availability, emotional stress is an unavoidable factor within higher education. We all experience the same emotions, students and teachers alike, but differently, and our reactions and coping mechanisms are both personal and culture bound. Therefore, to understand more deeply the link between the diversity of emotions in different learners and the effect of emotions on learning and sense of inclusion is of great ethical importance as well.

Today, the psychology of emotions, emotions and learning, and emotional intelligence, as well as the ethics of education, are relevant research topics on the subject of learning processes; it is therefore important for teachers and educators to understand how to support learners' overall emotional wellbeing. We all are different learners and need different kinds of support to manage the comforts and discomforts of learning. A deeper understanding of emotions, emotional intelligence and mentalization abilities is an essential tool for all educators within higher education. In "The Influences of Emotion on Learning and Memory", the authors elaborate how emotions influence our different cognitive processes, from perception and attention to learning, memory, reasoning and problem-solving. These researchers state how emotions especially affect the selectivity of attention, motivation and behaviour. In addition, they claim that "[e]motion also facilitates encoding and helps retrieval of information efficiently. However, the effects of emotion on learning and memory are not always univalent, as studies have reported that emotion either enhances or impairs learning and long-term memory (LTM) retention, depending on a range of factors." (Tyng, Amin, Saad and Malik 2017, 1) At best, educators can design inspiring and emotionally safe learning environments, learning and teaching methods and strategies that promote all types of learning, RDI and problem-solving for versatile learners.

EMOTIONS IN EDUCATION

Schuwirth (2013, 15) states in his article how important it is to study the role of emotions in education. Emotions are not just physiological responses – they are far more important. They are deeply connected to the social contract and one's culture, and they function as mediators in communication, especially when we talk about what is "right" in society. Further, Schuwirth (2013, 15) claims that emotions decide what our students want to learn, and therefore we need to understand emotions' role in the meaningfulness of learning. After all, emotions establish what students dare to learn. It is both exciting and frightening to be pushed out of one's comfort zone when facing new learning challenges. And, perhaps more importantly, emotions decide what students do and do not forget. If emotional capacity is not involved, we don't feel curious, critical or scholarly, and we wish to forget all that is dull, of no relevance and a waste of time.

When studying stressors and coping responses in college students, Brougham, Zail, Mendoza and Miller (2009, 94) found that the female students, who experienced higher overall levels of stress than male students, used more emotion-focused coping strategies than men, and both female and male college students used problem-focused coping less than emotion-focused coping. This indicates the importance of emotions in college students' stress-related coping mechanisms, which needs to be addressed when inclusion and diversity management methods are analysed and further developed in higher education. Similarly, when conducting their research on the Action-Emotion Style learning approach, learning difficulties and coping strategies in undergraduate university students, de la Fuente, Martínez-Vicente, Salmerón, Vera and Cardelle-Elawar (2016, 463) concluded that certain emotion-based achievement motivation styles, such as *impatient-hostile* ones, should be trained in personal self-regulation in general and particularly in self-regulated learning strategies (emphasis original).

LEARNING EMOTIONS, EMOTIONS IN LEARNING

In 2014, the International Academy of Education (IAE), a not-for-profit scientific association promoting educational research and its dissemination and implementation, published a booklet entitled "Emotions and Learning" as part of the Educational Practices Series, developed by IAE and published and distributed by UNESCO's International Bureau of Education. This booklet is written by R. Pekrun, the Chair of Personality and Educational Psychology at the University of Munich and a well-known PISA expert and emotion researcher.

Pekrun sees the role of emotions in learning as crucial. For him, emotions play a key role when we talk about students' attention, their motivation to learn or how they choose their learning strategies or self-regulate their learning. Emotions also affect personality development and students' psychological and physical health, and they are important in identity formation. As Pekrun (2014, 6) states, from an educational perspective, emotions influence not only learning and development but also students' emotional wellbeing, which must be regarded as an educational goal that is important in itself. Hence, in terms of ethical inclusion and diversity management, we need to remember the crucial role of emotions and their effect on learning within higher education.

Pekrun (2014, 6) mentions how the classroom is an emotional place, full of excitement, hope, pride and shame. The classroom is also a place for social emotions, such as admiration, empathy, anger, contempt and envy concerning peers and teachers. External factors, such as family stress, can also have a strong effect on students' learning and their achievements. Emotions affect students' attention, learning motivation, self-regulation of learning and learning strategies, as well as their holistic wellbeing and personality development. In addition to seeing the importance of emotions from the point of view of learning and development, students' emotional wellbeing in itself is an important educational goal. As Pekrun (2014, 10-11) states, emotions that have both universal and individual features can change over time and are subjective experiences, so the same situation may trigger different emotions in different individuals. These individual differences can be based on culture, ethnicity, gender, school and class. Pekrun (2014, 8) mentions four types of academic emotions as especially relevant to learning:

Table 1. *The four types of academic emotions relevant to students' learning by Pekrun (2014, 8).*

• **Achievement emotions are relevant when the importance of success and failure is made clear to students. These emotions are strongly linked with enjoyment of learning and success (hope and pride) or failure (anxiety and shame).**
• **Epistemic emotions are triggered by cognitive problems and when new non-routine tasks are learned. These emotions include, for example, surprise with a new task, delight when a problem is solved or frustration and confusion when obstacles appear.**
• **Topic emotions can be both positive and negative, and they affect students' interest in learning. For example, a story heard in class may create empathy with the fate of the character, or a painting presented at in art class may create enjoyment.**
• **Social emotions are linked with teachers and peers in the classroom, and they are relevant in terms of teacher-student interaction and group learning. Such emotions include, for example, love, sympathy, compassion, admiration, contempt, envy, anger and social anxiety.**

Since these emotions can strongly influence learning and achievement, it is essential that teachers and educators know how to deal with them. Pekrun (2014, 9) suggests that to better understand such emotions, teachers or educators can share their own emotional experiences as students; such discussions could take place, for example, in groups. Of course, one needs to remember that emotions are often a very private matter for students, and they might not want to share emotions related to their self-esteem or feelings of shame. Hence, research has shown that teachers and educators might have difficulty assessing students' true emotions. Therefore, it is important to build up a trustful relationship with students so they feel comfortable sharing their emotions. Pekrun (2014, 11) also states that it is important to understand that students react individually to different subjects and different academic situations, and one should avoid any stereotyping labels, such as labeling students anxious, bored or enthusiastic. Instead, one should make use of students' different emotional reactions by identifying tasks and situations that can promote their joy of learning and help students build their overall capacity by identifying their specific emotional strengths.

LBD – FINDING THE JOY OF LEARNING AND ETHICS OF EMOTIONS

At Laurea, a higher education setting, the points mentioned by Pekrun are addressed in different pedagogical and ethical ways. The pedagogical innovation Learning by Developing (LbD) forms the overall framework for action, teaching and learning at Laurea. As described by Katariina Raij, Director Emerita of Laurea, in the introduction to Learning by Developing Action Model (2014, 8), LbD emphasises acting together in real-life projects, resulting in individual learning, community learning and innovation. Students learn new competences needed in working life by participating in authentic projects and integrating different types of knowledge. LbD has become Laurea's trademark, with its high rates of employment, annual start-ups, positive national and international evaluations and awards, increasing external research and development funding, successful research and development projects, and international research and development networks. One of the LbD model's most recent awards was granted by The Global Women Invention & Innovation Network in London during summer 2019 in celebration of Multisensory Space, an open learning environment developed at Laurea Tikkurila by Senior Lecturer Minttu Räty and her colleagues. Multisensory Space is a great example of an LbD-based learning model, where both individuals and communities share learning and empowerment as well as innovative pedagogy. Below is a visual representation of Laurea's LbD model:

Figure 1. *The pedagogical innovation of Laurea University of Applied Sciences, Learning by Developing (LbD).*

At best, in LbD, the four earlier-mentioned key learning emotions by Pekrun are all enhanced in a positive manner. Such positive *achievement emotions* like hope and pride are encouraged in LbD-based learning, in which students can develop their individual skills in creative co-operation with working life partners in different authentic projects and community-oriented activities. Since activities are conducted in teams and are of experiential nature, anxiety and shame are reduced and creativity and shared learning are encouraged and promoted. *Epistemic emotions* are also triggered by positive real-life cognitive problems and when learning new non-routine tasks. In LbD, there is room for being surprised by a new task and delight when a problem is solved, and when these tasks are tackled as a team, there is less frustration or confusion when obstacles appear. Since LbD is based on real-life cases and situations, there is a good deal of space for positive and empowering *topic emotions*, which can increase the students' interest in the learning process. *Social emotions* are also relevant to all LbD-based learning processes, and in a team, the students learn to express different positive emotions, such as sympathy, compassion and admiration. There is no need for contempt, envy, anger or social anxiety when all those involved support each other for a shared goal – in which case truly 1+1 = 3.

In this way, LbD-based learning promotes the following elements based on positive emotions mentioned by Pekrun (2014, 12-13): students' attention, motivation, use of learning strategies and self-regulation of learning. In a LbD-based project or task, when the student is enjoying learning, the task is the emotional focus point, ensuring one's attention, allowing a sense of deep flow and complete immersion. When a real-life LbD project creates positive emotions, appreciation and enjoyment of learning, students' motivation and problem-solving competencies are naturally enhanced. In LbD projects, all study materials are based on real-life scenarios and interlinked with working life needs and thus require new type of creative learning strategies and advanced critical thinking. In addition, real-life projects demand a new level of self-regulation from the student in the form of more flexible and creative planning and a more systematic evaluation of the project and learning outcomes. LbD-based learning is also important for students' self-confidence by enhancing their overall competencies and encouraging creative solving of both academic and work-related tasks. As mentioned by Pekrun (2914, 16), self-confidence is needed for students' sense of being able to learn and succeed.

In addition to personal tutoring and different group discussions, as well as LbD-based projects, many of the students at Laurea Tikkurila attend classes conducted in the above-mentioned Tikkurila campus Multisensory Space. This open learning environment has been in development at Laurea since 2007 through various national and international projects, such the Erasmus+ project DISC, which focuses on promoting inclusion of immigrants and other citizens in more vulnerable positions through the Multisensory Space and digital skills enhancement. The key principle behind the Multisensory Space is to provide a versatile meeting point where individuals and students from different cultures and backgrounds can come together, get to know each other and safely share their culture, memories, experiences and emotions. The method refers, on the one hand, to a space where all senses can be used for learning, thus encouraging all types of learners, but on the other hand to a process whereby students can construct or modify the space according to their own thoughts, to tell a story or describe a thing, phenomenon or theme important to them. A visitor such as a student, can, for a moment, relax in a pleasant atmosphere, return to their past or explore a completely different world in a multisensory environment.

The Multisensory Space promotes wellbeing in different ways, emotional wellbeing included. This method allows one to address different emotions, such as joy and happiness related to memories and earlier experiences, optimism about one's future, and awe and appreciation concerning other cultures and life stories, thereby also promoting cultural inclusion. More challenging experiences, personal stories and worries

can also be safely shared in the Multisensory Space. This has been the case with the recent coronavirus epidemic and Chinese Social Services students, who have needed a safe space to reflect on their feelings and both receive and provide peer support. When the above-mentioned academic emotions by Pekrun are applied in the Multisensory Space context, we may say that achievement emotions are activated when learning new things, such as different cultures and identities; epistemic emotions such as delight are enhanced when possible Multisensory Space-related challenges are solved; topic emotions are activated when, for example, immigrants and refugees share their stories with students; and positive social emotions are strengthened when individuals such as diverse learners share emotions like sympathy, compassion and appreciation, thus empowering each other.

CONCLUSION

Emotions are an individual yet culture-bound element in learning and inclusion management, higher education included. There is a need for holistic learning situations and such learning and teaching methods, as well as open learning environments, the LbD-based open learning environment Multisensory Space included, where different emotions can be addressed in a safe, constructive manner. One size does not fit all, so learning methods and learning environments need to meet the personal needs of diverse learners and support their individual learning paths, including emotions, thus reducing student drop-out rates and enhancing study and work-related success. To accomplish these goals, emotions and their importance in learning processes need to be considered and further analysed. In the future, there will be an increasing need to more fully understand the often complex relationships between different emotions and the increasingly diverse learners. Emotions are essential in terms of students' holistic well-being, so they are important in and of themselves, beyond their role in academic learning. Hence, it is essential that educators more profoundly understand both their own and their students' emotional processes and how to use them constructively and ethically along all unique learning paths. To summarize, one may describe ethics of emotions in higher education in the following manner:

ETHICS OF EMOTIONS:
EMOTIONAL DIVERSITY AS PART OF INCLUSION AND DIVERSITY MANAGEMENT IN HIGHER EDUCATION

Ethics of emotions and understanding and appreciating emotional diversity in higher education is part of inclusion and diversity management, and it includes attention to students' different (personal and cultural) emotional profiles, their (emotional) coping strategies, their personal (study-related) interests and state of motivation, their courage and eagerness to study, their curiosity and personal desires, and their overall emotional well-being, which is both individual and culture-bound. When the different operators within higher education are able to address the emotional aspects of learning in a versatile and student-friendly manner by creating emotionally safe open learning environments, such as the LbD-based Multisensory Space, this can enhance both learning results and a sense of belonging and empowerment, thus promoting inclusion and diversity management of all types of learners.

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9. Who has the right to volunteer?

Riikka Kanervo

One of the most famous Finnish families is the Moomins, created by Tove Jansson. Moomins live in Moomin Valley, in the blue Moomin house. Moomins are bohemian, free-spirited and open-minded creatures whose home is always open to friends and random passers-by. Moomins are always ready for an adventure and meeting new friends. One day, in the book Invisible Child (1991), a friend of the Moomins named Too-Ticky comes over with an invisible child, Ninni, who has been bullied so badly she has become invisible. "I brought her here, so that you can make her visible again," says Too-Ticky (Jansson 1991, 103).

Ninni is not alone in her experience of invisibility. The world is filled with her fate companions who have turned invisible due to bullying, unemployment or other hardships that make them feel unseen. One way to reduce loneliness and feelings of worthlessness is to take part in volunteer work, unpaid work based on one's free will and choice.

Many workplaces are eager to accept student volunteers in their organizations, and they value the students' input. However, there seems to be fewer opportunities for those aspiring volunteers whose threshold to volunteer work is far too high for one reason or another. What if life has led you to a state where you experience yourself as invisible and unworthy as Ninni did when she entered the Moomin house? Who has the right to perform volunteer work and on whose terms?

This article discusses who has the right to participate in voluntary work. Is it really available to everyone? Who has the opportunity to participate in society and with what kind of preconditions? What kind of values and attitudes are inherent to the act of volunteering, and how can it be supported? The article is based on experiences within the Supported Volunteering project and the Timeout dialogue held at Lahti Diaconia Institute in May 2019.

VOLUNTEERING

Volunteering can support participation and integration by strengthening self-esteem and trust in one's capabilities, as well as by opening up new paths for the future. For example, for immigrants, volunteering provides a way to informally learn new skills and get acquainted with the work culture of the host country and thus build human capital (Yeteshawork 2017, 6, 14).

Amartya Sen (1999) argues that poverty and disadvantage are not about lack of money but lack of capabilities. Capabilities mean a person's real freedom to choose from different opportunities. Some capabilities are inborn (capacity), some are gained (competences) and some are formed in the surrounding environment (Sen 1999). The core of the capabilities approach lies in the idea that human beings are dignified and free beings who are able to make choices and shape their own life, rather than being pushed around by the world (Nussbaum 2001). People with capabilities believe in their skills and abilities and are able to pursue life on their own terms.

As a volunteer, one can work with the knowledge and skills one already possesses and participate according to one's abilities, resources and interests. Volunteering is a two-way process in which both the volunteer and the target gain something. Volunteers can learn new skills, feel joy, gain new experiences and meet new people. Volunteering offers value, as it can prevent loneliness and social exclusion. Volunteer work enhances communal trust and social capital, which are the bases of economic development in society (Citizen Forum, no date). According to numerous studies, volunteering can raise self-reported life satisfaction, happiness, health and life mastery, as well as psychological flourishing (Li-Hsuan 2019, Appau et al. 2019, Santini et al. 2018).

Volunteer work has been a part of the studies at Laurea University of Applied Sciences for years: it is partly embedded in study modules, but students also have the opportunity to volunteer in a place of their choosing and earn credits by doing so. Even staff members are encouraged to use some work hours for volunteer work. It is indeed true that voluntary work enables work experience, which is especially valuable for young people. Volunteering also offers the possibility to test different work environments while thinking about one's own future.

SUPPORTED VOLUNTEERING PROJECT

Plenty of volunteering opportunities are available to students, but what about those who don't have the resources and capabilities to find their way to volunteer work? The initial steps to enter volunteering can be challenging to some people. Lahti Diaconia Institute wants to develop possibilities for volunteering for groups who might need support when engaging in volunteer work, such as immigrants, the long-term unemployed or people with disabilities.

People of all abilities can take part in volunteering with little support, orientation and guidance. Supported volunteering is based on the idea that voluntary work is a civil right. Everyone should have the chance to do something significant and to participate in one's community, regardless of language skills, health or one's life situation (Laimio 2017, 4). Supported volunteering could be one path toward gaining capabilities and assimilating into society.

The Supported Volunteering project (2018–2020) run by Lahti Diaconia Institute makes volunteer work possible for those who need support in order to find a place and get started with volunteering. When the project, funded by the European Social Fund, started in March 2018, the project coordinator asked Laurea

representatives to join the steering group, as Laurea was running the project Building Skills and Communities Together (2018–2020), which has a similar target group. Laurea's role in the steering group was to introduce theoretical and practical knowledge and viewpoints about participation and inclusion.

Supported Volunteering offers a structured path to volunteering. The project coordinator meets with the client, and together they chart the client's hopes and wishes for volunteering, as well as their strengths and resources. Hopes and capabilities are the starting point from which the coordinator starts to map out possible volunteering opportunities.

When a suitable opportunity is found, the client can start volunteering with the support of the project coordinator. The coordinator might, for example, take part in the first visit to the organization if the volunteer does not want to go alone. A site for volunteering is not always found though. Companies, public actors and organizations may appeal to the resource shortage and to the fact that they do not have time to provide volunteer orientation. Scarce resources are the reality in many places, but do they also serve as an excuse for not welcoming a supported volunteer? One main aim of the Supported Volunteering project is to tackle the attitudes and values that prevent volunteering possibilities to those in need.

WE ALL HAVE SOMETHING TO GIVE

During the Supported Volunteering project, it has become evident how different backgrounds and life events may change the direction of one's life and even force one into the margins of society. The impact the project had on the participants' life was apparent: how even the smallest encounters, such as being greeted and thanked, could change a person's life.

After the first steering group meeting, project coordinator Mari Brunou and myself started to exchange thoughts about inclusion and participation in volunteer work. What started as short emails evolved into long face-to-face discussions. We found that we were facing a very important issue, and it was evident that participation and inclusion do not emerge from a vacuum but require support and action from the community.

We realized that supported volunteering can help maintain one's coping in everyday life. Immigrants and people recovering from mental health problems have been the main participants in the project. When one's ability to function decreases due to burn-out, depression or while adapting to a new culture, among many other reasons, it is extremely important to get support along the way.

Due to a challenging life situation, one's own resources can be almost non-existent. Based on project experiences, supported volunteering offers a low threshold to integrate back into society. With the right kind of support, one can recover from many situations where functionality has decreased. Supported volunteering is built on the notion that we all have something to give. At best, supported volunteering can lead a person towards academics or work, situations not previously possible or even realistic options for the participant.

It is a pity that strengthening participation and enabling volunteer work for those needing support can be seen as difficult or even impossible in today's hectic world. Sometimes, when the Supported Volunteering coordinator has contacted a place to ask whether they would welcome a supported volunteer, the answer has been, "That kind of person cannot volunteer at our organization." By welcoming volunteers with support needs into workplaces and social arenas, we diminish loneliness and exclusion. At the centre of the development work done in the Supported Volunteering project is the aim to tackle prejudice and negative attitudes that supported volunteering clearly evokes in some people's minds.

TIMEOUT DIALOGUE

In May 2019, the Päijät-Häme Volunteering Network and Citizens' Arena brought together volunteers who had been involved in the project, actors who provided supported volunteering opportunities from the public and NGO sectors, volunteer coordinators and others working in the field of inclusion for a Timeout dialogue.

The theme for the Timeout dialogue was volunteering opportunities for special groups, and it took place at Lahti Diaconia Institute. Timeout, a dialogue method for people from different backgrounds, was created over the course of 2016–2019 by the Finnish Innovation Fund (Sitra). Timeout is a facilitated discussion in which different people are brought together. Timeout breeds a feeling of inclusion between the participants and provides understanding of different perspectives (Timeout Foundation: What's Timeout about? no date).

The aim of the dialogue was to form a deeper understanding of the factors that enable and, on the other hand, prevent the volunteering of special groups, such as immigrants, people with disabilities, the long-term unemployed and people rehabilitating from mental illness. Many new perspectives on the subject were discovered during the dialogue. For example, a participant who had recently been diagnosed with an illness that makes him dependent on others described volunteering as a break from the diagnosis, a chance to help others instead of being helped.

This particular Timeout dialogue also included discussion about prejudices attached to supported volunteering. Participants shared the view that the biggest prejudices are the ones we create in our own minds: "We might think that a person with a challenge cannot do something, even if there would be no reason to think this way." One participant provided an example in which she as a service provider had tried to ease the way for a service user with a disability. She became aware of her own attitudes as the service user managed to conquer all the obstacles on her own. Another example was about a blind volunteer who wanted to post a newsletter in an organization – and in the end succeeded. Many participants shared similar experiences where prejudices and preconceptions proved nonsense.

A participant who provides volunteering possibilities for people with all abilities stated:

> "*Who else, if not we who provide volunteering possibilities, will take care of those who need support in order to be part of this society? It is our job to take them in for real and give them opportunities to do something useful and to have a break from being just a disability and diagnosis.*"

Participants in the Timeout dialogue saw volunteer orientation as extremely important, especially in order to prevent failure. As many of the supported volunteers have experienced hardships in their past, it is important to provide them with a good start to volunteering. The best part of supported volunteering is that, especially in the beginning, baby steps are enough. Positive experiences are more important than setting ambitious goals. Once a volunteer gains confidence, they can start taking on more responsibility and more demanding tasks.

CONCLUSIONS

While living with the Moomins and their friends and neighbours, Ninni experienced nothing but kindness and acceptance, even though no one could see her. As time goes by, Ninni gains back her self-esteem and bit

by bit becomes visible again: first her fingertips and toes, then legs, arms and finally her hair and face. "– Oh! Yells Ninni. – How funny! How amazing!" And she laughed, so that the pier she stood on shook and trembled. – As far as I know, she has never laughed before, said Too-Ticky in amazement" (Jansson 1991, 117). We have a lot to learn from the Moomins and how they accept everyone just the way they are.

Supported volunteering brings positive encounters, joy and content into one's life. It is an excellent way to feel as if one belongs to a community and to gain positive experiences. Most of all, supported volunteering makes invisible people visible again, one fingertip and toe at a time – just like Ninni. One participant in the project described how amazing it was to have someone say "good morning" to her every morning and thank her for her input at the end of each day of volunteering. Thanks to supported volunteering, this young person is now applying to vocational education, something she didn't even dream of some years back.

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IV

Evaluating ethical dimensions of different methods and approaches

10. Ethical perspectives in futures studies

Tarja Meristö

Futures research, according to Amara (1981), has three different tasks: imagination, analysis and participation. Imagination brings up alternatives not yet seen although still possible in the future. Analysis places emphasis on both factors and actors creating the future. The basic questions to be asked are, Who are the key actors? What are their interests? Who will have power to fulfil their vision? The final task, participation, helps actors re-formulate the future towards a preferred alternative based on shared values.

As a starting point for the futures studies are Ossip Fechtheim's thoughts about futurology and its purpose, which he formulated in the mid-1940s. This vision includes the prevention of wars, guaranteeing of peace and prevention of famine and poverty. According to Flechtheim, the best solution for this is to create a new *Homo humanus* with ethical principles (Flechtheim 1972).

FuturesLab CoFi is a research group at Laurea UAS whose focus is on futures research, foresight and scenario approach. CoFi was founded in 1999 at Åbo Akademi University and moved to Laurea in 2010. FuturesLab CoFi is an expert in futurology, especially in combining futures research with strategy work, both in theory and practice. Working in close co-operation with businesses, local and national governments and citizen-driven NGOs, it is possible to have an impact on the decisions made today but posing influencing on the future in the long run. FuturesLab CoFi offers organisations research, development, consulting and education services, having experience in short-term customer-specific projects at the local level as well as in long-term, multi-partner futures research projects in international contexts (CoFi 2020).

Futuristic perspectives will bring to the RDI work at Laurea's FuturesLab CoFi important themes. The need for clean water and renewable energy, the prevention of marginalisation of any citizen group and responsible business development are in focus at CoFi. Ethical perspectives are an integral part of RDI work at Laurea, and futures research will complete that with the aspects of sustainable development in which future generations

are systematically in focus (Bruntland 1987). Living conditions in economic, social and ecological perspectives are important in Laurea's key areas of RDI, including, e.g., safety and security, the circular economy and social and healthcare issues. All these include ethical aspects from the futures perspectives, paying attention to privacy in digital operating environments, responsible consumer behaviour and production amidst global climate crisis, and equality between present and future generations and between different social groups. According to professor Pentti Malaska, "In futurology we have to focus on issues in the long run, having influence on the whole universe at least for the next 1,000 years."

A timeframe in futures research will cover more than 20 years to guarantee conditions for the good life of future generations. Multidisciplinary futures research (Bell 1997) relies on participatory methodology to get all voices heard but also to confirm the citizen's role as an active subject, not only as an object in society (see also Meristö et al. 2016).

In this article, futures research and its applications at Laurea UAS's FuturesLab CoFi will be described in the perspective of ethics. Serving as a starting point for the futures studies are Ossip Fechtheim's books about futurology and its purpose as early as the mid-1940s, including the prevention of wars, the securing of peace and prevention of famine and poverty. According to Flechtheim, the best solution for this is to create a new Homo humanus with ethical principles.

Futures perspectives based on Flechtheim will bring to Laurea's RDI work important themes like the need for clean water and renewable energy, prevention of marginalisation of any citizen group, and responsible business development. The time frame in futures research will cover more than 20 years to guarantee conditions for the good life of the future generations, too. Multidisciplinary futures research will rely on participatory methodology to get all voices heard but also to confirm the citizen's role as an active subject, not only as an object in society.

FRAMEWORK FOR THE FUTURE

Futures research will have as its basis the global challenges concerning the future of the planet and humankind. The UN's goals to end poverty and protect the planet are the guiding ethical principles in the futures research community, too. The responsibility for future generations will be strongly accounted for when estimating the consequences of alternative scenarios from different perspectives.

A holistic view to the future means a multidisciplinary approach with political, economic, social, technological and ecological dimensions. These so-called PESTE perspectives (Meristö 1991) take into account both actors and factors from different levels, including the global, international, continental, regional, national and local levels.

Nearly all countries have promised to improve living conditions to protect the planet and improve their citizens' life as based on UN principles. These sustainable development goals include 17 sub-goals, covering areas such as living conditions on land for humans and for wildlife but also responsible consumption, sustainable housing and sustainable economic growth, among others (UN 2020).

FuturesLab CoFi Laurea focuses on sustainable development with all its aspects, including economic, social and ecological development. Methodologically, CoFi will use especially on the action scenario-approach (Meristö 1991), which means not only creating alternative scenarios for the future but also formulating recommendations for decision-makers based on scenarios to make better decisions today and to improve the conditions in the long-run.

The main research areas at FuturesLab CoFi include the wellbeing of different age and citizen groups, living in sustainable communities, sustainable business practices in global competition, and future skills and competences to create a better world from a sustainability perspective.

The ecological perspective includes environmental (E), health (H) and safety (S) dimensions. These EHS criteria play an important role in the citizen's mind, though individually with a changing importance of ranking. The individual's attitude varies, based on their position in society and their community but also based on the time perspective of the future. According to Club of Rome (CoR 2020), most people focus on their neighbourhoods, relatives and families in the short run, and only a few will pay attention to the planet and humankind along a longer time horizon. The shorter the futures timeframe to consider, the more selfish the choices among futures alternatives are. Concerning the RDI work, the expectations of the results are often opportunistic, looking for immediate benefits over a short term instead of considering their long-term consequences. Therefore, futures research is needed as an incubator to lengthen and broaden perspectives to make choices to fulfil sustainable goals as reported by the UN in order to improve living conditions equally.

In FuturesLab CoFi's portfolio at Laurea UAS, we have had a wide range of projects supporting the UN's goals for sustainable development. These projects will push staff and students as well as project partners towards responsible choices based on the UN's criteria for sustainable development goals. A couple of examples from CoFi's projects will be presented as examples here. They all fulfil not only the UN's goals for sustainable development but deal with scenarios in the long run to achieve the goals of futurology.

These projects, related to the **UN's goals for clean water, clean energy and sustainable economic growth, include opportunities not only for people but for the planet too.** From CoFi's viewpoint, these projects fulfil the UN's goals in terms of *think globally, act locally.* Projects presented here as examples are the CIRCLE project coordinated by Dr. Lauri Tenhunen from HAMK and financed by ERDF for two years (2017–2018); the Elli project coordinated by Seppo Niittymäki from HAMK and financed by ERDF for two years (2016–2017); and Sustainable Community Scenarios, financed by Tekes for 2010–2011 and coordinated by professor Pekka Kauppi from Helsinki University.

In the **CIRCLE project**, we created economically and environmentally sensible opportunities for energy and nutrient recycling in the water supply, whereas in **project Elli** the focus was on promoting clean-tech business, efficiency and regional energy production in three target residential areas in Lahti, Riihimäki and Hämeenlinna. Companies and other stakeholders participated in future workshops in order to create alternative future scenarios to support energy-efficient regional planning. **The Sustainable Community Scenarios project** investigated alternative futures for organising people's lives in order to sustainably live, work, travel, eat, recreate, construct and care for the elderly. This results in   a community that follows the principles of ecological, social and economic sustainability both in regards to its structures as well as its activities in long run.

On the other hand, CoFI's projects will focus on challenges at the individual level, based on the UN's goals for equality, education and good health, which include opportunities for people with disabilities and restrictions. These goals will be covered in CoFi's projects, i.e., in the project ZET, funded by ESF from 2015–2017 and coordinated by Hanna Tuohimaa, the project Työke funded by ESF from 2017–2020 and coordinated by Hanna Hakulinen from the Finnish Institute of Occupational Health, and project Nappi, receiving financial support from the Ministry of Social Affairs and Health to promote health for 2018–2020, coordinated by

Heidi Jokinen from Laurea UAS. These projects prevent marginalisation of any kind in society regarding, for example, youth or people of occupational age.

In the Zet project, young people developed, in collaboration with experts from the game industry, a game or youth for envisioning their future and planning and managing their lives in order to avoid marginalisation. The process provides youth positive change and opportunities to be engaged and influence society. The design process was carried out in futures workshops in Hanko and Lohja. The Työke project, on the other hand, has its background in the changes in working life cultures and in the transition process of Finnish social and health services. The aim of this project is to develop functional integration between occupational health systems and social and health services, not only for those who have a job but rather for all citizens of working age. Alternative scenarios for the next 20 years have been developed to meet those challenges proactively, not reactively. The Nappi project encourages young people with special needs to engage in physical activities and will support their active lifestyles. Young people in the target group may deal with various physical, mental or social obstacles that hinder their participation in normal life activities, such as sports and other forms of exercise. Nappi's aim is not only to promote the health of young people with special needs but to support their wellbeing by increasing participation in order to prevent loneliness and marginalisation.

CONCLUSION

Futures research and ethics go hand-in-hand in promoting conditions for a good life, independently on your roots and age The UN's sustainable development goals form the shared values for the activities in research and development work but also in life in general. In terms of future generations, sustainability as a guiding principle means economic, social and ecological sustainability: live today in such a way that future generations will have opportunities to live their lives according to their dreams and wishes (Bruntland 1987).

At Laurea FuturesLab, CoFi co-operates within the international network of futurists and the larger innovation community to make the world a better place. At the same time, CoFi will integrate foresight projects into regional development work with actors from local and national ecosystems, as well as into the educational programs at Laurea. In this way, the values and visions based on *Homo humanus*, described by Flechtheim in his book on futurology, will be shared widely in society, not only today but in the future.

While the future is not predictable, It is not predetermined: it can be influenced by individual choices and actions (Amara 1981). In the near future, digitalisation will play a larger role in our everyday lives. It is a huge challenge to ensure the equality and participation of all citizens in this transformational process. Furthermore, at a time when artificial intelligence is replacing human labour, the ethical issues concerning future solutions will rise up in many new ways (Ollila 2019).

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11. Ethical considerations of Living Labs

Julia Nevmerzhitskaya

Do ethics matter to Living Labs? How can Living Labs ensure that the solutions they develop are in line with applicable laws and contribute to the responsible conduct of research? What are the challenges of involving diverse stakeholders and users in the innovation process in a fair way? These questions form the basis for this article, which aims to discuss ethical considerations related to projects involving Living Labs.

Living Labs is a concept used mainly in the context of collaborative development aimed at solving complex societal needs. According to Björklund et al. (2017), collaboration can be defined as the transfer of knowledge from one party to another in an open and safe environment where all actors give and receive valuable information and ideas. This process may also be referred to as co-creation, which is understood as defining and solving shared problems with a systematic approach in close cooperation with multiple actors of diverse backgrounds. Despite there being no generally accepted definition of Living Labs, it is agreed that Living Labs are based on a systematic user co-creation approach, integrating research and innovation processes in real-life communities and settings, as stated by the European Commission (2016). Different definitions of Living Labs include Labs as spaces or environments (Almirall et al. 2012), Labs as networks (Leminen et al. 2012) and Labs as methodologies for user engagement (Eriksson et al. 2005). From a research point of view, Living Labs utilize participative research methods and experimental design.

Ballon and Schuurman (2015) argue that European Living Labs are based on five key elements: active user involvement, a real-life setting, multi-stakeholder participation, a multi-method approach, and co-creation. From an ethical point of view, these elements represent a number of challenges. Ethical challenges related to Living Labs are usually associated with participatory research ethics, emphasizing participant engagement and ethical codes of conduct related to participant privacy and consent, i.e., the user involvement element. However, ethical considerations of Living Labs go far beyond that of user involvement and include more complex issues such as the choice of actors in a Living Lab ecosystem, reliability and validity of Living Lab

methodology, and the ethics of decision-making (see, for example, Sainz 2012, Schaer 2017; Chasanidou & Karahasanovic 2016). In this article, we address ethical considerations based on key Living Lab elements and use examples from an ongoing EU-funded project to illustrate the complexity and importance of ethics in Living Labs.

ETHICAL ISSUES RELATED TO LIVING LABS

Active user involvement

The involvement of users in Living Labs is a complex and ethically challenging task. In any type of development activities that involves human participants, it is important to consider ethics. The European Commission developed guidelines for ethics self-assessment for projects addressing human participants (EC, 2019). The guidelines apply to Living Labs, as Labs are based on the participation of humans and often involve collection of personal data from Living Lab actors, interviews, observations, tracking and the secondary use of information provided for other purposes.

The key aspect when involving users in Living Lab activities is to obtain informed consent, meaning that all users taking part in Living Labs are fully informed about and agree to the purpose of the activity, types of data collected, how these data will be used and by whom and what happens to their data after an activity is completed. In addition to consent, it is also essential to ensure that all volunteers participate of their own free and that everyone has the right to refuse to take part and to withdraw their participation or data at any time without consequence. If Living Lab activities require participation of children or other user groups who are unable to give informed consent, a legally authorized representative such as parent should provide consent.

In addition to consent, an ethically important issue in user involvement is related to the role of users, i.e., whether they are perceived as objects (which are needed in order to make better business) or subjects (who are real change-makers in society). In Living Labs, end-users are, or should be, considered actors, not factors of participatory RDI processes, and everyone is considered able to and allowed to innovate and therefore has the opportunity to participate in co-creation and trial activities. For inclusive solutions, the involvement of non-users may be needed.

Another ethically notable aspect is whether or not users should be aware that they are a part of a Living Lab. Some studies report that Living Lab actors may consider it acceptable to not notify the users or to only notify them after the experiments have been carried out. A recommended code of conduct is to always inform all actors.

A real-life setting

Living Labs are not closed, controlled laboratories but rather real-life situations so development and testing activities and the actual use of products take place in various operating environments during practical everyday work and life. From an ethics point of view, it is important to create a safe operational environment and a confidential atmosphere to encourage organizations and individuals to share risks and resources needed for innovation and at the same time not impact real-life setting with Living Lab activities. In addition to these issues, the solutions, products or services to be used during Living Lab activities must fulfill the minimum ethical and legal requirements defined in the GDPR.

Finally, real-life settings pose unexpected risks that can result in major adjustments or even cancellations of Living Lab activities. The recent situation with COVID-19 is a good example of the many ethical issues arising from changing real-life settings. These issues include the inability of some actors to carry out expected tasks, which impacts the overall development process, a lack of commitment from the actors to continue with collaboration, and changing roles within an ecosystem.

Multi-stakeholder participation

The complexity of multi-stakeholder engagement in Living Labs arises from the diversity of participants, the fact that every participant has their own expectations and perspectives and that their individual experiences of the same situations differ. In Living Labs, multiple stakeholders share resources and risks to jointly create novel innovation; with such diversity, mutual understanding is needed, and it can be found through shared meaning creation, common visions, shared learning and joint-value co-creation.

To ensure that stakeholders are involved in accordance with ethical guidelines it is important to use transparency and equality in the selection of Living Lab actors. Since Living Labs follow open innovation principles, participation should be open to all interested stakeholders. Competition should be avoided, and each stakeholder should be treated equally in the co-creation and innovation processes. In order for trust to be built among actors, they must be interested in each other's practices and goals. A well-executed development phase is based on collaborative sense-making, mutual understanding and respect for the stakeholders' needs, goals and values. Often, ethical dilemmas are related to the decision-making processes of Living Labs (Sainz, 2012). Conflicts of interest between participants often occur due to a lack of shared goals or understanding of the implementation process, or both.

The multi-method approach

Living Labs activities are designed to systematically co-create and test novel products, services and solutions and to shorten the time from research and product design to market. This implies that the ethical compliance framework for solutions should systematically drive Living Lab activities throughout the innovation process, from idea generation to conceptualization and testing. In practice it means that ideation, concept development and testing, prototyping and real-life testing have to follow the same ethical code of conduct, which defines participation, information sharing, inclusiveness and data privacy and follows ethical principles of experimental and participatory research.

Co-creation

Co-creation requires systematic but also flexible operating principles and methods. A detailed specification of the co-creation and experimentation process should be developed and managed by each Living Lab. Living Labs should guide, with the help of social sciences, arts and humanities, the technological and business design processes leading to ecologically, socially, and ethically sustainable solutions. Ethical guidelines are needed for Living Labs involving experimentation for commercial gain. As a rule, Living Lab actors perform activities without compensation; they include the costs of the activities in their normal development work. Thus, all partners are expected to participate *pro bono* in co-creation activities.

Living Lab co-creation activities should benefit from open access, transparency and continuous feedback. Therefore, principles of fairness and open information and knowledge sharing should be applied while protecting the intellectual property rights of individual actors. Living Labs should follow the principles of open innovation, open science and open data.

EXAMPLES OF ETHICAL ISSUES OF LIVING LABS IN THE HORIZON 2020 CIRC4LIFE PROJECT

Living Labs can be developed and implemented using public funding, such as in the Horizon 2020 program in which Living Labs are mentioned in the scope of the calls under Industrial Leadership, Research Excellence and Societal Challenges. This chapter describes how Living Lab ethics have been addressed in a Horizon 2020-funded project, CIRC4Life: A circular economy approach for lifecycles of products and services (Grant agreement No 776503). The project aims to develop and implement a circular economy for products and services through value and supply chains in four industrial sectors: domestic and industrial lighting products, vegetable farming and food, the meat supply chain, and recycling and reuse of computer tablets. Three circular economy business models covering the lifecycle of a product have been developed in the project and will be demonstrated by the industry partners in the later stages of the project.

Living Labs are used in the project as a methodology for systematically engaging end-users and stakeholders in the innovation process throughout the project duration and as the key tool to ensure user acceptance of developed solutions. It is therefore vital for the project success that the Living Lab results are reliable, trustworthy, socially acceptable and ethically compliant.

To ensure the ethical compliance of Living Lab activities, an ethical clearance checklist was completed in the beginning of Living Lab activities, primarily addressing issues related to participants' consent and data privacy. At the time of this writing, more than twenty events involving over 350 external participants were conducted. For each event, informed consent was collected from the participants and the privacy policy was published to ensure the activity is ethically compliant. In addition, issues related to the ethics of the solutions, such as the CIRC4Life mobile application, were raised and partly addressed in relation to data privacy of the app users.

However, a number of issues related to all elements of Living Labs discussed earlier have been encountered by the project partners. As CIRC4Life is ongoing, some of these issues have not been solved at the time of writing; moreover, additional issues are expected to emerge during the demonstration stage. These issues, as well as available solutions and considerations, are presented in Table 1.

DISCUSSION

Living Labs are based on two requirements: the systematic involvement of users and stakeholders, and real-life settings. Both requirements cause a number of ethical questions and dilemmas common to other types of user research but also specific to Living Lab projects. This is especially relevant when Living Labs are conducted in a commercial context by a business consortium or one actor, since it is hard to compose an ethical code of conduct in commercial projects as compared to scientific, well-structured methodologies. User and stakeholder involvement in Living Labs can create challenges but can also improve the ethical conduct of Living Labs, provided that participants are not only aware of the goals and activities but also motivated

Table 1. Ethical dilemmas and solutions in CIRC4Life Living Labs

LIVING LAB ELEMENTS	DESCRIPTION OF ETHICAL ISSUES	EXAMPLES OF ETHICAL DILEMMAS IN CIRC4LIFE	CIRC4LIFE SOLUTIONS OR CONSIDERATIONS
User Involvement	Informed consent Data privacy Role of users awareness of users	1. Can you reward users for taking part in Living Labs? 2. How to approach "active non-users", for example, vegetarians in a meat-supply-chain-related Living Lab. 3. A "we are professionals in our field, we know better than users" attitude.	1.1 In ideation stage lead users, and active non-users participate without rewards. 1.1 As a part of an LL awareness campaign, the first 20 users to test a solution are offered cinema tickets. 2.1 Non-users are invited to early stages of the innovation process but excluded from testing phase. 3.1 Awareness-building among industry partners about user-centered innovation process; communicating benefits of user-centered design and innovation process.
Real-life setting	Uncontrolled environment Safety Unexpected changes in the environment	1. Can internal tests at company premises count as Living Lab testing? 2. Is it allowed to adjust real-life settings (by, e.g., choosing a focus group not represented by actual users)? 3. How to deal with risks associated with changes in real-life settings due to unforeseen events like COVID-19.	1.1 In the case of the specific LL context of an industrial LED light, a solution owner is also a user; therefore, installation and usage of new LED solutions internally can be an LL setting 2.1 In certain cases, so-called convenience samples (e.g., students) were used to receive feedback and new ideas but as an add-on, not as a substitute for actual users. 2.2 In the later stages of LL (small-scale testing and validation), only actual users are included. 3.1 The CIRC4Life Living Lab concept was designed to include physical participation of the stakeholders, and while some activities could be implemented virtually, others were cancelled, which poses an issue related to reliability and validity of Living Lab results; moreover changes in environments forced the partners to re-think their original plans.

LIVING LAB ELEMENTS	DESCRIPTION OF ETHICAL ISSUES	EXAMPLES OF ETHICAL DILEMMAS IN CIRC4LIFE	CIRC4LIFE SOLUTIONS OR CONSIDERATIONS
Multi-stakeholder engagement	Diversity Transparency Equality	1. How to select Living Lab participants. How to ensure equal participation of diverse stakeholders. 2. What to do if core stakeholders are not interested? 3. Can stakeholders be paid to engage in Living Labs	1.1 Systematic stakeholder management is essential for Living Lab success, and Santonen et al (2019) developed a model for stakeholder engagement based on cultural, organizational, user-driven, cross-functional, disciplinarily and cross-industry criteria. 2.1 Living Labs are not a solution that fits all, but in CIRC4Life we used approaches to communicate the benefits of co-creation to all core stakeholder groups. 3.1 The rule is, all stakeholders participate pro-bono; however, in exceptional cases, CIRC4Life involved paid consultants to engage in conceptualization of proposed solutions, a decision justified if core LL actors lack some specific knowledge for making decisions
Multi-method	Participatory design ethics Reliability of Living Lab methodology	1. What to do if survey results contradict user observations. 2. Is it possible to combine a waterfall model and an iterative Living Lab approach?	1.1 Multi-method approach helps avoid biases in results associated with use behavior; in CIRC4Life a theory of planned behavior (TPB) by Ajzen (1991) was used as the basis for consumer surveys to link attitudes of consumers with actual behaviors. 2.1 It has been found that a combination of a waterfall model for software development does not match the iterative methodology of Living Labs and can cause major gaps in user acceptance.
Co-creation	Ethically sustainable solutions Shared goals Shared ownership Win-win	1. Is it ethical to co-create new meat products when meat is not sustainable? Is it ethical to incentivize recycling by providing discounts for new purchases? 2. How does one ensure that all ideas, including the ones not in favor of ideas of a solution owner, are taken into consideration?	1.1 An ethical framework for solutions is a key in any innovation process: each solution in CIRC4Life follows an ethical code of conduct developed by the project and international, European and national laws. 2.1 While it has been a challenge in CIRC4Life to incorporate all stakeholders' views, we recommend that a clear procedure for collecting stakeholder ideas and presenting them in a concise form to decision-makers is a must in Living Labs, and we recommend that it be the role of an LL orchestrator to collect and analyze all ideas.

to take part in the innovation process, knowing that their views are respected and that they can influence development outcomes.

In addition to users, other stakeholders have to be engaged in the collaborative processes; to enable ethical decisions in Living Labs requires trust and learning. A key to successful implementation is agreeing on common quadruple helix objectives, based on win-win thinking. Agreeing on common values in Living Labs should involve debate about rules and ethics in experiments. There are a number of issues related to industry-driven innovation processes and commercial innovations, which tend to focus on industry-favorable solutions and economic gains rather than societal impact. In an ethically-driven Living Lab, every stakeholder group must "win" to stay engaged in the long term. As well, societal acceptance of the solutions is key to ethical implementation.

Living Labs are formed by actors pursuing a common development goal. With external funding available through means such as EU innovation funds, new Living Lab partnerships are formed to earn funding, and selection of participants is often based on the maximization of the chance to get such funding instead of creating self-sustainable partnerships for scaling of innovations. An opportunity-driven approach to forming new partnerships is needed to ensure openness and creativity in the co-creation process. Living Lab partnerships and ecosystems should be open to everyone, i.e. should be inclusive and should apply diversity as part of the innovation process. This means that ideas "outside the box" are welcome.

Experimentation in the real world aims at scaling up acceptable solutions. This means that a Living Lab approach might not be suitable for "extreme" innovations; instead this approach allows for testing of scaling. As real-life settings are often associated with large-scale experiments, market acceptance is key to ensuring sustainability of the results of an innovation process. For these reasons, some radical ideas (such as to stop meat production completely) are not suitable for Living Lab testing, as these ideas also put industry partners in a "looser" position.

Finally, co-creation as a key Living Lab process is only successful in an open and safe environment, one in which all actors understand and share a common goal, feel respected, understand the benefits of Living Labs on individual, organizational and ecosystemic levels, and are ready to contribute to a common effort to develop ethically acceptable sustainable solutions.

CONCLUSIONS

Developing and implementing Living Labs in a responsible manner requires sensitivity to ethical issues and a motivation to strategically include ethical considerations in Living Lab processes. These issues are associated with the key elements of Living Labs and include user and stakeholder involvement, a multi-method approach, challenges related to real-life settings and the ethicality of co-creation. A prerequisite to ethically driven Living Labs is a shared understanding by all LL actors of common goals, creating a "win-win" approach on an ecosystem level and including all quadruple helix actors. This is only possible in an open and safe collaborative environment based on trust and shared inputs, in which diverse actors can creatively co-create new solutions for complex societal challenges.

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12. What's to hide and why?
Data sharing as responsible research ethics

Hanna Lahtinen & Maija Merimaa

Open science has arguably been the buzzword of science policies of the early 21st century. At first, it was understood mainly as an attempt to convert the logic of scientific results, that is publishing so that articles locked behind paywalls are accessible to everyone. Although open access publishing is not yet an accomplished goal, significant advances have been made. The open science movement has spread, and the demand for openness has broadened to comprise the entire research process, including sharing, opening, archiving and reuse of data, and during the 2010s, data sharing has become an established practice.

The rapid rise of data sharing can largely be explained by the rise of the open data movement, an increase in the number of policies by research funders' and publishers' supporting data sharing, and more researchers seeing benefits from sharing resources (Bishop & Kuula-Luumi 2017). Regardless, the opening up of data has not yielded unanimous applause, and Research Development and Innovation (RDI) personnel, for example, at the universities of applied sciences in the Helsinki region, are concerned about its ethics (Merimaa & Lahtinen 2019). Similar results were found in a study (Talvela et al. 2020) conducted by the Aalto University. These studies explored attitudes, competence and practices in opening up research results and data.

In this article, we will discuss ethical questions in regard to research data. We introduce the Responsible Research and Innovation (RRI) framework and explore research, development and innovation (RDI) practices and competence at Laurea within this framework.

WHAT IS RESEARCH FOR

Let's begin by discussing why opening up data is relevant. The broader context can be located in the framework of European Union's Responsible Research and Innovation (RRI) programme. The RRI approach has gained importance in the European Union's science policies and funding programmes during the last

decade, especially in advancing the aims of the Horizon 2020 and Horizon Europe funding programmes. The claim RRI makes is that publicly funded science and innovation should focus on producing socially desirable outcomes instead of seeking justification solely from scientific or economic benefits.

Responsibility within RRI is understood as prospective responsibility, which is proactive, forward-looking and future-oriented. Prospective responsibility is not limited to mere compliance with laws and regulations – on the contrary, broad ethical reflections on the impacts of research and innovation are considered essential. However, no researcher nor research group is able to perceive and understand the societal context in all its complexity, and an elemental aspect of RRI is the involvement of relevant stakeholders within the research from initial research and design to the very end. In other words, in RRI responsibility is considered a collective and participative process, and it is shared among different actors with different roles along the innovation process (Arnaldi & Gorgoni 2016).

In RRI "relevant stakeholders" is a broadly understood concept that includes NGOs, companies, members of the affected communities and other relevant parties. The purpose of engaging with society is to reflect both positive and negative outcomes of research, and thus RRI allows for broader debate of the ethics of research, rather than mere risk assessments focused on avoiding harmful outcomes (von Schomberg 2013). Thus, responsible research can be considered the last step in a three-step model of science endeavouring towards more ethical research. The first step is "credible research", referring to integrity and good research conduct. The second step is "responsive research", meaning being open to collaborative and networked science. The third step, "responsible research", refers anticipatory outcomes and impacts. According to von Schomberg (2019), similar steps can be applied to responsible innovation.

Publicly funded projects at the universities of applied sciences (UAS) in Finland are driven mostly by the force to develop industrial innovation ecosystems. These include, for instance, general improvements to working life or small and medium sized enterprises' premises. Various stakeholders are included in the innovation processes and the and in this sense, RDI projects and practices at UAS' in Finland fulfil the RRI criteria well.

All in all, the underlying foundation of RRI is a paradigm shift in which the idea of science as a neutral space, separate from politics, society and ethics, is replaced by a constructivist understanding of science as inextricably embedded within society (DeSaille 2017). This paradigm shift was fuelled by the Lund declaration (2009) in the first decade of the 21st century. In the declaration, a clear demand was established that science should focus on the grand challenges of the time, such as global warming, tightening supplies of energy, water and food, ageing societies, public health, pandemics and security.

Although the declaration's impact was acknowledged, especially in the EU framework programme for research and innovation, the declaration was revisited in 2015 to emphasise an increase in effort and a heightened pace to find solutions to tackle societal challenges. This kind of a paradigm shift requires extensive ethical reflection of the causes and impacts of the research and requires reshaping of the entire research process.

A GROWING INCENTIVE FOR OPEN DATA

"Responsible Research and Innovation is a transparent, interactive process by which societal actors and innovators become mutually responsive to each other with a view to the (ethical) acceptability, sustainability and social desirability of the innovation process and its marketable products (in order to allow a proper embedding of scientific and technological advances in our society)." (von Schomberg 2013).

This widely quoted definition of RRI by one of its most important theorists, René von Schomberg, eloquently presents the essential elements of RRI – mutual interaction, focus on societally desirable outcomes and transparency of research – in one sentence. Transparency, although widely acknowledged as a research ideal, is seldom applied in practice to research data. At least in qualitative social sciences, description of the data and the methods used to collect and analyse it can be vague and obscure, and what data has been used is not always clear (Elman & Kapiszewski 2014). Similarly, it is not always clear what of kind data has been collected and used in projects administered by the universities of applied sciences in Finland (Päällysaho et al. 2019).

The lack of access to data renders it impossible to critically evaluate the research design, the data used and the conclusions drawn from it (Elman & Kapiszewski 2014). Thus, in order to increase research transparency, the European Union has acknowledged open access to data" as one of the six key elements of RRI. Further, the new EU Framework Programme for Research and Innovation Horizon Europe will promote open science in full, meaning opening up research data or at least the metadata by default, whenever possible (Burgelman et al. 2019), and as early in the research process as possible (von Schomberg 2019).

Responsible data management is abstracted from the requirement for providing open access to data so that privacy and security concerns, protection of scientific contributions, as well as legal and commercialization issues, are considered. In practise, this has led to the formulation of the FAIR guiding principles, according to which data should meet the standards of findability (F), accessibility (A), interoperability (I) and reusability (R) (Burgelman et al. 2019). Such flexibility is essential, because there is no one-size-fits-all solution, and ethical questions vary considerably depending on discipline, research topic and the type of data produced by research.

Although the opening up and sharing of data is strongly encouraged by the European Union, data management is still a relatively new topic at Finnish universities of applied sciences. A study on data management practices, competencies and attitudes (Merimaa & Lahtinen 2019) reveal that ethical issues are considerably identified and deliberated by RDI personnel at Laurea. According to the results of a questionnaire, RDI personnel were especially dubious of the ethical and legal aspects of data sharing. Another major concern is that the data might be handled inappropriately and that there is a risk of misinterpreted conclusions in secondary analyses. Similar doubts have been reported in various other studies (Bishop 2009; Kuula 2011; Feldman & Shaw 2019).

ETHICAL DILEMMAS OF OPENING UP AND SHARING QUALITATIVE RESEARCH DATA

The main doubts towards data sharing have remained the same throughout the last decade, and common arguments against sharing qualitative social science data are (see, for example, Bishop 2009, Elman & Kapiszewski 2014, Feldman & Shaw 2019):

- social science data is highly context-specific and impossible to reduce to transcribed datasets; thus, its reuse by researchers unaware of the research context is not recommended, due to an increased risk of misinterpretation
- open access to data would negatively affect trust between researchers and participants and weaken the quality of data; the requirement to open up data might also hinder participation and thus result in biased data
- it is ethically unbearable to share intimate and sensitive data

The two first arguments concern quality of research, and the main argument is that sharing of data might deteriorate such quality. However, the solidity of arguments can be questioned.

The first argument stresses the importance of the tacit knowledge of the research context that is obtained during the of gathering of research data. However, it is an approved practice to use research assistants to carry out interviews and – peeking over the fence to humanities – in history, the use personal and intimate data such as diaries, recordings and letters is a common tradition. Besides, science is partial, and claiming that one person possesses orthodox interpretations of a dataset is odd at best (Kuula 2011). Thus, although there are grounds to demand conceptual separation of primary and secondary research, there is no solid basis for arguing that qualitative research data could not be meaningfully reused.

The second argument claims that requesting permission to share data would violate the trust between researchers and participants and thus deteriorate the quality of data (Tsai al. 2016, Kuula 2011). However, when asked, the vast majority of persons who had participated in either medical (Shah ym. 2019) or social science research (Kuula 2011) both agreed to share their data. Some respondents have deemed the entire question odd, because they considered having agreed to advancing science in general and not a single research project in particular (Kuula 2011). Thus, it is common for participants to believe they have complied with an ethical duty to advance science, and impeding the reuse of the data might even run contrary to their ethics.

The third argument, most directly related to research ethics, stresses that it is researchers' ethical duty to protect participants, and allowing third parties to access data constitutes a risk and might cause harm to participants. Requesting informed consent and promising anonymity are not seen as sufficient measures: it cannot be known beforehand for what purposes future researchers might use data, and guaranteeing full anonymity – especially if studying a limited group – is practically impossible (Tsai al. 2016).

Treating participants ethically is inarguably a cornerstone of scientific conduct, and in certain cases even conducting research requires an a priori review by an ethics committee in the human or social sciences. The aim of these reviews is to predict any potential harm that may be caused to people participating in the research(TENK 2019, 59). Thus, if in especially sensitive cases it is believed that even the researchers need support from a special committee in order to assess the potential risks of the study, can it be expected that participants would fully understand what consent implies?

The question is valid, but impeding the opening up of data due to the rights of the research participants is ethically problematic as well. The main standpoint of RRI is that publicly funded research should benefit society, and research transparency requires open data. From the standpoint of RRI, the ethics of data sharing are not limited to the rights of participants: the researcher's obligations towards society should also be considered. Bishop (2009) describes the ethical duties of a researcher as follows:

> "*To participants, researchers owe a duty to avoid or minimise harm, provide informed consent, and protect confidentiality. To the scholarly community, there is the responsibility to maintain professional standards of conduct with transparency and integrity. Finally, to the public at large, including funders, there is a duty to pro produce quality research of wider social value"* (Bishop 2009).

Switching the perspective from the rights of individuals to the researcher and then to the duties of the researcher shifts the ethical balance in favour of data sharing. The ethical duty of research transparency is also acknowledged in the ethical guidelines for human sciences, although they remind one that the degree of openness should be determined on the basis of the data in question (TENK 2019, 57). In other words,

the pursuit of societal good does not justify causing harm to participants, but sharing of data should not be considered harmful, per se. According to RRI, research derives its ethical justification from the pursuit of common good, and thus the gains of data sharing should be weighed against minimal harms, with low risk to participants (see also Bishop 2009, 259).

SIMPLE IN THEORY, COMPLICATED IN PRACTICE

In a study on data management practices at Laurea (Lahtinen & Merimaa 2019), only 15% of the respondents describe interpretative metadata of their research data in order to enhance its reuse. The most common practice is sharing of data with project participations or within the organisation. Instead, it is not yet a well-recognised practice to deposit research data or its metadata into common repositories. Our perception is that the respondents of the study are not familiar with the principles of FAIR (findability, accessibility, interoperability and reusability of research data) and thus have not pondered all ethical aspects. However, we found evidence that respondents have a broad comprehension of the ethical viewpoints of different stakeholders, including RDI personnel, research subjects, non-profit organisations, SMEs and industrial stakeholders, governmental organisations, funders and the public at large.

The increasing demand for research and innovation to be as open as possible and so closed as necessary is simple in theory but raises many ethical questions that can be complex, wicked and perhaps difficult to answer. However, these ethical dilemmas are not due to openness. The ethical viewpoints aroused by openness are not novel, but the open science and innovation movement shifts them to the centre of research process. Thus, it is essential that those involved in research and innovation processes are aware of the dilemmas concerning ethical questions pointed out in this article.

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Afterwords
Promoting prerequisites for better world

Sari Sarlio-Siintola, Karoliina Nikula & Valdemar Kallunki

Ethical competence, deliberation and reflection are increasingly needed in the present times. Ethics are something very humane. Ethics is mentioned to be one of the competences that is difficult, if not impossible, to pass for a computer. Ethical competence, deliberation and reflection are therefore a key part of LAUREA's education and RDI activities in different fields of study and in various working life projects. We believe that ethical competence is even more important part of the future working life and that is how we want to equip our students and staff too for the future.

The world that we live in is changing more rapidly than ever and it seems to be doing so. New ethical questions arise all the time e.g. within the development of technology and medical innovations or in the pondering of how to use the resources. Technology itself must adhere to ethical principles and values, such as privacy or non-discrimination. Technology can also provide us with information to support ethical decision making. But technology cannot replace human in ethical decision making. The development of ethical frameworks for technology –based solution and innovations is therefore an important part of RDI work.

At Laurea University of Applied Sciences ethics is mentioned in the strategy. We look into the future excited about the possibilities ethical approach and competences will offer for us as educators, developers, researchers, students and institution of higher education, as we keep on promoting prerequisites for a better world.The aim is to strengthen the ethical competence of students and other actors, to foster an open culture of cooperation, and to jointly develop ethically, legally and socially sustainable products, services and operating models for the needs of the working life.

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This publication is intended for everyone interested in ethics professionally: research, development and innovation (RDI) actors, educational agents, funders and higher education institutions. The publication will offer insights into ethics work within RDI activities and development of education. With this publication we also want to show that ethics is a vivid part of everyday life of Laurea University of Applied Sciences in RDI and education.