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Ethical considerations and good practices in linguistic work on endangered languages: the case of a research programme on Cypriot Arabic

Abstract: Linguist-centred approaches to fieldwork on endangered languages aim to advance scientific knowledge while minimising unintended risks for participants. However, the situated nature of this fieldwork often calls for more community-centred ethical approaches so that research also translates into benefits for the researched community and not solely for science. Focusing on the relation between research and society, this article reviews macro- and microethical approaches from diverse fields and exemplifies their application in a research programme on the documentation and maintenance/revitalisation of Cypriot Arabic, a severely endangered language spoken in Cyprus. A key principle in this context is collaboration, both with the community and among experts in theoretical and applied linguistics, didactics, language technology, etc. Such multiple-disciplinary collaboration is essential for addressing community-driven goals, such as writing system codification, teaching material creation, etc., which exceed the scope of theoretical linguistics alone. Ultimately, the paper calls on theoretical linguists to embrace multi-disciplinary teamwork and to collaborate with the language communities where they conduct their research in order to align their research with the communities' needs.

Keywords: collaboration; Cypriot Arabic; endangered languages; ethics; linguistic fieldwork; responsible research and innovation

1 Introduction

Fieldwork involving endangered languages and their communities usually involves researchers specialising in applied subfields of linguistics, such as second language acquisition, educational, documentary, and anthropological linguistics. However, as endangered languages can provide valuable information on typological variation,

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language change, bilingualism, etc., they naturally draw the attention also of theoretical linguists, who may become very dedicated in documenting certain aspects of those languages, usually working as 'lone wolves' (in Austin's 2007 terminology). Because these efforts by theoretical linguists are driven mainly by theoretical motivations, documentation of an endangered language in such cases carries the risk of objectifying the language and reducing its speakers to mere sources of information. This is what Dwyer (2006: 54) calls the *go-at-it-alone* research model, in which you "go in, get the data, get out, publish". Nevertheless, linguistic fieldwork usually creates bonds between researchers and the community, and thus theoretical linguists often expand their interests and mission beyond their initial theoretical goals by considering the needs and interests of the language community. In this kind of situation, theoretical linguists must acknowledge their limitations in expertise when the community desires language maintenance or revitalisation: no matter how good their intentions may be, a synergy of different specialisations is needed to be able to meet the expectations of the community regarding, e.g., creating a writing system for oral languages, textbooks for teaching the language, language resources that support its use, etc. This calls for multiple-disciplinary[1] collaboration, a concept that has come to the foreground of ethical considerations for conducting linguistic fieldwork on endangered languages. This central principle does not exist in a vacuum, but forms part of a bigger discussion on ethics in linguistic fieldwork. Moving from running research on an endangered language solely for the sake of science to advocating for the needs of the language community – and thus running the research *for,* the community, not just *on* the community (Cameron et al. 1992) – is indeed a step forward. The next steps in the evolution of the ethical frameworks for linguistic fieldwork are based exactly on the principle of collaboration, both in the sense of interacting with the researched community in setting the research goals that would empower it, and also in the sense of forming partnerships between researchers and members of the community in the process of conducting the research (e.g., Rice 2006).

The evolution of ethical frameworks in linguistic fieldwork research reflects the need for linguists to acknowledge that, even with the most purely theoretical motivations aiming exclusively at language documentation, they are entering into the realms of *applied* linguistic research, whose nature is highly situated (Kubanyiova 2008). This recognition requires researchers to be attuned to the specific cultural, socioeconomic, and linguistic contexts in which these languages are embedded. Therefore, the positivist paradigm of treating participants as "materials" (Cameron et al. 1992: 14–15), from which the researchers must be distanced in order to reduce

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[1] In Choi and Pak's (2006: 351) terminology, "multiple disciplinarity" is an umbrella term that covers multi-, inter-, and trans-disciplinarity. It is the antonym of monodisciplinarity. These concepts are presented in Section 5.1 of this paper.

bias in designing and conducting their research (Park et al. 2020), cannot be at the heart of field linguistics; rather, the relational character of such research endeavours must be recognised and should become central to the ethical decisions made. Especially in the field of language documentation and revitalisation, which involves minoritised or marginalised communities, frameworks aiming to *rehumanise* linguistic research become even more important (e.g., Czaykowska-Higgins 2018; Dobrin and Berson 2011).

This paper explores the importance of combining theoretical and applied expertise in fieldwork linguistics, by examining the ethical challenges and decisions made in the case of a research programme on the documentation and revitalisation of Cypriot Arabic, a severely endangered language of Cyprus. This specific research programme was selected as a case study for various reasons, one of which is that the author of the present study is part of the research team of that programme and thus possesses inside knowledge of the rationale behind decisions made. Cypriot Arabic presents an interesting case for the additional reason that it is situated at the crossroads of Europe and the Middle East, thus expanding the ethics literature on endangered languages which has hitherto focused mostly on fieldwork in other parts of the world, such as the Americas and Oceania and their Indigenous populations. More importantly though, this research programme, which, at the time of writing, has been running for more than a decade, showcases a variety of ethical choices that involve different (and in certain cases conflicting) ethical principles discussed in the relevant literature. One of the principles that sets this programme apart from other documentation efforts carried out by theoretical linguists (which are primarily motivated by theoretical concerns) is the principle of collaboration in forming its multiple-disciplinary research team, something that has the potential to maximise the benefits for both science and the researched community. This aspect of collaboration aligns this research programme with other efforts by documentary linguists, such as the DOBES[2] projects (e.g., Wittenburg et al. 2002) and many others around the world (a lot of which are found in Bischoff and Jany 2018), but also with the literature on linguistic fieldwork, in which forming multiple-disciplinary teams is recommended as good practice (e.g., Dobrin and Schwartz 2016; Leonard and Haynes 2010). In this paper, collaboration is brought forward as a key aspect of translational research, i.e., research that can be translated into practical benefits for society (for the origin of the term in biomedical sciences, see, e.g., Fort et al. 2017; for its use in clinical linguistics, see, e.g., Weiss et al. 2017; for its use in applied linguistics, see Grujicic-Alatriste 2015, 2020).

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2 The acronym DOBES stands for "Dokumentation bedrohter Sprachen", i.e., "Documentation of Endangered Languages", and refers to an organisation and its projects for archiving the world's endangered languages.

Before proceeding with the presentation of the research programme on Cypriot Arabic, a review of relevant concepts in ethical research from various scientific fields is necessary, as they will be used as analytical tools to discuss the ethical decisions made in the specific research programme. In the following sections, I therefore first "zoom out" by reviewing relevant literature on "macroethics" (Section 2) and "microethics" (Section 3), as well as literature on the ethical frameworks that bridge macro- and microethics (Section 4), with particular emphasis on the framework of Responsible Research and Innovation (Section 4.1). I then "zoom in" to the evolution of ethical frameworks in linguistic research (Section 5) and connect it with the evolution from mono- to multiple-disciplinary teamwork (Section 5.1). Finally, I turn to the description of the specific research programme on Cypriot Arabic (Section 6), and I discuss how the reviewed principles were applied in making ethical decisions (Section 7), concluding on the importance of collaboration and multiple-disciplinarity (Section 8).

2 Macroethics (uppercase-E Ethics)

Macroethics, also known as *"Uppercase-E" Ethics*, encompasses a set of broad ethical concepts that are encapsulated in professional codes of ethics and Institutional Review Board (IRB) protocols (Kubanyiova 2008: 503). These principles aim to safeguard the welfare of human subjects in research, ensuring that research is conducted ethically and responsibly.

Two facets of research ethics are encompassed by the term *macroethics*: (a) procedural ethics (Guillemin and Gillam 2004), which is the process of obtaining permission from an appropriate ethics committee (such as an IRB) to carry out the intended research project, and (b) ethical principles stated in professional codes of conduct, such as those published by the American Psychological Association (APA 2002) and the American Educational Research Association (AERA 1992; Kubanyiova 2008: 505). The ethical recommendations of macroethics are typically derived from three core principles that serve as moral standards for research involving humans (Christians 2000):

– *Respect for persons*: This principle requires researchers to treat all participants with dignity and respect, and to protect their physical and emotional well-being, their privacy, and anonymity.
– *Beneficence*: This principle requires researchers to maximise the potential benefits of their research for the researched community while minimising the potential risks.
– *Justice*: This principle requires researchers to ensure a fair distribution of research benefits among different populations.

In applied linguistics research, while the principle of respect for persons is generally routinely adhered to, there has been a notable neglect of the principles of beneficence and justice. Beneficence, in the sense of ensuring research benefits the communities and participants, has often been implicitly assumed, leading to a lack of explicit documentation regarding the societal benefits of research. Similarly, justice has been consistently overlooked in applied linguistics research, leading to the exclusion of certain populations and serving only a privileged minority (Kubanyiova 2008: 505).

One of the problems associated with macroethics is the risk of it becoming a bureaucratic exercise, where researchers merely seek to fulfil procedural requirements rather than genuinely addressing the ethical needs of their research context (Hallowell et al. 2005). Another challenge is the misconception that adherence to macroethical principles invariably guarantees ethical research practice (Kubanyiova 2008: 503–504). The reality, though, is more complex, as ethical dilemmas may still arise, necessitating a more nuanced ethical approach.

In situated applied linguistic studies, conflicts can arise between macroethical principles. For instance, balancing confidentiality and accuracy in reporting linguistic research results may create ethical tension regarding adhering to the principle of respect for persons and beneficence respectively (Kubanyiova 2008: 506). Thus, macroethics alone may not offer clear guidance for resolving such conflicts.

3 Microethics (lowercase-e ethics)

Microethics (or *"lowercase-e" ethics*), according to Guillemin and Gillam (2004) (based on Komesaroff 1995), pertain to "everyday ethical dilemmas that arise from the specific roles and responsibilities that researchers and research participants adopt in specific research contexts". The microethical dilemmas can be complex and challenging, and they often require researchers to make difficult decisions about how to balance competing ethical principles. Microethics recognises the relational nature of research and stresses the need for ethical considerations that are situated and context-bound rather than abstract ethical considerations (Kubanyiova 2008: 506).

In the context of situated applied linguistics research, two ethical frameworks can be utilised as guidance for addressing ethical challenges at the microethical level: "ethics of care" and "virtue ethics" (Haverkamp 2005; Kubanyiova 2008: 504). The ethics of care model recognises research as a relational activity that calls for the researcher's empathy and solidarity with the individuals under study (Helgeland 2005). It prioritises individualised, context-specific decisions and actions based on care, responsibility, and responsiveness (Haverkamp 2005: 149–150). For instance, the IRB macroethical requirement for anonymisation of participant information may be at odds with a participant's wish to make their voice known, who may feel

that anonymisation strips them of their personal identity. In such a case, the researcher, based on the ethics of care framework, which calls for ethical actions in relation to the participants rather than to general IRB requirements, should be flexible enough to prioritise their participant's wish over checking a box in an IRB checklist.

Virtue ethics (which is discussed in more detail in the following section), rooted in Aristotle's philosophy, focuses on cultivating the moral character of the researcher rather than following specific principles (Haverkamp 2005). When ethical dilemmas emerge in the course of conducting research, virtue ethics supports the researcher's capacity and readiness to recognise them and enables them to make decisions based on both macroethical principles and the microethics of care (Kubanyiova 2008: 507).

The ethics of care and virtue ethics highlight the relational character of research, emphasising the importance of understanding the specific decisions and actions that affect the individuals being studied. Rather than relying solely on general principles, ethical practice in linguistic research involves attentiveness to the particular needs of research participants and the impact of research on the communities involved.

3.1 Virtue ethics as a guide to responsible innovation

The framework of virtue ethics offers valuable guidance for dealing with micro-ethical dilemmas in responsibly conducting innovative research and technology endeavours (Steen et al. 2021). For the cultivation of responsible innovation, several virtues are essential, which can be divided into two categories: those that are oriented towards the responsible side of responsible innovation, and those that are oriented towards the innovation side. Regarding the responsibility aspect, Steen et al. (2021: 251–252) reviewed several such virtues which play a crucial role in guiding ethical behaviour and decision-making; some of these virtues are the following:

– Justice: A commitment to fairness and equity in the distribution of the benefits and risks of innovation (Vallor 2016: 128).
– Anticipation: The ability to think ahead and identify the potential impacts of new knowledge, both intended and unintended (Stilgoe et al. 2013).
– Humility: A recognition of the limits of our knowledge and ability (Vallor 2016: 126).
– Honesty: A commitment to truth (Vallor 2016: 122).
– Inclusion and responsiveness: A commitment to involving a wide range of people in the decision-making process and to responding to their concerns (Stilgoe et al. 2013); it also has the dimension of promoting diversity in the formation of the research team (Steen et al. 2021: 252).
– Compassion, empathy, and care: A concern for the well-being of others, both individuals and groups (Vallor 2016: 133, 138).

Regarding the innovation aspect of responsible innovation, Steen et al. (2021: 252–253), through the lens of virtue ethics, reviewed certain virtues essential for fostering innovative research practices, some of which are the following:

– Self-control: The ability to self-discipline (Crawford-Brown 1997).
– Perseverance: The willingness to persist working on a goal and putting in effort in the face of challenges or hardship (King 2014).
– Inquisitiveness: A propensity to be open and responsive towards other people and their experiences in the context of collaborative innovation, as well as towards one's own experiences and learning (Steen 2013).
– Flexibility: The ability to adjust behaviour, beliefs, and emotions in response to unfamiliar, upsetting, or unstable circumstances (Vallor 2016: 145).
– Collaboration: The ability to encourage cooperation and cultivate an environment that supports cooperation (Steen 2013).

These innovation-oriented virtues are not merely principles for efficiently conducting innovative research; within virtue ethics, they have their place in making ethical decisions in conjunction with the responsible-oriented virtues. For instance, possessing the flexibility virtue ensures that one can adjust not only to the changing demands of a research programme, but also to the changing priorities of the researched community: a research team of theoretical linguists may, for example, initially work on language documentation and analysis motivated by theoretical or typological concerns, but the community may wish to have teaching materials for preserving the language; within responsible innovation, the research team should consider ways to respond to this wish, e.g., by expanding the team with applied linguistic expertise and other relevant specialisations. Moreover, self-control and perseverance do not only safeguard the successful completion of an innovative research project, but also ensure that the outcomes promised to the community will be delivered, in accordance with the responsible-oriented virtues.

Balancing the demands of responsibility and innovation is not always an easy task, as they can sometimes be at odds with each other. The doctrine of the mean, as proposed by Aristotle, suggests finding the optimal expression of virtues in specific situations (Steen et al. 2021: 254–257). However, the challenge lies in identifying which virtues are relevant and how to balance them appropriately. Practical wisdom, or *phronesis*, serves as a regulating virtue that guides the exercise of other virtues, allowing researchers to make balanced and context-specific ethical decisions. Practical wisdom fosters the moral character of the researcher and facilitates ethical practice. It is not something that can be learnt from books alone, but rather it is developed by trial and error through practice (Steen et al. 2021: 256). Practical

wisdom coordinates the four major features of responsible innovation, namely anticipation, responsiveness, inclusion and reflexivity, and promotes community rather than just individual benefits, as well as longer-term goals (rather than short-term ones), such as sustainability; it can also assist in developing and cultivating other virtues that are important for ethical research and innovation, such as empowerment, which is the virtue of letting go of control and of sharing power with others, especially with prospective users of our research and innovation (Steen et al. 2021: 257–258). For example, the empowerment virtue was at the heart of the research programme on Cypriot Arabic discussed in the second part of this paper, as control was given to the researched community to participate in setting the agenda, forming the research team, and also in conducting the research.

4 Bridging macroethics and microethics: a coactive synthesis

This brief review of research-related ethical considerations has so far navigated through the principles of macroethics, which deal with overarching principles, and microethics, which pertain to specific situations. In this section, the ethical frameworks that bring macro- and microethics together will be presented.

Kubanyiova (2008: 507) points out that, while major ethical codes of practice have recognised the situated nature of ethics, only a few offer specific guidance for situations where macroethical and microethical practices may conflict. The Canadian Code of Ethics for Psychologists, developed by the Canadian Psychological Association (CPA 2000), presents an exemplary model for addressing these ethical tensions. This code encourages the integration of macro- and micro-aspects of ethical research conduct based on four fundamental principles: "Respect for the dignity of persons", "Responsible caring", "Integrity in relationships", and "Responsibility to society". The code relies on the application of ethics of care and virtue ethics, encouraging researchers to be sensitive to the concerns of individual research participants. Furthermore, the Canadian Code calls for acknowledging that ethical principles may sometimes clash, necessitating a balanced approach in ethical decision-making, which may be a complex process. It also recognises that some clashes of ethical principles may not have an incontestable resolution, and researchers are expected to rely on a "reasonably coherent set of ethical principles" (CPA 2000) and their personal conscience in making decisions.

4.1 Responsible research and innovation

As discussed above, responsible innovation, if governed by virtue ethics, can provide guidance through practical wisdom for making decisions at the microethical level. The concept of responsible innovation, as analysed by Steen et al. (2021), focused more on the ethics of technological innovation, known as *technomorals* (Vallor 2016). A concept that encompasses not only technomorals but also research ethics is *Responsible Research and Innovation* (RRI), which functions as a bridge between macro- and microethical considerations. RRI has its roots in discussions about research integrity and the ethical, legal, and social implications of research (Owen et al. 2012: 751). RRI extends the ethical considerations beyond individual researchers or innovators, who may have limited power in the context of global innovation, to encompass collective endeavours; more specifically, RRI promotes social interactions among stakeholders, researchers, and research institutions (von Schomberg 2013), focusing on mutual responsiveness (Owen et al. 2012). As von Schomberg (2011) defines it,

> Responsible Research and Innovation is defined as a transparent, interactive process in which societal actors and innovators engage with each other to ensure the ethical acceptability, sustainability, and societal desirability of the innovation process and its products. RRI aims to embed scientific and technological advances in society while focusing on collective responsibility.

Being focused on the purposes, motivations, and intentions of science and innovation, RRI shifts the emphasis away from what we *do not want science to do* (i.e., equating research ethics with the macroethical preoccupation of avoiding unintended risks) and onto what we *do want it to do* (Owen et al. 2012: 754). Thus, purely consequentialist ethics that centres on intentions and/or the consequences of actions of individuals is deemed unsuitable for innovation (von Schomberg 2013: 59) and must be rejected if we wish to promote the collective endeavour of cultivating mutual responsiveness among the various actors involved in research and innovation (Steen et al. 2021: 246).

Owen et al. (2012: 751) identify three distinct features of RRI: (1) democratic governance of the purposes of research and innovation in the quest of appropriate impacts; (2) responsiveness, with an emphasis on the integration and institutionalisation of the principles of anticipation, reflection, and deliberation; and (3) responsibility reevaluated in the context of innovation as a collective endeavour. These three RRI features are presented in the following subsections.

4.1.1 Science for society: democratising the governance of intent

RRI emphasises the need for more collective participation in the setting of research and innovation priorities making research responsive to the needs of society and aligned with public values. As mentioned above, it goes beyond merely mitigating unintended risks and aims to define what the purposes of research and innovation should be. This shift includes a focus on science for society, whereby research and innovation are directed towards societal challenges and the desired impacts (Owen et al. 2012: 757). Deliberative democracy is the underpinning principle, involving the institutionalisation of values-based approaches and the inclusion of the public and stakeholders in setting the research and innovation agenda with the aim of aligning it with community needs and priorities (Owen et al. 2012: 754). An example of such participatory agenda setting from the medical field concerns the Alzheimer's Society in the UK, which involved carers and people with dementia in setting research priorities and decision-making processes, such as by participating in grant selection panels (Wilsdon et al. 2005). A parallel example from linguistics would be for members of the research community to form both boards for setting the research programme goals but also hiring committees for the filling of research positions in the programme; such a case was the research programme on Cypriot Arabic, which, as already mentioned, will be presented later in this paper as a case study.

4.1.2 Science with society: institutionalising responsiveness

The second facet of RRI, responsiveness, underscores the incorporation and institutionalisation of the principles of reflection, anticipation, and inclusive deliberation within the realms of research and innovation processes (Owen et al. 2012: 755). Anticipation entails the analysis of intended and unintended impacts; reflection necessitates the contemplation of purposes, motivations, known and unknown factors, risks, and ethical dilemmas; inclusive deliberation urges broad engagement and dialogue with diverse stakeholders and the public.

These dimensions of responsiveness emphasise the necessity for an "iterative, continuous, and flexible process of adaptive learning" (Owen et al. 2012: 755) that should be institutionalised to govern policy- and decision-making processes. The responsiveness dimension advocates for an emphasis on science with society, positioning research and innovation as responsive to societal direction and adaptable in the face of unpredictable innovation outcomes.

The overarching goals of RRI hinge on inclusiveness, involving early engagement of diverse stakeholders, such as policymakers, researchers, industry, and civil society organisations, something that fosters co-responsibility in innovation development (Owen et al. 2012: 752–753).

4.1.3 Putting the "responsible" in "responsible research and innovation"

Beyond established obligations that scientists have in connection with research integrity, the concept of RRI extends responsibilities also to universities, businesses, policymakers, and research funders (Douglas 2003). Addressing these responsibilities necessitates reflecting on the structure, funding, and implementation of science and innovation programmes. The responsibility dimension of RRI explicitly links research and innovation to responsibility, prompting a re-evaluation of responsibility as a social ascription in the context of future-oriented, uncertain, complex, and collective innovation endeavours (Owen et al. 2012: 756–757).

The transformation envisioned by the application of the reviewed principles of RRI constitutes a shift from science *in* society to science *for* society, and *with* society (Laroche 2011). These principles are particularly applicable to linguistic research and especially to linguistic fieldwork research, as will be shown in the following section.

5 Evolving from linguistic research on languages to community-based language research

Cameron et al. (1992) discussed the responsibilities of linguistic fieldworkers in the context of ethical considerations and identified three paradigms in linguistic field-work: "Linguist-Focused Ethical Research", "Advocacy Research", and "Empowering Research". The first paradigm, Linguist-Focused Ethical Research, primarily emphasises researcher-centric approaches and macroethical concerns of minimisation of harm and inconvenience to the researched subjects. This framework focuses on research *on* a language community, i.e., what was mentioned above as "science *in* society".

Advocacy Research, the second paradigm, introduces a commitment to the well-being of the community being studied. It emphasises research on and *for* subjects, focusing on benefiting the community while conducting research, i.e. conducting "science *for* society".

The third paradigm, Empowering Research, encourages a collaborative approach whereby researchers work on, for, and *with* the community they are studying, thus conducting "science *with* society". This interactive and dialogic research method aims to empower the community and its members (Cameron et al. 1992; Rice 2006).

Rice (2006) proposed a potential fourth model, Community-Based Language Research, in which research on a language is conducted for, with, and *by* the language-speaking community. This approach involves a collaborative partnership

between researchers and the community, emphasising a collective and inclusive research process (Czaykowska-Higgins 2009). Research conducted within this model is "community-situated, collaborative, and action-oriented" (Rice 2018: 14). This model should not be perceived as yet another research methodology, but rather, as Leonard and Haynes (2010) put it, as a research approach and philosophy centred on the principle of collaboration. The Community-Based Language Research model has received much attention in the literature (e.g., Bowern and Warner 2015; Leonard and Haynes 2010; Rice 2010, 2011), and its application can be found in numerous projects, such as the ones reported in Bischoff and Jany (2018).

The evolution of the research paradigms is reflected in the evolution of the terminology used to describe the relationships between field linguists and speakers (Rice 2006): more specifically, the evolution from "informant" to "consultant" and further to "collaborator" reflects a shift towards more active and participatory roles for speakers in the research process. Rice (2006) also emphasised the importance of negotiated relationships between field linguists and speakers, taking into account factors such as the speaker's interest in linguistic training, collaboration models, and involvement in linguistic analyses.

Within the evolution of these research paradigms, the concept of ownership of linguistic data is central to ethical language research. Field linguists must respect the rights and wishes of the community in which the research is conducted. This includes considerations such as archiving, access, and use of collected data, as well as acknowledging individual and community ownership over linguistic and cultural information. Moreover, when producing linguistic materials, it is important to create resources that are usable and beneficial for the community. This requires collaboration with community members and consideration of their linguistic learning needs (Rice 2006).

Another important aspect of the relational models of linguistic research is sharing knowledge with the language community, which should be a continuing commitment (Smith 2021: 16). This goes beyond just sharing surface information; it is the responsibility of researchers to share the theories and analyses that shape the construction and representation of knowledge and information, something that can help to demystify and decolonise language research (Smith 2021: 17).

Field linguists must recognise and respect diverse intellectual traditions. They should challenge the assumption that linguistic research models based on traditionally Western intellectual traditions are universally applicable (e.g., Leonard 2021; Rice 2006). Instead, linguists should adopt an empowerment and collaborative model that values different intellectual traditions and knowledge systems. This can enrich the research process and lead to a more comprehensive understanding of language (Rice 2006).

5.1 A note on the evolution of collaboration in teamwork

The evolution of ethical frameworks in linguistics by increasingly focusing on collaboration finds its parallel in the discussion on the evolution of "disciplinarities" (Stember 1991). To move beyond a *mono-disciplinary* approach, apart from intra-disciplinary discussions on ethics and best practices, a crossdisciplinary perspective – i.e. examining methods, practices and ethical frameworks from other disciplines – is beneficial. This can in turn lead to "multiple-disciplinary" teams (Choi and Pak 2006), which involve the collaboration of more than one discipline. The nature of this collaboration may evolve from *multidisciplinarity* to *inter-disciplinarity* and even *transdisciplinarity* (Choi and Pak 2006; Stember 1991): multidisciplinarity involves disciplines collaborating from their separate perspectives to reach a common goal in an additive manner, i.e., with each discipline working on a specific aspect without integrating insights from the other disciplines; in contrast, interdisciplinarity synthesises methods and approaches of different disciplines in an integrative way of building bridges across disciplines; finally, transdisciplinarity offers holistic schemes that unify intellectual frameworks, transcending and converging disciplinary and stakeholder perspectives in order to address the dynamics of whole systems (Choi and Pak 2006). Transdisciplinarity is thus not just a harmonious synergy of disciplines envisaged by interdisciplinarity, but results in a new unified framework that differs from all contributing disciplines. From a sociology of science perspective (Gibbons et al. 1994), two modes of trans-disciplinarity are identified (Scholz and Steiner 2015): *Mode 1* and *Mode 2*. "Mode 1" transdisciplinarity is mostly theoretical, relates to an "inner-science activity", and is driven by a broad pursuit of a "unity of knowledge" (Rigolot 2020: 2; Scholz and Steiner 2015: 15). "Mode 2" transdisciplinarity is primarily practical, involves role release and expansion within the team (Choi and Pak 2006: 15), and is usually characterised by the involvement of stakeholders in participatory problem-solving approaches that are applied to concrete, societally relevant complex problems (Rigolot 2020: 2; Scholz and Steiner 2015: 15). As a result, "Mode 2" is inextricably linked to one's personal life as a *way of being* and goes well beyond one's work as a researcher (Rigolot 2020).

Not all collaborations need to be interdisciplinary and not all research topics call for transdisciplinarity. Nevertheless, certain traits of transdisciplinary teamwork (especially of "Mode 2") resonate with the ethical considerations reviewed above. For instance, the cooperation between science and society is also at the heart of community-based research approaches, while the release and expansion of roles in transdisciplinary teamwork parallels the empowerment virtue of responsible innovation, which values letting go of control and sharing power with others. In the

same way as "Mode 2" is not just a way of teamwork, but rather a way of being not only at work but also in life (Rigolot 2020), community-based research is not a research methodology, but rather a research philosophy centred on the principle of collaboration (Leonard and Haynes 2010).

5.2 Evolution of practices in the field and of the field of Linguistics

This evolution of ethical frameworks in linguistic research, as well as the evolution of multiple disciplinaries, increasingly bring the participants and their priorities to the forefront by focusing not exclusively on "uppercase-E" (macro-)Ethics, but rather by bridging it with "lowercase-e" (micro-)ethics. Similarly, in Leonard's (2023) terminology, "uppercase-L" Linguistics, i.e., the discipline as an abstract notion, is distinguished from "lowercase-l" linguistics, i.e., the process of studying language: while "uppercase-L" Linguistics may be rooted in the positivist paradigm and Western thinking and be associated with colonial history and practices, "lowercase-l" linguistics does not necessarily entail any specific way of carrying out research and of ranking the desiderata of researchers and participants (Leonard 2023: 115–116). That is why "lowercase-l" linguistics is where practical decisions are made regarding lowercase-e ethics and their balancing with uppercase-E Ethics (and that is also where one may operate within "Mode 2" transdisciplinary principles). The discussion of these matters in the literature over the last decades has led researchers in anthropological, documentary, and other applied fields of linguistics to reevaluate their approach on "lowercase-l" linguistics, i.e., on how they conduct language research. This shift, as Leonard (2023) supports, can also reach "uppercase-L" Linguistics by incorporating in "lowercase-l" linguistics Indigenous ways of conducting linguistic research. Indeed, linguistic practices ("linguistics") do shape the field ("Linguistics") in their research approach and philosophy; apart from the inclusion of Indigenous ways of thinking and working, "uppercase-L" Linguistics can be reshaped in terms of Ethics policies that synthesise macro- with microethical principles (as discussed in the literature reviewed here) established by research projects, organisations, or even states. This stage of rethinking of "uppercase-L" Linguistics can become possible through discussing these issues for example in the academic literature, at conferences, through training, etc. Such centring of the ethics/Ethics discussion on foregrounding the interests of the participants has been re-humanising linguistics/Linguistics for some time now (see Czaykowska-Higgins 2018; Dobrin and Berson 2011). This re-humanisation of the field can in turn prove especially beneficial for theoretical linguists, who may not have been as involved in the evolution of the

relevant ethical frameworks as documentary and other applied linguists have been. It becomes even more important for theoretical linguists who may venture as lone wolves or as small teams in fieldwork especially if they are interested in endangered languages. If their research does not involve Indigenous communities, but is rather conducted, for example, in Europe, the chances of theoretical linguists having considered, e.g., Indigenous ways of conceptualising fieldwork research are even lower, as they may not be perceived to be as relevant. Thus, reporting on ethical decisions made by research projects in such non-Indigenous settings adds to the existing literature. One such example is the case study reported in this paper, namely, a research programme on Cypriot Arabic, a severely endangered language at the crossroads between Europe and the Middle East.

6 The case of the research programme on Cypriot Arabic

The concepts of ethical research reviewed in the previous sections will be exemplified through the presentation of ethical concerns and actions of a specific language documentation and revitalisation programme, in which the author participates as a researcher. Apart from examining specific ethical choices made through the lens of the ethical frameworks reviewed above, this exposition aims also to highlight good practices followed. Before proceeding, the researched language and language community are presented, namely, Cypriot Arabic and the Maronite community of the Kormakitis village in Cyprus respectively.

6.1 Background on Cypriot Arabic and its speakers

The Maronite community of Cyprus is one of the five ethnoreligious groups recognised by the 1960 constitution of the Republic of Cyprus, the other four being Turkish Cypriots (who are Muslim; Turkish Cypriot Roma are included in this group), Greek Cypriots (who are Greek Orthodox; Orthodox Cypriot Roma are included in this group), Armenian Cypriots (most of whom are Armenian Apostolic), and Latin Cypriots (who are Roman Catholics). The notable difference of the Maronite Cypriots from the other Christian groups is that they belong to the Maronite Church, one of the Eastern Catholic Churches, which is based in Lebanon and has Saint Maron as their patron saint. In terms of socioeconomic status, Maronites do not differ from the rest of the Cypriot communities. Regarding their presence on the island, Maronite populations came in waves to Cyprus from the region of Greater Syria from the 7th

century to the 12th. In the 13th century, there are reports of the existence of 62 Maronite villages in Cyprus, especially on Pentadaktylos mountain (Frangeskou and Hadjilyra 2012: 8). Today, only four villages remain, all of which are situated in the north of the island. Out of these populations, only the Maronites of Kormakitis speak Cypriot Arabic, i.e., the evolution of the Arabic variety brought to the island in the Middle Ages; Maronite Cypriots from the other villages do not speak this language and have no memory of their ancestors ever speaking it. Traditionally, the endonym used among the Kormakitis community to refer to their language is either *arapika*, a Cypriot Greek word that means 'Arabic (language)' or *sanna*, which, in Cypriot Arabic, means 'our language'. In the international scientific literature, it is known as "Cypriot Arabic", while in recent years the term "Cypriot Maronite Arabic" has been used in the government and legislation. An imprecise term, albeit somewhat widely used in informal contexts, is also *maronitika*, a Cypriot Greek word that means 'Maronite (language)'. Cypriot Arabic is one of the "peripheral varieties" of Arabic (Borg 1985), a group of Arabic varieties that developed outside of the core Arabic-speaking area and came into contact with non-Semitic languages (Borg 1994). In the case of Cypriot Arabic, the variety that it came into contact with is Cypriot Greek, which exerted lexicogrammatical influence on Cypriot Arabic (Armostis and Karyolemou 2023).

In the turbulent summer of 1974, Kormakitis surrendered to the invading Turkish army; since the northern part of Cyprus was no longer controlled by the government of the Republic of Cyprus, most of Kormakitis inhabitants fled their village and relocated to the south. Due to this displacement, the community was scattered, the language network was broken, and the intergenerational transmission of the language disrupted with younger generations acquiring Cypriot Greek as first language instead of Cypriot Arabic. As a result, Cypriot Arabic is nowadays spoken as a first language by less than a thousand people at various degrees of competence and mainly by people aged 50 and over, all of whom are bilingual with Cypriot Greek and literate in Standard Modern Greek. For these reasons, Cypriot Arabic is included in UNESCO's *Atlas of the World's Languages in Danger* as a severely endangered language with very low ethnolinguistic vitality (Karyolemou 2019).

6.2 The research programme on Cypriot Arabic

Owing to the joint efforts of academics and members of the community, in 2008, the Republic of Cyprus recognised Cypriot Arabic as a minority language of Cyprus. This recognition was the first step in language planning, namely, status planning: being considered a language in its own right – and not a dialect of Arabic anymore – was a status elevation that paved the way for funding opportunities and more organised

efforts to protect it. Following this official recognition, in consultation with members of the community, a team of academics proceeded with designing a research programme for language documentation and maintenance/revitalisation to be submitted for approval to the government. At the same time, the government appointed an Experts Committee consisting of academics and members of the language community to be consulted regarding the revitalisation efforts. Therefore, early on, the principle of collaboration in setting the goals of the research programme became central in the efforts to protect the language in accordance with the ethical virtue of inclusion (Stilgoe et al. 2013) of the responsible innovation framework reviewed above. Those efforts culminated in 2013 in the creation of the "Documentation, Preservation and Revitalisation of Cypriot Maronite Arabic" research programme of the (now-titled) Cyprus Ministry of Education, Sports and Youth under the direction of Marilena Karyolemou, a linguist specialising in language planning and policy and sociolinguistics. The programme, which has been operating on a part-time basis since then, had within its major goals the creation of an "*Archive of Oral Tradition of Cypriot Arabic*". The goals of the programme are constantly reevaluated according to the needs of the community as they emerge from the consultation with the aforementioned Experts Committee, but also in close collaboration with the Representative of the Maronite religious group in the House of Representatives of the Republic of Cyprus. In what follows, specific macro- and microethical challenges, decisions, and actions are presented.

6.2.1 The initial stages: macro- and microethical considerations

As Cypriot Arabic had been for centuries an orally transmitted variety without many written texts or systematic descriptions of its grammar and lexicon (see Armostis and Karyolemou 2023), the programme initially focused on the documentation of the language as a necessary first step for corpus planning. This was done by hiring native speakers of Cypriot Arabic as research collaborators and training them in order to conduct ethnographic interviews in Cypriot Arabic with members of the community and also to thematically annotate the interviews. Trained phoneticians, one of whom is the author of the present paper, completed the research team by being assigned the phonetic transcription of parts of the interviews. The aim of the phonetic transcription was to obtain a data-driven description of the phonetic and phonological system of the language, which is a necessary step towards the creation of a writing system for the language. The hiring committee for both the interviewers and the phoneticians during those initial stages of the programme consisted of members of the Experts Committee mentioned above, specifically, linguists and native speakers of Cypriot Arabic. This composition of the hiring committee was important for ensuring that the hired research collaborators for conducting the interviews were

fluent in Cypriot Arabic (fluency is not a given, especially for younger members of the community), but also for sharing the decision-making process between linguists and the community both in setting the agenda of the programme and in forming the research team.

From the outset of the programme, obtaining informed consent from the participants and also safeguarding their privacy through anonymisation received special attention in order to adhere to the macroethical principle of respect for persons mentioned earlier (Christians 2000). This may be a standard practice today, but it was not a given in the 1960s, when another research programme started conducting interviews for the creation of an "Oral Tradition Archive for *Cypriot Greek*" by the Cyprus Research Centre. This programme is still ongoing, but it has never been available to the public or the scientific community, despite its invaluable content. Part of the reason for its unavailability is precisely the fact that the interviews had not been conducted with written consent and there were no strategies for data anonymisation or removal of sensitive materials from the corpus. In the first training of the research team for the Cypriot Arabic programme, researchers from the Cypriot Greek Archive were invited to share expertise regarding conducting ethnographic interviews, especially in the context of Cyprus, but also to stress the importance of obtaining informed consent.

Apart from the macroethical aspects of conducting ethnographic research, research collaborators were trained to follow a protocol during the interviews in order to elicit information about (and also relevant vocabulary of) various aspects of the community's life and activities (e.g., cooking, traditions, marriage, work, etc.). After the interviews, the collaborators provided a written report (in Greek) of the thematic breakdown of each interview. Most of the recordings were orthographically transcribed (even though no codified writing system existed during the initial stages) and a subset translated into Greek. Another subset of recordings was phonetically transcribed. As the phoneticians at the time had no competence in Cypriot Arabic (or any other Arabic variety), they would rely on the orthographic transcriptions to validate their phonetic transcription and would often consult with the native speakers of the team for unclear cases.

6.2.2 Moving forward: the creation of a writing system

For the specific research programme, documenting the language was never an end in itself; it was, however, a necessary first step towards maintenance and revitalisation efforts, since, as already mentioned, the language had not been adequately described regarding its grammar and lexicon. As an almost exclusively orally transmitted language, Cypriot Arabic also lacked a codified writing system, the need for which became obvious from the outset of the programme. It is not the case that Cypriot

Arabic had never been rendered in writing; it had been written with the Greek script, e.g., in the Frangiskou (2000) dictionary, or with an alphabet based mainly on the Roman script proposed by linguist Alexander Borg, which the community adopted in an official ceremony in December 2007 (Armostis 2020; Karyolemou and Armostis 2020). Even though the alphabet was utilised by the community, e.g., in the "Maronite Press" newspaper, its use exhibited substantial spelling inconsistencies (Armostis 2020) – something that was observed also in the orthographic transcription of the programme's oral corpus. This was because only one of the two constituents of a writing system was explicitly provided, namely the alphabet; the other necessary constituent is the set of orthographic rules that govern the use of the alphabet (Sampson 1985: 19), something that, with the exception of basic graphophonemic correspondences, was lacking for Cypriot Arabic.

Therefore, creating an associated orthography for the Cypriot Arabic alphabet became one of the primary objectives of the research programme in its general effort for corpus planning. This was a necessary step for spelling consistency in the orthographic transcription of the corpus, but also for the creation of materials for teaching Cypriot Arabic to young and adult members of the community as part of the acquisition planning of the research programme. The author of the present study was put in charge of the creation of a complete writing system for Cypriot Arabic. The reason for having been assigned this task was my interest in grapholinguistics, especially regarding the creation of writing systems for unwritten varieties, and also my experience in proposing a writing system for Cypriot Greek as part of a lexicographical project (Armostis et al. 2014). This effort pertained to both aspects of a writing system, namely, the orthography and the signary (Daniels and Bright 1996: xlv), the latter being "the complete inventory of the basic signs of a given writing system" (Coulmas 2003: 36), which, apart from signs representing language units (distinctive features, phones, phonemes, syllables, or morphemes), includes diacritics, punctuation, numerals, blank spaces, etc. Regarding the development of orthography, the aim was to develop clear rules for all aspects of orthography, such as (more detailed) graphophonemic correspondences (with respect to the balance of phonography with morphography and orthographic depth), the representation of suprasegmentals (e.g., stress, consonant gemination), capitalisation, orthographic word division, hyphenation, word contraction, loanword spelling, use of punctuation, etc. (Coulmas 1996: 379–380). Regarding the signary, on the one hand, the Cypriot Arabic alphabet proposed by A. Borg (Armostis 2020) had to be reevaluated with respect to representing all phonemic contrasts of the language, but also regarding alphabetical order, letter names, etc., and on the other hand, decisions had to be made regarding punctuation, such as which kind of quotation marks to be used, which symbol for the question mark, the semicolon, etc.

As a theoretical linguist, I strove to create a linguistically sound writing system, i.e., a system that would be optimally aligned with the structure of the language. However, even when such a linguistically ideal system is proposed, if its end-users do not find it acceptable, learnable, and usable, the proposal will be unsuccessful. As linguists, we naturally tend to insist on ranking linguistic soundness as the most important criterion in developing a writing system; however, we need to acknowledge what practice and the relevant literature conclude, i.e., that other factors often take precedence over a linguistically ideal system (Cahill 2014; Cahill and Karan 2008), such as educational (e.g., ease of learning), sociopolitical (e.g., wishing to adopt conventions from the writing system of another language), and also practical production factors (e.g., Unicode support, the availability of keyboards and fonts, etc.). Understanding the complexity of factors involved in developing a writing system means that, if the purpose is for the writing system to be used by the speech community (especially in cases of endangered languages, in order to aid and support language revitalisation efforts), the system should be put to the test (Karan 2013). This is yet another facet of how the collaboration principle could be applied: a writing system should not come solely in the top-down fashion of the "omniscient" linguist who offers the gift of writing to the community; rather, it should be the outcome of a collective endeavour of taking all factors into account and testing the system with the community. Therefore, we consulted a group of Cypriot Arabic speakers regarding various aspects of the writing system; some pertained to spelling issues that arose in the process of orthographically transcribing the oral corpus, while others had to do with certain theoretical considerations resulting from the linguistic analysis of Cypriot Arabic. We thus ended up with a writing system proposal comprising explicit orthographic rules and minor modifications of the alphabet. As already mentioned, we decided to formally test the system in order to investigate its acceptability, learnability, and usability. Through testing, we also wished to examine whether certain aspects of the proposed system would prove difficult or counterintuitive for the speakers, in which case we would either reconsider them or plan their teaching with extra care.

We, therefore, designed an experiment consisting of three parts (Armostis 2020): a pre-test, a crash course in the proposed orthography, and a post-test. The subjects would listen to audio-recorded Cypriot Arabic words through headphones and would indicate on a questionnaire how they would spell the words heard. Both the pre- and post-test consisted of two subparts: one in which the subjects would write down the word they heard in any way they wished, and another one in which the subjects had to select their preferred spelling out of options given. In the pre-test, the open-ended subpart was first, and the close-ended subpart was second; the reverse was true for the post-test. At the end of the orthography crash course, the participants were asked

to fill in a questionnaire that asked them to rate the proposed system for how logical, easy, acceptable, etc. they found it.

The results showed that participants found the proposed system quite logical, rather acceptable and that they would probably use it. Most of them agreed that it is easily learnt. Regarding the results of the experimental tasks, it was found that the participants either already followed our conventions or adopted them after the crash course. In the case of the voiced clusters [ɣd], [ðb], and [ɣb], the participants showed a preference for representing their underlying forms (/ɣt/, /ðp/, /ɣp/), even though the spelling proposed in the crash course was a surface one, i.e., ⟨ɣd⟩, ⟨δb⟩, and ⟨ɣb⟩; thus, we revised our proposal, spelling them as ⟨ɣt⟩, ⟨δp⟩, and ⟨ɣp⟩ (Armostis 2020).

After the analysis of the experimental data, we were in a better position to finalise the writing system and address some remaining issues, such as its technological support. The characters selected for the alphabet are all Unicode characters, something that facilitates digital production of texts in Cypriot Arabic. Moreover, we created digital keyboards for writing in Cypriot Arabic on computers. In accordance with RRI principles, future plans include the creation of smartphone keyboards, something that is a desideratum of the community, who started using the writing system in their online communication, especially on social media (Karyolemou and Armostis 2020).

6.2.3 Expanding: creation of teaching materials

After the creation of the writing system, an orthographic guide was written to facilitate its learning. Also, open seminars were organised for the members of the community in order for them to be trained in the writing system. The research programme was thus able to proceed with the next activities, which included the expansion of the documentation efforts and the creation of teaching materials.

To achieve its goals, the research team was expanded by including theoretical linguists who specialise on syntax and phonology in order to reach more in-depth descriptions of the grammar of the language through the analysis of data from the oral archive. Moreover, applied linguists who specialise on educational linguistics completed the team. The aim was the creation of digital teaching materials for the language to be taught to adults at the A1 level of the Common European Framework of Reference for Languages. The materials were tested in evening language classes offered by a member of the team who is a Cypriot Arabic speaker and a primary school teacher. Even though the community was pleased with this, they requested that teaching materials be produced in the form of a printed book initially for child learners and then for adults. Although the creation of a traditional textbook was not in the goals of the project, being responsive to the community's needs, the research

team set this as its priority, adhering to the virtues of responsible innovation. A graphic designer was added to the team for the graphical aspect of the textbook.

The textbook was digitally enhanced, as it contained QR codes to videos, audio recordings, and games. The recordings were made by hiring speakers of the language specifically for the production of such educational materials. The textbook also included pages to be cut out that contain various language games. All these features made the textbook remarkably modern in its approach and design, something that was enthusiastically welcomed by the community. Since its publication, the textbook has been used in the annual summer language camp organised by the community in Kormakitis with the support of the research team. In particular, each year, before the camp, native speakers are trained by the researchers of the team on various aspects of language pedagogy and also on the subject matter regarding, for example, the use of the writing system. Teaching materials and other language resources have been made available online through a community website (Kormakitis.net 2024). More recently, a more formal channel of dissemination of the research programme was created (University of Cyprus 2025), which provides online access to selected audiovisual materials from the oral archive as well as to teaching materials, the orthographic guide and other information on the project and the language. The website intends to gradually provide access to the oral archive in its entirety, after it has been processed, e.g., by removing sensitive information.

7 Discussion: the ethical aspects of the Cypriot Arabic research programme

What emerges from the presentation of the goals and actions of the specific research programme is the centrality of the collaboration principle. The fact that, from the outset of the programme, the team consisted of both academics and members of the language community working together from setting the agenda, to hiring researchers and producing deliverables, was a decisive factor in making an impact. This aspect of collaboration adheres to the inclusion and responsiveness virtue of responsible innovation (Stilgoe et al. 2013) and also to the democratic governance of intent and inclusive deliberation principles of RRI (Owen et al. 2012). Another equally important aspect of the collaboration principle was the fact that the team members brought in expertise and skills from different fields, namely, theoretical linguistics, language planning, grapholinguistics, educational linguistics, graphic design, and IT skills (e.g., in creating keyboards and digital resources for the textbook). Regarding the nature of teamwork, different "multiple-disciplinary" approaches (in Choi and Pak's 2006 terminology) were in evidence in the project. In some respects, the project is

multidisciplinary, as different sub-teams, e.g., phoneticians and syntacticians, were working independently with the common goal of documenting the language. In other respects, interdisciplinary approaches were used, for instance in the creation of the textbook, which required a coordinated synergy of the aforementioned specialisations within the project. Finally, the project also features transdisciplinary traits, such as sharing and expanding roles within the project: for example, members of the project who specialise in language pedagogy regularly provide training to members who are native speakers so that they can teach the language to others effectively, while the latter have provided language teaching to the linguists of the team, something that facilitates their theoretical analysis of the language.

Through the presentation of the research programme, some other ethical principles and virtues emerged as useful guidance, such as the principle of responsiveness regarding aligning the goals of the programme with the desiderata of the community. Some other ethical principles and virtues also came into focus on the sidelines of the programme's activities. One of them, *anticipation*, is a key virtue in being responsible in research and innovation (Stilgoe et al. 2013), which has to do with assessing early on the negative impacts of a project's activities. In working on the codification of the writing system, I personally did not anticipate a particular negative impact on certain speakers. In particular, the orthographic codification of Cypriot Arabic left speakers with a feeling of spelling inadequacy. This was because, not having had explicit orthographical rules accompanying the initial alphabet proposed by A. Borg (Armostis 2020), some speakers had been using the alphabet applying ad hoc and inconsistent conventions. With the final codification that we proposed and its dissemination to the community (through online resources, open presentations organised in collaboration with community stakeholders, open training seminars, as mentioned in Section 6.2.3, and through the teaching of the language in evening courses), however, some speakers realised that the way they had been spelling the language would thereafter be considered incorrect. This discouraged them from writing in their language, at least in formal settings, such as in their community's newspaper, which resulted in not using Cypriot Arabic in the "Maronite Press" for some years. I became aware of this after a training session on the established orthography: this was not done in the form of a complaint, but rather as a statement of excitement that they could thereafter write in accordance with the orthographic rules, and hence resume writing in the newspaper. Despite this being good news, I was personally devastated to hear about the reason for the gap in using the language in the newspaper, as my intention was to facilitate and promote writing in the language, not to discourage it, albeit inadvertently. My immediate reaction was to urge them never to give up writing in the language and reassured them that it does not really matter how they write in the language, so long as they do write in it. A

better way to anticipate such negative impact would be, apart from the open training sessions, to have more focused sessions with anyone who writes in Cypriot Arabic in formal or semi-formal contexts. As a team, we are open to proofreading texts to help align them with the proposed orthography, so long as the writers desire such editing. A future direction would be the creation of a freely available online spell checker, something that the (correctly spelled) corpus we have created would facilitate. This of course would require further (interdisciplinary) collaboration with computational linguists and/or computer programmers.

An issue that creates some degree of ethical tension pertains to the belief of many members of the community that they come from Lebanon and that Cypriot Arabic descends either from Lebanese Arabic or from Aramaic (the latter because it is considered to be the language Jesus Christ spoke). The strong religious bonds with the Maronites of Lebanon are the reason for the belief about the Lebanese origins of the community and its language; there is even a popular folk etymology of the name of Kormakitis from the Kur village in Lebanon. Of course, linguists know that the name "Kormakitis" does not derive from "Kur" and that Cypriot Arabic is more related to the Syro-Anatolian-Mesopotamian dialect continuum (Borg 1984, 2006) rather than to Lebanese Arabic; as for Aramaic, Cypriot Arabic has an Aramaic substratum, but it is an Arabic variety essentially (Borg 2006). As scientists, we have a responsibility to adhere to the macroethical principle of serving and disseminating scientific truth (or, more accurately, what the scientific consensus is); however, this principle clashes with the microethics of care, as the members of the community may feel uncomfortable or even threatened when an outsider questions the community's self-identification. Therefore, researchers should be considerate of how the members of the community feel about these issues. This does not mean that the community is not potentially open to reconsidering such myths. What actually happened was that some members of the community had a critical approach to such issues and were very interested in hearing what linguists think about the origin of the language (and the community). This has led to the spread of the scientific position of these matters from within the community, something that to a certain extent resolved the tension between the macro- and microethical decisions the researchers had to make. This is a good example of the fact that when a clash between two ethical principles exists, there may be ways to eventually not compromise either one.

A similar, albeit ethically more straightforward, situation regarding different views by the researchers and the speakers had to do with the syntactic order between an attributive adjective (or adjective phrase) and the noun it modifies. In the oral corpus, both the more traditionally Arabic construction *Noun–Adjective* and the more Greek-like construction *Adjective–Noun* were observed, including in the speech of older speakers (Armostis and Karyolemou 2023). In the creation of teaching

materials, numerous lexical gaps were identified, one of which was the lack of Cypriot Arabic greetings such as "good morning", "good night" etc. As members of the community wished to develop their own greetings in Cypriot Arabic (especially in view of the creation of teaching materials for the language), the native speakers of the team suggested constructions using the Adjective–Noun order, such as "kaes χχar" and "kayse layle", which translate as 'good morning' and 'good night' respectively. Even though these suggestions did not cause any reactions by the rest of the language community at first, when they came to the attention of a couple of speakers who had studied Standard Arabic, they were perceived as calques from Greek, hence wrong in not following Standard Arabic syntax. Those speakers discussed this issue with the research team claiming that the Adjective–Noun order is not correct in Cypriot Arabic, because it is not the standard word order in Standard Modern Arabic. Of course, the researchers knew that both constructions were in reality used by the community, regardless of the fact that one can be attributed to transfer from Greek. Nevertheless, since there were strong opinions about the correctness of such constructions, and despite the fact that the Greek-like constructions for greetings had been suggested by Cypriot Arabic speakers, the research team (which, as already mentioned, included members of the language community), after careful consideration, adopted the suggestion and changed the syntactic order of such phrases in the teaching materials. This change was the result of the open dialogue with the wider language community on the basis of the principles of collaboration and responsiveness.

Of the many other ethical aspects of the project, an important one is the long-term commitment of the programme members to raising awareness about the language, increasing its visibility, and enhancing the positive attitudes of the community towards it. This kind of image and prestige planning (Ager 2005) follows from the realisation of the responsibility that academics have in promoting the language. It is an unfortunate fact that the dominant Greek Cypriot community has little knowledge of who the Maronite Cypriots are and rarely are they even aware of the existence of Cypriot Arabic. The researchers of the programme who teach at universities in Cyprus purposefully opt to refer to Cypriot Arabic in their courses, which range from purely theoretical content to sociolinguistic and other applied subjects, in order to raise awareness. Beside the context of higher education, members of the research team, be they academics or Cypriot Arabic speakers, have been engaging in wider promotion of the language by means of public lectures, presence in the media, and other outreach activities.

In the same vein, some of the non-Maronite members of the research team, such as the author of the present study, attended for a number of years the aforementioned evening Cypriot Arabic classes (organised by the government and facilitated

by the research programme on Cypriot Arabic) and acquired some rudimentary knowledge of the language. Speaking the language is a way of bringing the researchers closer to the researched language community, something that helps the researchers acquire a deeper understanding of the language and its speakers. Moreover, when out-group individuals strive to learn the language, the language is perceived as worth learning by those members of the community that had not had the opportunity to acquire it as first language. This realisation arguably brings a change in attitudes towards learning the language; in other words, the prestige of the language is increased. I would make the claim that the impact is even greater when, at big community gatherings, non-Maronites, and especially academics, address the community in their speeches using Cypriot Arabic (even if for a couple of sentences). This is an experience that the speakers of the language had never had before: someone else speaking their language at formal occasions even with an accent. This makes it feel like any other "normal" language which is acquired as a second/foreign language by speakers of other languages. It also brings it to the present day as a modern language and not just a language stuck in the community's rural past – an attitude that had initiated the breakdown of intergenerational transmission of the language even before the scattering of the community after 1974.

As a final remark, I wish to give a personal perspective. Being a phonetician, I was initially mostly interested in linguistic form and not so much in meaning; the latter was of interest to me mainly for finding minimal pairs in order to establish which sounds are contrastive. Even when consulting with the Cypriot Arabic speakers in the team in order to design the orthographic experiment, I would be mostly interested in finding words with the desired patterns of speech sounds; beyond the meaning of the word, any additional piece of information that the speakers shared regarding the words, e.g., other related wordforms or the cultural significance of certain content words, was perceived by me as distraction from the task at hand. This was certainly not the most respectful way of accepting the insights of the native speaker collaborator; even if not overtly expressed, the dismissal of such pieces of information by me may have been observed in my body language and caused discomfort to my collaborator – I was in essence violating the ethics of care principles. When I later started learning the language, my perception and attitude drastically changed: lexical items started being associated with lived experiences and, gradually, I began appreciating the cultural significance of words. Essentially, learning the language transformed me from a scientist in my lab analysing the language as an object from a distance to an enthusiastic researcher who would be more in the field forming friendships and learning about the community out of pure interest and not just because of a specific research agenda.

8 Conclusions

The presentation of the research programme on Cypriot Arabic in this paper was not intended as a successful example of language revitalisation. Rather, through highlighting the challenges and decisions made in the programme, the aim was to showcase how setting and pursuing a language revitalisation research agenda is a dynamic process constantly (re)negotiated between the researcher team and the community at hand and how decisions made considering scientific priorities can be revised in light of RRI principles. As an alternative to the 'lone wolf linguist' monodisciplinary model that theoretical linguists often work with, one good practice is to adopt the "Community-Based Language Research" ethical framework (Czaykowska-Higgins 2009), in which research *on* a language is conducted *for*, *with*, and *by* the language community (Rice 2006). This framework is based on the principle of collaboration between researchers and members of the language community from setting the research agenda to running, analysing, and presenting the findings.

This principle extends to the collaboration among researchers coming from different scientific (sub)fields. To responsibly respond to requests of the language community involving more "applied" science, such as the creation of a writing system and of teaching materials, theoretical linguists should acknowledge the limits of their expertise. A good practice that emerges from the literature reviewed and is confirmed by the example of the research programme on Cypriot Arabic is precisely the creation of a multiple-disciplinary team (Choi and Pak 2006) for successfully addressing such requests. A synergy of different areas of expertise is needed, including experts in various theoretical subfields of linguistics (phonetics, phonology, morphology, syntax, semantics), in sociolinguistics, language planning and language policy, didactics and educational linguistics, grapholinguistics, language technology, graphic design, lexicology and lexicography, etc. Regarding the ethical side of forming such a team, the various "R"s of ethics are needed, such as the relational character of the research effort, responsiveness, responsibility, etc. (Kirkness and Barnhardt 1991; Tsosie et al. 2022; Wilson 2008). As for the teamwork side, various "C"s are needed, such as collaboration, coordination of efforts, communication, caring, chemistry, etc. (Choi and Pak 2007; Wiecha and Pollard 2004).

It is of course understandable that securing funding for such a multiple-disciplinary team and even finding experts in all those fields is not always possible (for some challenges, see Crippen and Robinson 2013). Recognising, though, what disciplines would be essential in meeting the needs of the community is still important in at least understanding the limitations that follow from not forming such a team. In any event, the general ethical frameworks and principles outlined above and exemplified through the presentation of the Cypriot Arabic research

programme can serve as useful guides for making one's own macroethical and microethical decisions. By transcending disciplinary limits in discussing ethics in research and society, this paper aimed to bring this crossdisciplinary view of ethical frameworks to the attention of theoretical linguists, who are invited to reassess their lowercase-l linguistic practices in the field and to re-imagine the field of uppercase-L Linguistics.

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