Rural Sociology 0(0), 2021, pp. 1–42
DOI: 10.1111/ruso.12400

Becoming a Young Farmer in the Digital Age—An Island Perspective*

İlkay Unay-Gailhard
Leibniz Institute of Agricultural Development in Transition Economies (IAMO)

Francisco Simões
Instituto Universitário de Lisbon (Iscte), Cis-Iscte, Avenida das Forças Armadas, 1649-026, Lisbon, Portugal

Abstract This study investigates the career construction paths of young farmers and aims to contribute to the literature on the "young farmer problem." Of particular relevance is this study's focus on the potential of islands as a new career landscape in the digital age. Young farmers' subjective experiences toward careers were analyzed based on narrative interviews, quantitative surveys and expert interviews from two EU islands: Crete and the Azores. Firstly, the study provides insights on the behavioral and cognitive dimensions of the career construction model by identifying followed career paths. Secondly, we turn our focus to the role of digital communications in career construction and, thirdly, the study examines the geographical dimension of the model. We find that involvement with farming entails complex career patterns that evolve into passion. Whether their involvement follows planned or unplanned paths, protean career attitudes, desire to experiment, and a strong sense of career self-concept play significant roles in shaping the career narratives. "Experience" and "management" dimensions of online communication drive the construction of careers as a part of a professional identity mechanism. Our results reveal that the "island effect" (maintaining a part-time farming culture) plays a role in cohesive singular and multiple career self-concepts.

*This publication is based upon work from COST Action CA18213 Rural NEET Youth Network, supported by COST (European Cooperation in Science and Technology), and the "Communication Process for Promoting Young Farmer" project funded by German Research Foundation (DFG). This research used data collected from EU islands in Greece (Crete) and Portugal (The Azores). For data collection in Crete, the German Research Foundation (DFG) covered mobility and research stay costs at the Mediterranean Agronomic Institute of Chania (CIHEAM, MAICh) (project number: 433488472; research stay dates: 01/08/2019–30/11/2019). The authors would like to thank Mattas Konstadinos, Giorgos Baourakhs, Eleni Stamataki, Thomai Nikoli, Marko Mrdjevonic, Nicolas Papadandonakis and all other contacted researchers at MAICh and government officials at the Directorate of Rural Development in Chania for their help in the realization of interviews on Crete. For data collection on The Azores, the EU COST Action project of the Rural NEET Youth Network covered mobility and research stay costs in the scope of a Short Term Scientific Mission (STSM) (project number: CA18213; research stay dates: 01/02/2020–20/02/2020). The authors would like to thank the collaborating researchers at the University Institute of Lisbon. This study was also funded by the Foundation for Science and Technology (FCT) in Portugal, under the CIS-Iscte PEST Grant number UIDB/03125/2020. Address correspondence to İlkay Unay-Gailhard, Leibniz Institute of Agricultural Development in Transition Economies (IAMO), Theodor Lieser Str.2, D-06120 Halle (Saale), Germany. Email: unaygailhard@iamo.de

[Corrections made on 23 July 2021, after first online publication: The co-author's affiliation has been corrected in this version.]

Introduction

Highlighted as the "young farmer problem" in recent literature (Eistrup et al. 2019), the lack of interest among youth to choose farming as a "career option" is a common phenomenon for developed economies. Undoubtedly, many young people do not consider farming as a "career option," even if they graduate with an agricultural degree (Unay-Gailhard et al. 2019) or have farming career-related opportunities that were gained via their family background (Cavicchioli et al. 2018).

However, the negative perceptions toward farming among youth should not be misinterpreted as a lack of interest toward agriculture systems. There is an increasing wave of civic engagement in agroecology and agri-food movements among younger generation that give support for more ecological and non-industrial agriculture than the previous generation (Bruce 2019; Fernandez et al. 2012). As put forward by the "networked individualism" model, youth of today live in an environment of increasing privatization of information where digital communication plays a role in shaping their behavior (Rainie and Wellman 2012). Although this digital "networked" nature of social behavior is an important topic within political studies that deal with generational renewal problems in civic engagement (Chaskin et al. 2018), there is still relatively little empirical knowledge about the digital "networked" nature of economic behavior (e.g., involvement in farming as a "career option").

We observe an increasing use of digital communication tools among government and civic society to support generational renewal in farms by establishing online rural youth forums; promote youth volunteerism in sustainable agriculture projects; use social media to disseminate information, recruit, and mobilize youth; and for agricultural education and extension.

While these tools give more youth direct access to new developments with fast, better tailored information, they may also change the career intentions of youth, and the way they identify themselves in their occupation. However, these tools are still relatively new, thus it remains unclear as to how they may contribute to generational renewal.

An Island Perspective on the "Young Farmer Problem"

Our research focuses on the interesting potential of islands as a new career landscape in the digital age. As discussed by island (Kelman and Baldacchino 2016) and comparative political studies (Veenendaal and Corbett 2015), small island geographies offer an important answer to large questions.

The potential of islands as case study regions within the process of career construction finds its rationale from findings documented within recent career theories and digital sociology studies. Recent career theories suggest that today's employment conditions are more and more volatile and that career paths can be turbulent (Cortellazzo et al. 2020). There is also a trend toward individuals combatting ambiguous career paths by following personal (e.g., self-fulfillment) rather than organizational values. This change in the nature of career intension—that is also supported by the impact of digital communication technologies on the working world- brings flexibility in the career landscape, and as an outcome we observe more and more in-migrants to rural regions with self-employed businesses (Herslund 2019; Martins and Partidário 2020). As studied within the context of back-to-the-land movements, individuals leave the urban to go to the rural with the aim of adopting an alternative lifestyle, and some even get involved with full-time or part-time farming careers (Góngora et al. 2019; Xie 2021).

The role of communication revolution in our life was previously pronounced as "the death of distance" (Cairncross 1997) highlighting the shifts of economic activities to remote areas. A study of Alinejad and Ponzanesi (2020) suggests that digital media supports connections that enable feelings of belonging that can be sustained across distance. Thus, the incorporation of digital media into career development in remote regions opens up an interesting field of investigation for islands where career development and out-migration decisions are strongly related. What we know based on island studies so far is that high levels of out-migration among youth from islands is mainly driven by better career opportunities on mainland (Alexander 2015; Baldacchino et al. 2015).

Focus of the Study: A Shrink Group within a Major Problem

Although several studies have led to mounting evidence on the dimensions of the "young farmer problem," this study specifically focuses on the transition into farming careers in the digital age. Under these circumstances, choosing farming as a "career option" is not highly valued and out-migration from islands to find better career opportunities on the mainland is the norm. In the EU, young farmers represent a small share of the labor force and they are getting scarcer (6.9 percent in 2005; 5.1 percent in 2016) (Eurostat 2018). Therefore, young farmers of today may be considered as *a minor group (in terms of their small share in the farming population) in a major problem* in the development of the EU farming system. Exploring why and how some youth choose farming as a "career option" inspires us to undertake a narrative approach with this shrinking group to find answers to the following questions:

Q1. What are the career construction paths followed by young farmers of EU islands?

Q2. To what extent does digital communication impact their career construction paths?

Q3. How have island identity particularities shaped their career constructions?

The main objective of the study is to identify the career construction paths of young farmers by listening to their career stories, which give their **subjective experience** with their careers. The study questions were answered via the use of the narratives of young farmers ($N = 23$) representing a range of typical farm types on two EU Islands: Crete in the Mediterranean Sea, and the Azores in the North Atlantic Ocean. Furthermore, analyses were based on a supportive data-set which includes quantitative surveys with young farmers ($N = 23$) and expert interviews ($N = 15$). The quantitative surveys aimed to clarify the internal structure of the narrative in terms of the use of digital communication tools, and their role in career construction. The objective of the expert interviews was to understand the islands' farm typology, and to identify the involvement trends into farmer career in each farm type.

Three stage analyses were employed to explore behavioral, cognitive (**Q1** and **Q2**), and geographical dimensions (**Q3**) of the career construction model. In the first stage, the study approached Q1 by considering Modestino et al.'s (2019) career construction model as a basis to gain insights on the chosen career paths. The second stage, Q2, explored an extension of the model by incorporating the use of digital communication tools. In this stage, narratives were analyzed to identify the impact of digital communication tools on each followed career path. In the third stage, Q3, the narratives were re-analyzed from an island studies perspective, and statements that highlight the role of island particularities were grouped according to island typology within four dimensions: identity, boundedness, connectedness, and metaphors (Baldacchino 2018; Royle 2014).

Literature Review

The framework of the study is based on overlapping in the literature, drawing on rural sociology studies, recent career theories, theories of farm entry and island studies.

The Changing Nature of Career Development Paths and Farm Entry

In the past, **career studies** used to conceptualize careers as a planned and predictable process through the life cycle of adults. During the course of a life cycle, individuals make plans as they age and begin their careers by completing their education and enter the workforce following their school period (e.g., doing internships, working in temporary positions). Recent empirical findings explored how career involvement may also be shaped by unplanned and unpredictable processes (Kindsiko and Baruch 2019; Modestino et al. 2019). Different from planned and predictable career orientation, unplanned and unpredictable paths encompass having no particular trajectory in mind (such as corresponding education or clear milestones), yet following rising opportunities during their career construction period (Modestino et al. 2019). Chance events such as financial crises, or unexpected personal events in one's life may significantly influence career development, either in a positive or a negative way (Kindsiko and Baruch 2019; Salamone and Slaney 1981). As highlighted by protean[1] career development studies, career choices increasingly directed by personal values suggest that individuals experience greater responsibility for their choices. This is due to giving priority to their subjective career success (Hall 1976), where by personal accomplishment and self-fulfillment is valued more than position and remunerations (Park and Rothwell 2009).

When it comes to farming, recent **farm entry studies** provide empirical findings on the changing nature of farm involvement, which can be summarized within three variants. First is the emerging "new entrance" group in agriculture, which often includes individuals from different educational and family backgrounds than traditional farmers (Pindado et al. 2018; Zagata and Sutherland 2015). Farms in this category show different forms, such as (i) urban farms that are mainly developed with a trigger of social goals rather than profit maximizing (Dieleman 2017); (ii) care farms based on community integration approaches including vulnerable farm workers (Hassink et al. 2016); (iii) farms as a start-up idea based on completely new, innovative products (Pindado et al. 2018); and (iv) alternative farms where the food movement has played a role in catalyzing the farm involvement (Bruce 2019). Second, in parallel to the studies on the unplanned and unpredictable processes of careers, a study by Dias and Rodrigues (2019) investigates the impact of unexpected events (economic crises) on farm entry and found that

[1]The term "protean" comes from Proteus, a Greek god who changes his shape at will. Protean career development refers to an individual's ability to reskill so as to meet both the demands of the changing job environment and their needs for self-fulfillment (Sullivan and Baruch 2009).

the motive (distinction between opportunity versus necessity) of involvement shows a change after a crisis period. The authors explain this change with growing interests toward "lifestyle-farming" or "sustainable farming" practices among individuals. Third, recent farm entry studies capture a "new farm identity" construction mechanism among farm successors (Chiswell and Lobley 2018). As discussed within the "new farmer identity" (Xie 2021) concept, which is mainly based on identity theory (Stryker 1994), individuals' perception toward their behavior cannot be separated from their self-conception, and these perceptions play an important role in understanding how cognitive dimensions shape attitudes toward careers. Rising literature on the development of a cognitive perspective of agri-entrepreneurship provides insights on where youth want to be in their farming careers (Fitz-Koch et al. 2017).

Digital Communication Tools and Involvement with Farming

Scholars across ***career development studies*** improve our understanding of the nature of contemporary careers (see Sullivan and Baruch 2009 for a review). More specifically, recent publications document the effects of the digital communication tools on career construction via career initiation, transition, and progression:

Career initiation. The use of digital communication tools plays a role in the career initiation of youths during the school period via increased interest in certain careers. The use of these tools helps to improve career-related skills and eases school to work transition through learning about career opportunities and having access to job search assistance (Baumann and Utz 2021). As reported by Ruparel et al. (2020) and Gerard (2012), social media platforms can create better opportunities for students to advance their career aspirations, and encourage students to think about their career paths in future jobs. Looking from a gender perspective, previous literature shows that low willingness of young women to become farmers is explained by cultural norms, because youth understand farming as a male profession (Shortall et al. 2020). However, as shown by Pinkard et al. (2017), digital communication tools may have positive effects on existing gendered disparities in professional identity construction. The authors show that the use of digital communication platforms plays a mediating role in increasing young women's interests toward career opportunities that generally show gender disparities (e.g., science, technology, engineering, and math). Farani et al. (2018) investigate the effect of digital networks on the entrepreneurial behavior of agriculture students. The authors results display that participation in networks (exchanging entrepreneurship knowledge via WhatsApp and/

or Viber networks) had both direct and indirect effects on entrepreneurial behavior by increasing entrepreneurial thinking and decisions.

Career transition (career mobility, career change). The effect of digital communication tools on career transition (transition across occupations, industries and countries) is rising as an interesting research field. In Schwab's study (2016), "the fourth industrial revolution" that refers to the advances in the digital age (via artificial intelligence (AI), robotics and other technologies) predicted individual ability to integrate knowledge from diverse sources, and reskill them for new career incentives. According to Sullivan and Al Ariss (2021), digital communication tools allow individuals to master new competencies that ease their career transitions into different work environments, as well as their moving into new occupations with these newly acquired skills.

Career progression. Research findings offer an understanding of the benefits of social networking platforms for career progression by highlighting the role of online communication platforms. These are associated with access to information, ideas, professional advice and awareness of contacts that effectively help in career tasks, work-related assistance and career sponsorship (Baumann and Utz 2021; Davis et al. 2020). With regard to the impact of social media on career success, Nikitkov and Sainty (2014), Utz (2016), and Baruffaldi et al. (2017) demonstrated the professional informational benefits. In sum, prior research provides initial evidence that social media use enables professional collaborations, and expands networking opportunities during career progress.

There have been no recent comprehensive findings by ***agrarian literature*** on the effect of digital communication tools on career intention and transition. Existing agrarian literature mainly provides insights on how digital communication tools generate support for career progression in terms of farming practices (Burton and Riley 2018; Mills et al. 2018) and agricultural extension (Kelly et al. 2017). A study by Burton and Riley (2018) emphasizes the important role played by online data in validating our understanding of traditional agro-ecological knowledge. Mills et al. (2018) investigate the use of social media for farmer-to-farmer knowledge sharing in relation to sustainable soil management practices, documenting the benefits for those who seek information. Elghannam et al. (2017) examine the farmer-consumer connection and the potential of online social networks to create short food supply chains. Polanin et al. (2017) investigate the impact of online farmer-farmer connection networks designed for women farmers. The authors' results show the ability of social media tools to bring additional progress to business plan development and knowledge sharing.

As concluded by Klerkx et al. (2020) in a recent review about digitalization in agriculture, the individual dynamics for which digital transformation has an impact needs further research covering both interdisciplinarity and transdisciplinary studies. This study answers this call by providing an empirical approach to the potential effect of digital communication tools in the career construction paths of young farmers.

Island Particularities

An island's immediate distinctiveness comes from its geographical state. Islands are typically delimited spaces surrounded by a maritime border (Baldacchino 2005; Hay 2006) with their size ranging from small to large, or even continental islands (such as Australia). Furthermore, islands interact with their natural sea borders as defined in terms of distance to the continent. While some islands are remote and peripheral, others are more accessible. The deep changes in air and sea transportation have profoundly redefined the flow of people, goods and services between islands and continental areas, with a collateral effect on the redefinition of islands' remoteness (Royle and Brinklow 2018).

International law and diplomatic grounds, such as the ones issued by the United Nations, acknowledge that an insular territory can only be considered an island if it has enough resources to sustain human settlement as well as an economic and viable social life (Royle and Brinklow 2018). Islanders tend to be more attached to their islands compared to how continental populations feel about their neighborhood or home city (Hernández et al. 2007). This sense of stronger connectedness or attachment is not limited to space. Islanders' isolation from the exterior often leads to stronger bonds within the community (Hay 2006; Royle and Brinklow 2018). This sense of belongingness and kinship drives islanders to voice a sense of permanence more often (Hay 2006), resulting from explicit actions to perpetuate their common heritage, shared places and common knowledge (Royle and Brinklow 2018). Unsurprisingly, islanders' dense and deeply interconnected social networks and appreciation for local culture reflects the dominance of traditional values over more liberal ones, of the collective over the individual and, consequently, of a more hierarchical social organization, often driven by family as the major social unit (Athanasou and Torrance 2002). Taking Western culture as a referent, such a cultural set will favor a masculinization of family external roles, including in economic activities.

This cultural framework is heavily dependent on an island's size and remoteness. In fact, the smaller and more remote an island is, the

stronger the levels of place and community attachment will be, as well as the dominance of collectivistic views, the hierarchical distances between levels of social organizations and the centrality of families in the social architecture. Royle and Brinklow (2018) classify this sense of islanders' unique identity as "islandness." As a sign of diversity opposed to the cultural massification of globalization, islandness suggests, mostly, a positive view of being an islander, a proud one, based on the singularity of space, the resilience to overcome hardship and natural disasters, and the uniqueness of local cultural values and manifestations.

Youth involvement in farming on small islands. The uplifting islandness narrative of geographical, cultural and identity distinctiveness does not necessarily facilitate youth involvement in a traditional activity such as agriculture, even on small and remote islands, as one might expect. In fact, contrasting effects in this respect might lead to at least four different pathways for inclusion in the sector. The first is youth whose families are already involved in farming (Stockdale and Ferguson 2020). These families have accumulated knowledge and resources, namely land, and can more easily pass it on to the next generation.

A second pathway seems to establish a compromise between the islandness narrative and openness to modern or outside values. As others have shown (e.g., Baldacchino 2005; Bonnici and Cassar 2017), due to a lack of opportunities and resources, island job markets encourage multifunctionalism, which is an ability to be engaged in multiple professional areas simultaneously or across their life-span. This might well be a solution for those youth from families with a farming background who also want or can dedicate themselves to professional activities in other economic sectors, such as services. In that sense, these youth build a bridge between family values and expectations and their own professional expectations, usually nurtured during the formal education process.

A third pathway is less aligned with the islandness narrative, as it's focused mostly on its geographical singularity. In this case, youth with or without a family background in agriculture might be involved in the sector with the intention to develop greener, more sustainable, and healthier food goods. Interestingly, while this perspective might be aligned with island representations as singular spaces that uphold environmental sustainability encompassed by the islandness narrative (Hay 2006), it might also include disagreement between conventional ways of producing food goods perpetuated by prior generations and alternative ones based on modern, digitalized, and less local forms of doing it. This pathway extensively covers all those cases in which youth are willing to return or migrate to rural areas to establish new eco-agriculture forms

or associated economic activities (ecotourism, for instance) (Martins and Partidário 2020). This trend has positive collateral effects on local communities, as it increases highly skilled critical masses and adds social and economic value to local resources (Martins and Partidário 2020; Schmitt-Wilson et al. 2020).

A fourth pathway includes those youth coming from outside the sector with no prior connection to agriculture. This is a less recurrent headway to youth agriculture involvement involving mostly low-qualified, vulnerable youths, such as those who are Neither in Employment, Nor in Education or Training (NEET). For many of these youth, farming is their last resort for a professional occupation. Their expectations are usually focused on activities of the tertiary sector that echo modern values. Moreover, they sometimes have to struggle with parental disapproval in respect to farming, as their parents represent one of the first generations on the island that found an alternative to agriculture as a means to develop a professional life (Simões and Brito do Rio 2020).

Data Collection

Two EU Islands as Case Study Regions

This study was conducted on Crete island, Greece (Chania, November 2019), and the Azorean island, Portugal (Terceira, February 2020). Both islands have vibrant agricultural activity that takes commercial and non-commercial forms and provides an appropriate structure for studying different farm types involved with both local and international production (wine and olive oil on Crete and meat production on the Azores). In terms of the "young farmer problem," at the national level, young farmers under 35 years of age are particularly scarce in Greece (3 percent) and Portugal (4 percent), whereas the EU average is 6 percent (European Commission, 2019; Eurostat 2018).

Data Sampling Approach for In-Depth Young Farmer Interviews

Active young farmers in the study regions were selected via direct contact through interviewed experts in the region. In some cases, the main researcher reached active young farmers (narrators/research participants) using snowball sampling via the network of interviewed farmers.

Expert interviews were conducted to understand the typical farm types in the region (each expert was asked to define these types in terms of size, specialization, and managerial ownership), and to identify the young farmer sample based on these typical farms (each expert was asked to help the main researcher to reach active young farmers

(age[2] < 45) linked to such farms). Having defined the typical farm types as an outcome of expert interviews, the data sampling approach for in-depth young farmer interviews was designed.

The young farmers proposed by interviewed experts were purposely sampled to cover the typical farms in the region. The share of narrators in each farm type was defined according to the most frequent young farmer situation on the island. The narrators in Chania were also purposely sampled to include small and medium size family farms with a mixture of products, such as olives, wine, honey, a microbrewery, vegetables, herbs, and fruit; and medium and large family farms with olives and greenhouses. The narrators in Terceira were sampled to include medium and large size family and intermediate farms (family farms that are supplemented by hired labor, but do not exceed 50 percent) that involved meat and milk production; and small and medium size family farms with pastured livestock, such as sheep and goats, greenhouses, horticulture, fruit, and honey production.

As suggested by study of Coopmans et al. (2019a), which applied a narrative approach in five EU member states, reaching out to early-career farmers is not an easy task. The demographic structure of the farming population mostly includes an aging group, with a very low percentage of young farmers. Due to this, a minimum 10 in-depth young farmer interviews were targeted; this being achieved with 11 from Crete and 12 from the Azores. In total, 23 interviews were conducted: 20 with face-to-face meetings and 2 via online meetings. To capture the trend of entering agriculture as a second career, 2 middle-aged farmers (age 48) were included in the sample (1 from Crete and 1 from the Azores).

The active young farmers (narrators/research participants) gathered within this study are not exhaustive in number. However, the study sample includes typical farm types in the region that enables understanding of the career development paths of young farmers in different farm types. Moreover, conducted expert interviews were purposely designed to increase this understanding in the region from different expert views.

Process of In-Depth Young Farmer Interviews

Once active young farmers were identified, meetings took place at the time and place proposed by the farmer. The in-depth interview meeting

[2]Based on the studies that deal with the "young farmer problem" (Coopmans et al. 2019b; Hamilton et al. 2015) we consider the active young farmer age to be 45. This is justified by the very low number of farmers younger than 35 years old due to higher educational achievements among younger farmers relative to past (Katchova and Ahearn 2016; Madureira et al. 2015), and a rising trend among individuals who are involved with farming as a second career (Bruce 2019).

consisted of three parts: in the first part, the main researcher stated the aim of the project and explained the purpose of the interview (5–10 minutes). The second part was the biographical narrative interview (45–60 minutes). Finally, the quantitative survey, with open-end questions, was carried out (20–30 minutes).

Data Collection and Used Data in the Analyses

Analyses were based on (i) **narrative interviews** and (ii) **quantitative surveys** with young farmers ($N = 23$); 11 from Crete and 12 from the Azores, and (iii) **expert interviews** ($N = 15$); 9 from Crete and 6 from the Azores. The narrative interviews were used as the main data for the study. The quantitative surveys and expert interviews were used as supportive data, and detailed in Annex 1.

The **narrative interviews** with the active young farmers aim to explore the way individuals experience their career and the factors that shaped their career intentions and orientation. As a basis for the biographical narrative approach, we utilized the study by Coopmans et al. (2019a) dealing with generational renewal problems of farms. We asked a single question that aimed to reveal the narrators' career stories, with the interviewer interrupting with additional short questions only if there was a need for clarification.

An ethical clearance certificate was obtained from the ethics committee of the project coordinator's institution, and signed consent forms were obtained from each voluntary adult that participated in the data collection. All interviews were conducted in the English language, and a translator was used in the case of non-English language speaking participants. The interviews were recorded with the participants' permission.

Methodology

A three-stage analysis was employed for the career construction model with behavioral, cognitive and geographical dimensions as summarized in Figure 1.

As shown in Figure 1, our career construction model (based on Modestino et al. 2019) consists of four aggregated career construction paths of (i) career intention; (ii) career orientation; (iii) career narrative construction; and (iv) career self-concept with 10 identified themes. These themes are (1) **planned**: intention expressed with planned tasks or with predictable phases; (2) **unplanned**: intention expressed with unplanned and unpredictable events; (3) **relational**: orientation expressed with the influence of others (parents, advisors); (4) **protean**: expression of career orientation by emphasizing the personal management ability of one's career. Career choices expressed within the context

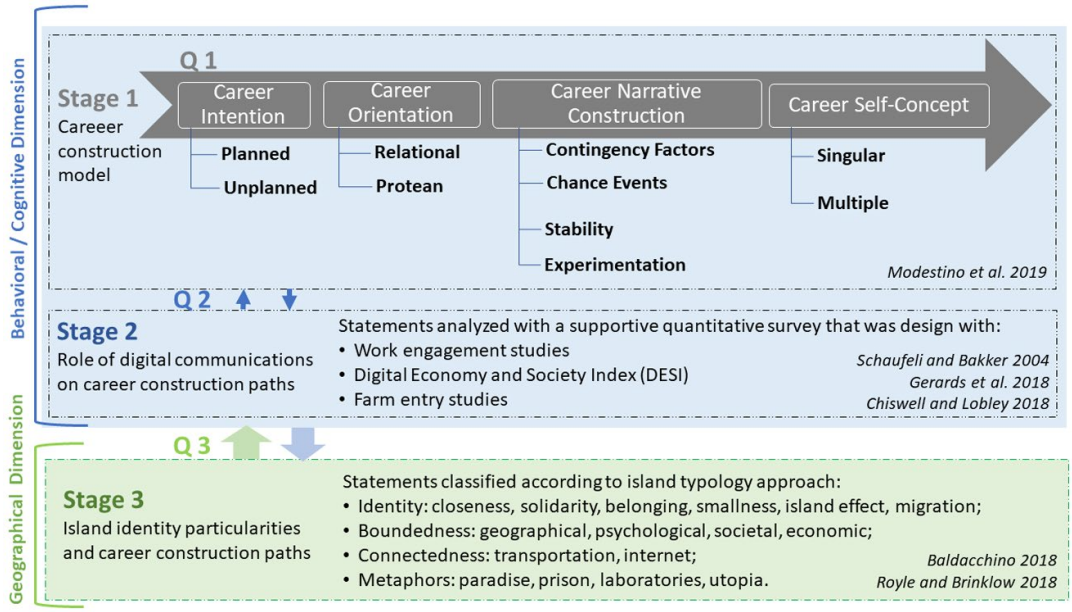

Figure 1. Methodological Stages of the Career Construction Model.

of self-fulfillment, awareness and sensitivity of certain topics; (5) **contingency factors**: career narrative expressed with the influence of factors related to personal abilities such as education, sex, socio-economic status indicators of parents' occupation, and/or awareness of skills (Salomone and Slaney 1981); (6) **chance events**: career narrative expressed with the impact of events that are unpredictable and happened accidentally or in an unplanned way such as economic crises, local disasters, unexpected personal events (Kindsiko and Baruch 2019); (7) **stability**: career identity expressed with desires for a predictable career by avoiding risks in the labor market; (8) **experimentation**: career identity expressed with desires of taking risks by (i) getting involved with a farming career or (ii) experimenting in different roles/works in a farming career; (9) **singular self-concept:** expression of strong sense of self in relation to a career; and (10) **multiple self-concept:** showing multiple career self-concepts with involvement in different careers or different work/roles in the farming career.

Methodological Stages of a Career Construction Model

Behavioral and cognitive dimensions of the model approached within the first and second stages of the analysis: narratives were transcribed and coded with a focus on how participants engage in making meaning out of their career (**Stage 1**), and the role played by digital communications (**Stage 2**). Our coding process was guided by the career construction model of Modestino et al. (2019), which is used to examine

the career narratives of young professionals. The three-step coding process included an initial read to identify the general themes. A second reading organized the narrators' statements based on the corresponding themes. A third reading phase developed a final data structure to more accurately reflect our data. This final reading covered the engagement of newly emerged codes to our data structure with the corresponding literature. For example, different from our base model, alternative and undecided career self-concepts were not found, but themes of experimentation and multiple self-concept show a dual internal trend due to the entrepreneurship specificities of the farming profession.

The geographical dimension of the model was explored in the third stage of the analysis: narratives were re-analyzed to identify the role of island identity particularities in career stories (**Stage 3**). The descriptive coding approach used to identify statements related to the role of island life on career construction. Selected statements were classified according to the themes used in previous island typology studies (Baldacchino 2018; Royle and Brinklow 2018). Our data structure provides four categories (1) **identity**: closeness, solidarity, belonging, island effect, migration; (2) **boundedness**: geographical, psychological, societal, economic; (3) **connectedness:** transportation, Internet; and (4) **metaphors**: paradise, prison, laboratories, utopia.

Profiles of the Research Participants (Narrators)[3]

The average age of responders was 35 (Crete = 37 and the Azores = 34) with a min. age of 27. In total 3 female and 20 male farmers were interviewed. 4 farmers had a secondary level education, 7 farmers had a university degree in farming-related disciplines such as agriculture, wine making, animal genetics or zoo animal technology, while the majority of the participants ($N = 12$) had a university level education in disciplines other than agriculture, such as economics, engineering (mechanical/forest), tourism, sociology, geography, electronics, and informatics.

All participants reported the existence of accessible farmland for their involvement in agriculture. In total 15 participants came from families with commercial (full/part-time), and non-commercial farms (own consumption or abandoned land) and 7 participants were from families who were at least two generations removed from farming.

Half of the participants reported having no off-farm income, all their income comes from farming (we consider these respondents full-time farmers). Another half reported having other income from other sectors, and they consider farming as a second career (we consider these

[3]Further details of research participants (narrators) profiles are given in Annex 2.

respondents part-time farmers). For some of the part-time farmers, their first careers had connections to farming (i.e., forest engineer, employee at an organic certificate association, farm adviser). For others, their first career did not have a connection to farming (i.e., employee in the navy, military air force, IT working in education, tourism, and culture sectors).

Among the participants, return "islanders" ($N = 12$) (natives born on the island who followed their education and/or career development off the island, but have returned to the island) were considered as a specific group to provide insights about the relationship between career construction, in-migration decisions to the island, and digital support.

Results

Table 1 gives the summary of results having "strong support," meaning these statements were experienced by many participants in our data.

The findings detailed in three subsections in order of the three research questions. Each subsection aims to provide specific statements from the narratives, and indicates the level of support for the statements; that is, "strong support," "moderate support," and "tentative support" as used in studies by Clair and Dufresne (2004), and Modestino et al. (2019).

Q1. What are the career construction paths followed by young farmers on the EU islands?

Career Intention: Planned/Unplanned. Our findings show that around half of the participants in our study have a planned involvement with farming, while the other half have unplanned intentions. The planned career path followers that pursue a corresponding education or have a clear milestone show two main trends: (1) **planned as full-time** and (2) **planned as part-time**.

We found strong support in the narratives for participants who planned their farming career paths as full-time to be involved with farming as a successor to maintain the family business and to innovate. This path of involvement had often been planned since childhood, and the corresponding agricultural degrees were pursued. Often, their decision to be a full-time farmer was because of their strong passion for agriculture, animals, and nature, as one female farmer in the Azores shared:

> I don't think I ever made a career decision. I was sure that I would work with the animals. I never saw myself doing anything else. My dream was always to work with the cows.

Participants who expressed their trajectory as planned as part-time mostly reasoned their involvement with the island identity particularities

Table 1. Results of the Career Construction Model for Young Farmers on Crete and the Azores.

Dimensions of the Model:		Behavioral/Cognitive		Geographic
Career Construction Paths		Q1 Followed Career Paths	Q2 Role of Digital Communication	Q3 Role of Island Particularities
Career Intention	**Planned**: Following a traditional path via corresponding education or planned actions	Planned as full-time or part-time	Accessing online education and advisements + Polishing career ideas with more concrete/innovative business plans	**(I) Island effect** a vivid part-time farming culture that is being maintained on the island positively influences the multiple cohesive career self-concept + Island particularities of "smallness," "belonging," and "economic boundedness" influence part-time farming career intentions
	Unplanned: Career intention increases as a result of a certain period	Job-to-job; School-to-work transition period		
Career Orientation	**Relational:** Career orientation expressed with influence of others	Role of parents; Role of Internet relations	Internet relations create awareness, sensibility about certain topics and provide inspiration from others	
	Protean: Career orientation expressed with factors that create sensitivity about certain topics	Food movements; Pro-environmental objectives; Back-to-the-land movement		
Career Narrative Construction	**Contingency Factors:** Statements that support personal abilities in career-related skills	Access to land; Awareness on entrepreneurship skills; Gender aspect	Improving hard & soft skills via online learning platforms, input providers' online consulting services, and applications on farm management + Professional identity construction and management via online tools for stability and experimentation	**(II)** "***island calling***" a way for islanders to justify and rationalize their return decisions + Responding to "*island calling*" with protean career competencies of adaptability and self-awareness

Dimensions of the Model:		Behavioral/Cognitive		Geographic
Career Construction Paths		Q1 Followed Career Paths	Q2 Role of Digital Communication	Q3 Role of Island Particularities
	Chance Events: Statements that support career involvement as a result of unexpected events	Unexpected economic situations or personal events		
	Experimentation: Statements that support the desire of taking career risks	Career choice experimentation; Career activity experimentation		
	Stability: Statements that support the desire of a stable career	*"Being a good human"* *"Being professional"*		
Career Self-Concept	**Singular:** statements that demonstrate a strong sense of cohesive career self-concept	*"Career calling"*	Opens the sense of self-recognition by others on a global level + Facilitate the construction of dual career and multiple tasks in the career	
	Multiple: statements that demonstrate a multiple cohesive career self-concept	Farming as a part-time career: Farming with multiple roles		

Notes: This Table provides summary results of our career construction model for young farmers in the two studied EU islands. The provided summary results have a strong level of support in our findings. The moderate and tentative support of our findings are provided in the manuscript.

of the well-maintained part-time farming culture on the island. This path is detailed under Q3 with the "island effect."

Our participants who followed an unplanned path expressed their involvement both as a part- and full-time occupation. The majority of the unplanned career path followers noted their childhood dreams were different than farming, and correspondingly they were not involved with agricultural education. Two farmers (on the Azores and Crete, respectively) expressed this as:

> Being a farmer is not a dream of any child…I left the family business and went to the USA for education and work… because my career would not be in farming.
>
> My dream job was to be a pilot.

Our study found that two periods over the life-course of the participants following an unplanned path play a role in increasing their farming intentions: (1) **job-to-job transition** and (2) the **school-to-work transition period**.

We found strong support among unplanned career path followers that the intention to farm took form during their first temporary or stable job in other sectors, resulting in a job-to-job transition. One farmer in Crete described his path as:

> Working in the office [in his job in Athens] was like working in enclosed caves. I wanted to be outside; I prefer to be in the open air and doing farming in combination with my profession (majored in engineering).

For some unplanned career path followers, farm involvement happened during the school-to-work transition period. One farmer in Crete described his involvement with a business plan that started to take form during his master's education in:

> When I tried to find some olive oil [brands] from Crete in the Netherlands, I couldn't find anything. [He started to ask:] Why is nobody bringing it here?

Career Orientation: Relational/Protean. For participants following both a planned and unplanned career path, we found an equally strong support for relational and protean orientations that shaped their career orientation.

Relational aspects of **role of parents** and **role of Internet relations** were found to have career-shaping impacts on our participants. The majority of planned full-time career path followers noted a role of parents, mainly

fathers and grandparents, as influential people, as one farmer in the Azores acknowledged the role of her father:

> My father had three girls. Because none of us would stay on the farm, people started telling my dad that he was very lucky with the business but very unlucky with the girls. So, he started to tell us, since we were little, that we were going to make a huge company together. We grew up hearing that und believing in that.

The role of Internet relations on the participants' career orientation was mostly expressed as a trigger to increase their knowledge and awareness of the profession (detailed in section Q2).

Protean orientations were strongly expressed in the context of experiencing greater responsibility for their career choices, which arose via exploration of inner values creating self-awareness and sensitivity on certain topics. Three main variants were distinguished as the motives for involvement with protean competencies of self-awareness and adaptability. First, for some respondents, protean orientation was expressed linked to **food movements**, with statements about "animal welfare activism," "culinary activism" and "vegan and vegetarian activism." Within this context, greater responsibility is felt for the production of fresh, local, and high-quality food that respects welfare standards. As one farmer in the Azores stated:

> I'm vegetarian, all four of us are vegetarian as well [children and wife]. That is one of the main reasons that I started doing farming…this is a matter of trust [in the market]! Personally, it is hard to trust animal farmers that kill pigs and at the same time produce vegetables for us.

Second, for some respondents, protean orientation was noted with **pro-environmental objectives**, such as "ecosystem services provision on the farm," "waste avoidance," "farm practices with energy conservation and recycling ideas." For these motives, the respondents showed environmental considerations as reasoning for being involved with farming. One farmer in the Azores who became involved with farming 8 months ago explained this as:

> I have plans to continue doing farming because I really like it… your vision about your land is always changing according to the information that you get. I want to grow an ecosystem here.

Third, for some respondents, protean orientation resulted in an involvement in the **back-to-the-land movement** as noted by their search for radical or subjective career success, and/or their wish to disconnect

from urban society and consumerism. Under this motive of involvement, participants expressed their self-directed goals and how they perceive farming as an opportunity for professional and personal advancement. One participant expressed this as:

> I was tired of having the urban life of having to buy everything you have in a supermarket. I was feeling a little bit weak that I always needed money to get something …

Career Narrative Construction: Contingency Factors/Chance Events. While most of our participants noted the role of contingency factors in their career narratives, we also had participants express their involvement with chance events. Both contingency and chance events had reinforced a cohesive career self-concept.

Examples of noted contingency factors are being aware of their agri-entrepreneurship skills, access to farmland, gender, being aware of online agricultural education and extension opportunities, island culture influences, and education. Our analysis revealed strong support for **access to farmland** (via heritage, borrowing from parents and/or working with parents) as a stepping stone in their farming involvement. However, participants expressed their interest and awareness in their **agri-entrepreneurship skills and abilities**, with personal qualities and efforts such as "to work in other sectors to save money to farm after their education"; "to modernize the farm via bank loans"; "to participate in competitions with a business plan"; "to be a candidate in global awards"; and "to design a specific management software, automated machines, and to hold their patent owner rights." All of the women participants noted a validating experience when asked directly. The **gender aspect** of being a female farmer was mostly expressed by comparison with the past: negative perception of male farmers, families, and society toward being a female farmer has overcome with their generation. One female animal farmer in the Azores shared her childhood memories as:

> That was a challenge for me! I just wanted to show the other people that I could do so much like boys. For me, to take a heavy bag of feed and to feed the animals, it was like telling: "I can also bring the feed to the animals. There is no difference between me and you!"

Participants noted several chance events of **unexpected economic situations**, such as financial crises and high levels of unemployment. Some crises brought a delay in their involvement plans, or suddenly prompted them into farming due to a lack of job opportunities, forcing them to

make a career decision. Two Cretan farmers shared their observations and inside talk as:

> During the 2009 crisis period, the farmers in the local farmers' market [in the city of Chania] tripled in number … the crisis closed many doors but opened a few doors for farming.
>
> 2012 was the peak of the crisis. It was the worst part of the crisis.…you had to be very focused on your target and very willing to do things. Be very aggressive. Be very sure and very confident about what you're going to do [career wise].

Noted **unexpected personal events,** such as being "informed about a land inheritance," "job opening news," "lost/quit their job," and "had a sudden request from parents to be involved with farming," led some respondents to be engaged with farming. Two farmers (on the Azores and Crete, respectively) who left their jobs in the USA and became involved with farming put this as:

> I had a very good job and when I went back to farm, I worked more hours but earned less money. So, lifestyle-wise it was a step back. But part of the agreement with my father was that we would do interesting things in a different way. Pull the farm into the 21st century. That was my drive.
>
> I ended up in farming by accident. And it was a pleasant surprise… Farming for sure wasn't the aspiration but it turned into that beautiful lifestyle

Career Narrative Construction: Experimentation/Stability. Results show that the majority of our respondents have a desire for stability and they mostly sought stability through career work/role experimentation. There are two main identity mechanisms that participants used to experiment: (1) **career choice experimentation** and (2) **career activity experimentation**.

We found strong support that respondents react to contingency factors or chance events with a desire to experiment with their career choices by getting involved with farming, as expressed by two participants (on the Azores and Crete, respectively):

> I needed to change just a little bit, not talking of having a really big business around that [farming], but just by myself, just trying to do something.
>
> I try to be open minded. I spent time and try to analyze it [involvement idea] in my head.

Our results reveal equally strong support that experimentation in career activities was incorporated in the narratives. As one participant in Crete who was engaged in experimentation with prestigious laboratories at Harvard and Boston Universities remarked:

> I didn't learn it [from school], I did a lot of experiments. It was a feeling, I don't believe in risks. In Greece we have a motto: Keep patience and multiply your efforts with it. I totally don't agree with it. I don't have two lives. So why not to go out and be active. If you love the land, something will appear. When I opened the small bottle plant in the basement of my parent's home, almost 90% of my family members laughed at me. That gave me power to go on.

Our analysis suggests that participants who have a desire for stability in farming careers give importance to the two key dynamics expressed as "***being a good human***" (by participants from the Azores) and "***being professional***" (by participants from Crete). These values are expressed as an informal understanding of the long-term career success that governs participants' behavior.

The importance of *"**being a good human**"* was noted in the idea of farming in a respectful way and, most of the time, was expressed in comparison to the mainland where there are more options to sell products rather than on a small island. To keep good personal relations, and respect the island's social norms were given as examples that help to find customers, secure the existing customers' network, and build trust in food quality.

The importance of *"**being professional**"* was expressed in comparison to the previous generation, who largely experienced a non-regular income. To invest time and money in marketing, modernization, quality of products were given as examples of *"**being professional**"* in a farming career that represents the non-traditional way to farm, and a unique way to avoid the risk of non-regular and non-secure income.

These two highly pronounced constructs among respondents from the two islands were considered important points signaling how participants experience an identity construction through other's eyes. Two farmers (on the Azores and Crete, respectively) briefly put the deep meaning of these constructs as:

> It is not possible to be a good human and to produce bad…. Here you need to be a good human with high tolerance. … These skills are important for farming…

> They are [old generation] working in a completely wrong way. Nobody is doing it [farming] professionally!

Career Self-Concepts: Singular/Multiple. Our results suggest strong support for the participants having formed a cohesive singular or multiple self-concept.

Regarding a singular-focused career, the theme to which respondents referred to in describing their passion for farming was a ***"career calling,"*** which was found to be an important driving force behind their involvement. We especially captured this career passion among respondents from a farming family background. Some expressed this ***"career calling"*** as existing since their childhood, which allowed a singular career self-concept to be experienced across their lifetime even if they were involved in different education choices or different career options other than farming. This was expressed in the narratives in diverse ways:

> Agriculture was calling me since my childhood.
>
> For me it's like agriculture was calling me. We are linked with a strong force.
>
> I always considered myself a farmer.

For some, a strong passion toward farming becomes a point of "obsessive passion" (defined as having a deleterious impact on a relationship with others by Vallerand et al. 2010). Our study found tentative support for an "obsessive passion" with narratives providing statements on their destructive relationship. For example, a vegan farmer expressed his problematic relationships with animal farmers, and a farmer expressed his uncivilized lifestyle in the non-populated mountain area during his two first years in his career.

With respect to a multiple-focused career, participants show a cohesive multiple self-concept even if they're involved in **farming as a part-time career**, and/or involved in **farming with multiple roles**. We found a strong level of support for having a *"career calling"* among both full and part-time farmers. Due to part-time farming career intension mostly expressed in the context of island identity particularities this is detailed under Q3.

Regarding multiple roles in their farming career, we found strong support for multiplicity in roles such as worker and manager; owner and worker; marketing strategist and owner. This could be because of two main factors: lack of skilled and unskilled labor and contribution potential of their education (e.g., engineering, designer, tourism) to different farm work.

Even for the two studied islands, labor problem shows different particularities (e.g., the importance of immigrant farm workers has been noted on Crete, while not on the Azores), this problem was expressed

with both validating and invalidating career self-concepts, such as: "creating a delay for diversifying my agro-tourism plans"; "pushing for more innovative ideas"; "educating themselves on data keeping methods" and "barriers to enlarging my business" as expressed by one farmer on Crete:

> I work alone because you can't find workers, so this is the biggest problem for me. So, I will continue to keep buying land till I can manage to work with what I have.

Q2. To what extent does digital communications impact the career construction paths of young farmers on the EU islands?

Digital Communications and Career Intentions: Planned/Unplanned. The major two discussed themes to which respondents referred to in describing the impact of digital communication on their career intentions was (1) the opportunity of accessing **online education and advisements** in the early stage of their career, and (2) the benefit of **polishing their career ideas** with more concrete and innovative business plans.

For unplanned career path followers, online communication plays a role in business understanding and training, which contributed to changing their intentions. Online connections can impact farming decisions, as a farmer on the Azores explained:

> 2014, I think, [was then involved with farming without a production type idea] while I was searching on the Internet, I found a blog called 'The Dark Side Of The Mushrooms'. I started to talk with him, which changed some of my ideas…

Digital Communications and Career Orientation: Relational/Protean. The Internet relationship between users who have met online, or who know each other only via the Internet, was reported as a driving force behind their career orientation in different ways. Internet relations help to **create awareness and sensibility about certain topics**, and **provide inspiration from others** that directly/indirectly influences career orientation. As one farmer put it:

> I saw some examples of farmers on the Internet with a huge greenhouse with vegetables. I think it helped and encouraged me to be a farmer. The strategy, the photos that they put up, the message … yes, I liked to see that. In my life it was a positive influence.

Another farmer expressed the importance of Internet relations on his career orientation by highlighting its role in raising awareness of the back-to-the-land movement:

> I observed from the Internet [mentioning some online network groups of organic family farmers] how the new rurals … coming from big cities … then … they bought a big piece of land and started to do some farming. And left their big jobs.

Digital Communications and Narrative Construction: Contingency Factors/ Chance Events. The potential contribution of digital communication in promoting contingency factors among youth was providing education by improving their **hard and soft skills** via online learning platforms, input providers' online consulting services, and online applications on farm management. These tools help them to place their personal values toward modern farming life-style, become aware of recent and niche advancements of the occupation, and find their personal qualities related to a farming career that is different than traditional norms. A youth farmer on the Azores explains why his path involves online education as:

> How can it be that university professors that train next generation farmers don't know anything about future farming? That was the impulse for me to go learning online. Today, new farmers won't get any valid information from their family nor the local community. But digital tools will be key for them to succeed.

Within chance events, some participants highlighted the importance of knowing about the potential to acquire hard/soft skills online, especially during periods of long-term unemployment and economic crises due to its nature of low cost and schedule flexibility.

Digital Communications and Narrative Construction: Experimentation/ Stability. The majority of our respondents use online communication to seek experimentation and stability in their careers and are strongly related to digital identity mechanisms that give further details on the "experience" and "management" dimensions of online communication.

The **professional identity construction** to seek stability or engage in experimentation within online tools was noted, with important online connections being farmer-input provider, farmer-consumer/citizen, farmer-farmer (mostly outside of the island). Their benefits were described as providing an ability "to overcome geographic isolation to access knowledge, costumers, and input providers" and "to diversify production by reaching innovative and niche ideas." A very weak connection (online and offline) between farmer-local public administration has

expressed for both islands. For some, online connections close that gap, as one respondent said:

> You don't need to go and ask for help [from local advisers]. You can go on YouTube and learn how to shear sheep, how to clip their hooves … you can learn from important universities that are specialized in these areas, produce sheep and goats, either from the UK, Texas or Missouri.

The **management of professional identity** within online tools was expressed within the context of seeking career stability. For some, digital identity management has a singular form where one can observe both the personal and professional self together. For others, online tools offer opportunities for several identities. One farmer on Crete described a need for two digital identity constructions:

> Things are very visual today. I think the best way to communicate with the people is social media. I'm working with two photographers; one for Facebook and one for Instagram. Visitors of these two platforms are not the same public.

Digital Communications and Career Self-Concepts: Singular/Multiple. Our results show that use of online communication **opens the sense of self-recognition by others on a global level** by validating or invalidating career self-concepts. For those selling online, the recognition of a global demand for their production from far away cultures creates encouragement to include their farming identity within the shared collective identity. As an example of an invalidating career self-concept, an animal farmer noted an invalidating self because of the rising online plant-based diets movements and discussions of the pollution produced by animal farmers, expressing the recognition of his profession by "others" as:

> [on the Internet] They see us [animal farmers] as a problem!

Most participants expressed the use of digital applications for work, and when asked to describe further, they reported using them for water irrigation, pruning, mapping, and humidity detection. Online tools **facilitate the construction of dual career and multiple tasks** in the career by reducing the work load and making locations flexible. Two part-time farmers (one on the Azores and one on Crete, respectively) expressed this as:

> Now I control my farm by cell phone. I can manage my farm from everywhere, I just need an Internet connection.

> From my phone, I can activate my irrigation system for half an hour and then the system starts. I can water my field from New York.

Q3. How have island identity particularities shaped the career constructions of young farmers?

Island effect: Part-time farming career as a multiple cohesive self-concept. As defined in the island studies with the **"island effect,"** some aspects of culture (e.g., economic, linguistic) are maintained longer than the mainland's, due to some island identity particularities, such as connectedness and boundedness. While half of our participants were involved with farming as a full-time occupation, another half farmed as a part-time career option. The narratives of the part-time farmers strongly support that the part-time farming culture is maintained on the study islands and stems from parents or grandparents of the participants. For some, their intended career path was **planned as part-time**:

> I always called myself a part-time farmer.
>
> When I was a child I didn't see my future in farming, but I thought of doing farming part-time, not full time.

Our analysis revealed strong support that island particularities of "**smallness,**" "**belonging**" and "**economic boundedness**" play a role in the career intentions of choosing farming as a second career option.

Regarding "**smallness,**" short rural-urban distances on small islands provide a unique opportunity to benefit from both urban and rural lifestyle advantages, as well as demonstrate long-term career commitment in two different careers that have urban and rural locations, as put here:

> Islands have advantages that may keep more young people on the farm. We are close to the city, all is close. I work at the farm, but I can easily go work and meet with friends in the nightclub.

The island particularity of "**belonging**" was expressed by several farmers as "*land is emotional.*" This strong attachment to the land serves to follow the behavior of previous generations and to further maintain the farming culture. One part-time farmer on the Azores who's involved with farming after having inherited land put this as:

> Here land is emotional. It's like having a luxury love, like to have an old car, a classic car.

The "**economic boundedness**" of islands was noted within the multifunctional nature of an island job market. We find a consensus among

part-time farmers that second career intentions aim to partly mitigate unemployment and decrease risks attached to a single occupation. One participant from the Azores, who is also a private company owner in the city, put it as:

> From all these areas I have a profit. If agriculture fails, I have another pillar, and if that fails, I have another one. It's not a probable thing, but it's possible.

Finally, an important observation is that participants involved with two careers show a **multiple cohesive self-concept** but not a flexible or undecided career self-concept. Even though they face negative circumstances such as long working hours in their working life, they express their involvement as having two full-time jobs. A part-time farmer on the Azores described this as:

> Regarding the weekly hours, I do farming, it's still a full-time job. I leave my job at 5pm and afterwards I go to farm and then I work until darkness depending on the season. Most of the days I go to farm before going to my regular job. I tell people I'm a full-time farmer and that my contract job is my hobby. Sounds like a joke, but it's the truth.

Answering "island calling" with a protean career development. One always yearned to leave, because the island rejects people, and to which one always yearns to return because the island beckons people.

Dias de Melo (1925-2008), from Dark Stones

To get insights on the potential of islands as a new career landscape in the digital age, we focus on the group of return "islanders," those who'd migrated from the island for education or career development and currently have returned to the island. We found strong support for islanders' return decisions expressed within island identity particularities of "belonging," "island culture" and "uniqueness," which we refer to as "***island calling***[4]" in this study. Respondents expressed this feeling as follows:

> We used to say that only islanders can understand, but you always want to come back to the island.

> I knew that I would come back. It is hard to explain that feeling, it has to do with our mentality and how we grow up here.

> It was always a dream to come back to the island!

[3]The way for islanders to justify and to rationalize their return decision call as "lure of islands" in the study of Baldacchino and Bonnici (2015).

Among return "islanders," there is widespread fact that both insider and outsider value predict their protean career development. Some responders answer "***island calling***" with protean career competencies of personal commitment and desire for individual achievements, as expressed by one farmer (PhD in forest engineering) on the Azores:

> We were very happy with our achievements (on the mainland), but as career achievements it's not very satisfactory. That's why we switched and thought about doing farming [on the island].

Some answer **"*island calling***" with a social achievement ideology, like one farmer (MSc in mechanical engineering) on Crete who made a radical decision to leave his job in Germany:

> That work was really great, but I believe that I wanted to do something for myself, for my villagers, for farms around here. I didn't want to see one more village remove farming forever.

As detailed under Q1, some answer "***island calling***" with protean career competencies of self-awareness that took its form via being involved with food movements, pro-environmental objectives, and the back-to-the-land movement.

What is notable among the group of return "islanders" is how islands represent a geography for a new beginning with validating subjective career success even if one comes across invalidating objective success from family members. This protean competence of adaptability was captured by memories from two farmers (on the Azores and Crete, respectively) who unexpectedly became farmers:

> At that time, it was a shock to them [friends] when I quit university [for organic farming] because we never discussed farming. I was a good student. Even to my family it was a shock. They didn't want me to quit university…
>
> My parents didn't want me to come here because I had a good job [in the USA]. But I said I'm going to go.

Discussion and Conclusion

The contribution of this study is to explore the career construction paths of young farmers through a sociological lens of island life in the digital age. First, we provide a deeper insight into the behavioral and cognitive dimensions of the career construction model by identifying the followed career paths of young farmers, and second, we turn our focus to the role of digital communications on those career paths. Lastly, this study examines the geographical dimensions of the career construction

model within the island context. Taken together, each stage of our analysis makes several contributions to different literature covering both theoretical and practical implications.

In the **first stage analysis**, the results of the career construction model highlight the importance of farming involvement within the unplanned career path. What is notable among unplanned career path followers is how farming turned into a "passion" during their school-to-work or job-to-job transition period, particularly for those who had an invalidating perspective toward farming during their childhood and adulthood. Even there is a rising interest in the career pathways of young farmers (Góngora et al. 2019) and alternative farm entry paths (Bruce 2019), there are limited studies that investigate the role of unplanned events in career construction in light of recent career theories. As our findings suggest, farming involvement within unplanned career paths is a result of several factors, such as chance events, contingency factors and the desire to experiment in their careers. The followed unplanned path by young farmers in our study adds a further layer to farm entry literature, especially to the agrarian studies reported the non-traditional pathways.

Our results on the unplanned nature of farm entry are consistent with the recent study on the typology of small farms in the EU (Guarín et al. 2020). Authors highlight "new" emerging farm type "businesses," where farm managers are mostly young and highly educated. The involvement motivation—of this group of highly educated young people—is expressed by lifestyle change or their perception of farming as a new business opportunity at a certain time in their life-course. Furthermore, our study sample, which includes highly educated (in terms of university education level) young farmers from different study fields, is in line with the findings of recent studies in the EU. Here, young farmers are reported as highly qualified, and "new entrance" into farming often includes individuals from different educational backgrounds rather than traditional farmers (Agroop 2018; Pindado et al. 2018).

Protean career development, the desire for career experimentation, and a strong sense of cohesive career self-concept plays a significant role in shaping the career narratives of young farmers whether their involvement followed planned or unplanned paths. It is highly evident that farmers as role models are an absent image in society (except for winemakers), which needs closer attention. In our study, even some planned full-time career path followers noted the influential role of parents (mainly fathers), our results noted the absence of "mother and farmer" role model. When asked directly, almost all of the participants expressed that they have no close friends from childhood and from their educational years who chose farming as a career option like they did. Looking

to entrepreneurship literature, this is an important point, signaling that the behavior of close networks/friends do not play an important role in being involved with farming, which is in line with the independent occupational nature of a farming career. In line with these findings, agri-entrepreneurship literature (Willock et al. 1999) highlighted this particularity of the farming profession that is strongly attached to personal values itself. As suggested by the findings of Schaufeli and Bakker (2004) passion toward the farming profession makes differences in the work engagement scale toward absorption, which is being totally and happily immersed in work.

The added value of our research to these studies is to show that involvement with farming is entailed in complex career patterns that turn into a passion, which is expressed as a "*career calling*." Even participants who were involved with different educational choices or career options other than farming heard this "calling" across a lifetime, and this explains how they engage in making meaning out of unpredictable and unplanned events. This study found a strong level of support for answering a "*career calling*" by establishing both singular (involvement as a full-time farmer) and multiple (involvement as a part-time farmer) cohesive career self-concepts.

At this point, our findings build the bridge between the career calling literature and the particularities of the farming profession. In the career calling studies, "career calling" describes two main assumptions (Richardson et al. 2017). First, having a "calling" that may be interpreted as having a "passion" for a particular career field. Second, having a strong sense of dedication and involvement in a specific field. Our findings capture the first assumption via narratives of participants coming from families where their parents or grandparents were engaged in farming, and who expressed having a "calling" since childhood. Regarding the second assumption, having a strong sense of involvement was observed particularly among participants whose career orientations were expressed with self-awareness on certain topics (detailed in this study within food movements, pro-environmental objectives, and back-to-the-land movement).

Our analysis further reveals that the desire for career choice experimentation, and career activity experimentation shape farming career narratives. This was noted with two types of tensions contributing to the family business literature (Grubbström et al. 2014; Joosse and Grubbström 2017). Due to its unique nature, there are two defined family business tensions, which are often intergenerational in character. The first is the tension between the need to maintain the business or innovate (Innovation Paradox, see De Massis et al. 2016). Our findings suggest strong support for the ability to maintain a farming career by

seeing experimentation as a way to grow both in their career and family business by creating a sister company or a new department in the family business. The second is the tension between the need to honor the previous generation's vision or adapt the vision of the successor (Oedipus Paradox, see Suddaby and Jaskiewicz 2020). Our findings captured this tension mainly among fathers with the aim of maintaining the farming career by seeing experimentation as a way to differentiate work/roles (e.g., invest in mechanized agriculture, hydroponic systems, art residency, agro-tourism on the farm) that totally differ from the previous generation's vision or traditional notion. As suggested by Glover and Reay (2015), we conclude that given tensions are mainly driven to protect the socioemotional wealth (that refers to the non-financial aspects of the family farm) in family firms that meet with the desire for construction of a new identity.

In the **second stage analysis**, this study provides insights into the role of digital communication tools in the construction of professional identities. As defined by new media studies (Madianou and Miller 2018), our results reveal two dimensions of online interpersonal communication: it is not only "experienced" but also "managed" as professional identity mechanism (both as a social construction and a cognitive structure).

Regarding the "experienced" dimension, the impact of digital communication tools on the professional self has grown in attention in career construction studies (Kasperiuniene and Zydziunaite 2019), as well as in the agricultural literature investigating the role of digitalization on farmer identity and skills (Carolan 2020; Rotz et al. 2019). Our results contribute to both topics from a youth career involvement perspective. More and more, we observe studies that highlight the fact that commonly used agrarian theories to explain farm entry with traditional planned and predictable pathways, whereby the family farm transfers their ownership to a successor, and gives a new identity to the family business, cannot fully address the changing nature of farm involvement (Bruce 2019). In our study, farm entry followed non-traditional paths, including unplanned, chance events and experimentation with interpersonal online communication playing a role in each path and influencing their behavioral and cognitive structure of professional identity. Through acquisition of hard/soft skills via online tools, inspiration from individual online networks, and self-recognition at a global level, our results demonstrate how users "experience" the online communication environment, and show a shift from the gathered information toward professional identity construction.

In terms of the "management" dimension of online interpersonal communication, as reviewed by Olanrewaju et al. (2020), openness and easy

connectivity of online networks overcome the difficulty that individuals experience in reaching out to a proper expert advice, which is especially important in the early stage of their entrepreneurship related careers. While our results are in-line with this finding, accessed information from the Internet was found questionable in terms of the source's relevance, trustworthiness, quality, and reliability. Often having access to a huge information create the same question expressed by reached active young farmers (research participants) as "*How to filter all gathered information?*" More precisely, users face challenges in managing globally collected agrarian knowledge from different online sources in a local farming context. This question opens discussions on the role of digital communication tools that promote a new media culture whereby the information access is no longer a passive process (unlike in the old media where information sources were in the hand of inflexible sources), but an interactive process that requires management. In our study, we observed professional consequences of choosing between different sources of new media sources, as well as provision of professional identities in different sources (e.g., present in divers social media platforms with different digital business strategies).

Furthermore, in line with Sullivan and Al Ariss (2021), our results contribute to the "career transition," "career change," and "career mobility" research where the use of digital communication technologies have enabled career transition of individuals, particularly into a farming career as an outcome of job-to-job transition.

In **the third stage of the analysis**, we extended our career construction model with a geographical dimension. The studies of Alexander and Hooley (2018) and Camilleri and Debono (2020) are two of few works that investigate the role of island particularities in the career development. Our results touch on that gap, showing that island particularities ("smallness," "belonging," and "economic boundedness") and the "island effect" (maintaining a part-time farming culture due to short distances between urban-rural regions) play an important role on emerged cohesive singular and multiple career self-concepts for those who have access to land. However, evidence from our analysis suggests that the contingency factor of inheriting farmland has a strong but not a straightforward link to involvement with farming. While the transmission of career adaptability across generations is shown in the literature (Garcia et al. 2019), the contribution of our study is to show how career transmission across generations on small islands takes place in the career narratives. In our case, most of the time it is not the role model that is expressed as a driving reason of their career intention, but more the relationship

between a desire for protean career development and belonging to the land that has been noted.

This study examined return "islanders" to provide insights on the new career landscape potential of islands in the digital age and, in turn, demonstrated that return "islanders" possess a particularly stronger protean career pattern when it comes to constructing their career in farming on the island, which is strongly linked to their return decision. This observed particularity is explained by returned "islanders" ability to transform the condition of having access to land on an island into an opportunity for protean career development by using their protean competencies of adaptability and self-awareness. The study of Bruce (2019) provides the typology of "returning farmers" who become farmers later in life bringing nonagricultural work experience and a unique insider-outsider perspective. The return "islanders" show similarities to the authors' typology of "returning farmers," where the mentioned insider perspective is linked to the protean competencies of adaptability and self-awareness. In our case, adaptability is observed with the ability to construct a career in a changing environment, and self-awareness is expressed with increased sensitivity on certain topics (food movements, pro-environmental objectives, and back-to-the-land movement) linked to their career choices and pursuing individual and/or social achievement ideologies. For the protean competencies of self-awareness, our findings show that digital networking plays a role in creating sensitivity about certain topics and receiving inspiration from others. In line with Davis et al (2020), these digital networking opportunities provide an important support to protean behavior.

Our study has some limitations that future research could address. First, our narrative interviews' sample size is limited in terms of the socio-demographic background of respondents. Relative to the number of non-migrating "islanders" and return "islanders," we reached few respondents in the groups of settlers and part-time islanders. To better conceptualize the differences among these groups, we encourage reaching further respondents represented in these groups. Second, this study does not aim to be comparative in nature by providing a comparison across two islands, but to offer observed identical career development paths on both islands. A further comparative study would be helpful to explore how individuals develop their career identities across different island geographies. Third, while our study aims to investigate the role of island particularities on career construction, the relationship between digitalization, return migration, and the islands' labor markets needs further insights. The impact of material infrastructure of bridges on islands' labor markets is well documented (Baldacchino 2007). As a follow up

question, the influence of digital communication infrastructure on the labor market of the islands would be worthwhile as further research for both youth return migration and rural labor market studies. Lastly, our narrative interviews combined with supportive quantitative survey data give some insights into the digital identity mechanism, especially how youth "experience" the online environment for farming professions. For further research, the "management" dimension of interpersonal online communication suggests an interesting research area that may contribute to the "new farmer identity" studies in the digital age.

References

Agroop. 2018. "Study: Young European Farmers are Few, Highly Qualified and Invest a Lot of Money." *Agroop*. Retrieved April 9, 2021 (https://medium.com/agroop/study-young-european-farmers-are-few-highly-qualified-and-invest-a-lot-of-money-ceb1b23ef02d).

Alexander, Rosie. 2015. "Career Decision Making in Island Communities: Applying the Concept of the Aquapelago to the Shetland and Orkney Islands." *Shima* 9(1):38–52.

Alexander, Rosie and Tristram Hooley. 2018. "The Places of Careers: The Role of Geography in Career Development." Pp. 119–30 in *New Perspectives on Career Counseling and Guidance in Europe*, edited by V. Cohen-Scali, J. Rossier, and L. Nota. Cham: Springer.

Alinejad, Donya and Sandra Ponzanesi. 2020. "Migrancy and Digital Mediations of Emotion." *International Journal of Cultural Studies* 23(5):621–38.

Athanasou, James A. and Janette Torrance. 2002. "Career Development in the Pacific Islands: Key Issues Influencing Educational and Vocational Achievement." *International Journal for Educational and Vocational Guidance* 2:7–20.

Baldacchino, Godfrey. 2005. "The Representation of Islands." *Geografiska Annaler. Series B. Human Geography* 87(4):247–98.

Baldacchino, Godfrey. (Ed.). 2007. *Bridging Islands: The Impact of "Fixed Links"*. Institute of Island Studies, Charlottetown, Canada: Acorn Press.

Baldacchino, Godfrey. 2018. *The Routledge International Handbook of Island Studies: A World of Islands*. Abingdon: Routledge.

Baldacchino, Godfrey and Joseph V. Bonnici. 2015. *Real Stories of Small Business Success, Insights from Five European Island regions. A Self-help Guide based on the NISSOS Project*. San Gwann, Malta: Publishers Entreprises Group (PEG) Ltd.

Baldacchino, Godfrey, Kelly Vodden, and Ryan Gibson. 2015. *Postscript: Place Peripheral: Place-Based Development in Rural, Island and Remote Regions*. St. John's, Newfoundland: ISER Books.

Baruffaldi, Stefano H., Giorgio Di Maio, and Paolo Landoni. 2017. "Determinants of PhD Holders' Use of Social Networking Sites: An Analysis Based on LinkedIn." *Research Policy* 46(4):740–50.

Baumann, Lee and Sonja Utz. 2021. "Professional Networking: Exploring Differences between Offline and Online Networking. Cyberpsychology." *Journal of Psychosocial Research on Cyberspace* 15(1):Article 2.

Bonnici, Christian and Vincent Cassar. 2017. "The Implications of Contextual Realities on Career Development: The Specific Case of University Research Managers and Administrators in Small Island States." *Journal of Career Development* 47(3):266–79.

Bruce, Analena B. 2019. "Farm Entry and Persistence: Three Pathways into Alternative Agriculture in Southern Ohio." *Journal of Rural Studies* 69:30–40.

Burton, Rob J. F. and Mark Riley. 2018. "Traditional Ecological Knowledge from the Internet? The Case of Hay Meadows in Europe." *Land Use Policy* 70:334–46.

Cairncross, Frances. 1997. *The Death of Distance: How Communication Revolution Will Change Our Lives*. London: Orion Publishing.

Camilleri, Thomas and Manwel Debono. 2020. "The Small Scale Syndrome: Career Perspectives of Maltese and Gozitan Secondary School Students." *Small States & Territories* 3(1):229–48.

Carolan, Michael. 2020. "Automated Agrifood Futures: Robotics, Labor and the Distributive Politics of Digital Agriculture." *The Journal of Peasant Studies* 47(1):184–207.

Cavicchioli, Daniele, Danilo Bertoni, and Roberto Pretolani. 2018. "Farm Succession at a Crossroads: The Interaction among Farm Characteristics, Labour Market Conditions, and Gender and Birth Order Effects." *Journal of Rural Studies* 61:73–83.

Chaskin, Robert J., Caroline McGregor, and Bernadine Brady. 2018. *Engaging Urban Youth: Community, Citizenship, and Democracy*. Galway: UNESCO Child and Family Research Centre, National University of Ireland Galway.

Chiswell, Hannah M. and Matt Lobley. 2018. ""It's Definitely a Good Time to be a Farmer": Understanding the Changing Dynamics of Successor Creation in Late Modern Society." *Rural Sociology* 83(3):630–53.

Clair, Judith A. and Ronald L. Dufresne. 2004. "Playing the Grim Reaper: How Employees Experience Carrying out a Downsizing." *Human Relations* 57(12):1597–625.

Cortellazzo, Laura, Sara Bonesso, Fabrizio Gerli, and Joan M. Batista-Foguet. 2020. "Protean Career Orientation: Behavioral Antecedents and Employability Outcomes." *Journal of Vocational Behavior* 116:103–343.

Coopmans, Isabeau, Joost Dessein, Jo Bitjtteier, Federico Antonioli, Franziska Appel, Rob Berry, Daniele Bertolozzi, Valentin-Mihai Bohateret, Ioan-Sebastian Bruma, Paul Courtney, Cecilia Casonato, Corina Dinulescu, Codrin Dinu-Vasiliu, Krisztina-Melinda Dobay, Elodie Dolleans, Elisabetta Fiorini, Violeta Florian, Camelia Gavrilescu, Piotr Gradziuk, Florian Heinrich, Anca Izvoranu, Sara Johansson, Konstantin Klein, Gordana Manevska-Tasevska, Daniela Matei, Miranda Meuwissen, Delphine Neumeister, Giulio Paolini, Mariya Peneva, Andrea Petitt, Elodie Pineau, Christine Pitson, Simone Severini, Thomas Slijper, Barbara Soriano, Lucian Tanasa, Camelia Toma, Monica Tudor, Julie Urquhart, Katarzyna Zawalinska, and Erwin Wauters. 2019b. *D3.2 Report on a Qualitative Analysis in 11 Case-Studies for Understanding the Process of Farm Demographic Change across EU-Farming Systems and its Influencing Factors*. Horizon 2020 SURE-Farm Project Public Deliverables D3.2, Project no. 727520. Retrieved July 11, 2021 (https://www.surefarmproject.eu/wordpress/wp-content/uploads/2019/07/D3.2-Report-on-a-a-qualitative-analysis-in-11-case-studies-for-understanding-the-process-of-farm-demographic-change-across-EU-farming-systems-and-its-influencing-factors.pdf).

Coopmans, Isabeau, Mariana Draganova, Sue Fowler, Gordana Manevska-Tasevska, Peter Midmore, Plamen Mishev, Pip Nicholas-Davis, Andrea Petitt, Charlotte Prové, and Saverio Senni. 2019a. *D2.2 Report on Analysis of Biographical Narratives Exploring Short- and Long-Term Adaptive Behaviour of Farmers Under Various Challenges*. Horizon 2020 SURE-Farm Project Public Deliverables D2.2, Project no. 727520. Retrieved July 11, 2021 (https://www.surefarmproject.eu/wordpress/wp-content/uploads/2019/05/SURE-Farm-D2.2-Report-on-analysis-of-biographical-narratives-report.pdf).

Davis, Joanna, Hans-Georg Wolff, Monica L. Forret, and Sherry E. Sullivan. 2020. "Networking via LinkedIn: An Examination of Usage and Career Benefits." *Journal of Vocational Behavior* 118:103396.

De Massis, Alfredo, Federico Frattini, Josip Kotlar, Antonio Messeni Petruzzelli, and Mike Wright. 2016. "Innovation through Tradition: Lessons from Innovative Family Businesses and Directions for Future Research." *Academy of Management Perspectives* 30(1):93–116.

Dias, Cláudia S. and Ricardo G. Rodrigues. 2019. "Agricultural Entrepreneurship and the Financial Crisis." *Global Business and Economics Review* 21:500–18.

Dieleman, Hans. 2017. "Urban Agriculture in Mexico City; Balancing between Ecological, Economic, Social and Symbolic Value." *Journal of Cleaner Production* 163:156–63.

European Commission. 2019. "Analytical Factsheet for Greece: Nine Objectives for a Future Common Agricultural Policy, Fact Sheet Version: September 2019." Retrieved

April 9, 2021 (https://ec.europa.eu/info/sites/info/files/food-farmingfisheries/by_country/documents/analytical_factsheet_el.pdf).
Eistrup, Mathias, Ana R. Sanches, José Muñoz-Rojas, and Teresa P. Correia. 2019. "A "Young Farmer Problem"? Opportunities and Constraints for Generational Renewal in Farm Management: An Example from Southern Europe." *Land* 8(4):1–13.
Elghannam, Ahmed, Miguel Escribano, and Francisco Mesias. 2017. "Can Social Networks Contribute to the Development of Short Supply Chains in the Spanish Agri-Food Sector." *New Medit* 16(1):36–42.
Eurostat. 2018. "Farmers and the Agricultural Labour Force—Statistics." Online Publications, Data Extracted in November 2018. Retrieved April 9, 2021 (https://ec.europa.eu/eurostat/statisticsexplained/).
Fernandez, Margarita, Katherine Goodall, Meryl Olson, and V. Ernesto Méndez. 2012. "Agroecology and Alternative Agri-Food Movements in the United States: Toward a Sustainable Agri-Food System." *Journal of Sustainable Agriculture* 37(1):115–26.
Fitz-Koch, Sarah, Mattias Nordqvist, Sara Carter, and Erik Hunter. 2017. "Entrepreneurship in the Agricultural Sector: A Literature Review and Future Research Opportunities." *Entrepreneurship Theory and Practice* 42(1):129–66.
Garcia, Patrick R. J. M., Simon L. D. Restubog, Anna C. Ocampo, Lu Wang, and Robert L. Tang. 2019. "Role Modeling as a Socialization Mechanism in the Transmission of Career Adaptability across Generations." *Journal of Vocational Behavior* 111:39–48.
Gerard, Joseph G. 2012. "Linking in with LinkedIn®: Three Exercises that Enhance Professional Social Networking and Career Building." *Journal of Management Education* 36(6):866–97.
Gerards, Ruud, Andries de Grip, and Claudia Baudewijns. 2018. "Do New Ways of Working Increase Work Engagement?" *Personnel Review* 47(2):517–34.
Glover, Jane L. and Trish Reay. 2015. "Sustaining the Family Business with Minimal Financial Rewards." *Family Business Review* 28(2):163–77.
Góngora, Ruben, Maria J. Milán, and Feliu López-i-Gelats. 2019. "Pathways of Incorporation of Young Farmers into Livestock Farming." *Land Use Policy* 85:183–94.
Grubbström, Ann, Susanne Stenbacka, and Sofie Joosse. 2014. "Balancing Family Traditions and Business: Gendered Strategies for Achieving Future Resilience among Agricultural Students." *Journal of Rural Studies* 35:152–61.
Guarín, Alejandro, María Rivera, Teresa Pinto-Correia, Nuno Guiomar, Sandra Šūmane, and Olga M. Moreno-Pérez. 2020. "A New Typology of Small Farms in Europe." *Global Food Security* 26:100389.
Hall, Douglas T. 1976. *Career in Organizations*. Glenview, IL: Scott, Foresman.
Hamilton, William, Gary Bosworth, and Eric Ruto. 2015. "Entrepreneurial Younger Farmers and the "Young Farmer Problem" in England." *Agriculture and Forestry* 61(4):61–69.
Hassink, Jan, Willem Hulsink, and John Grin. 2016. "Entrepreneurship in Agriculture and Healthcare: Different Entry Strategies of Care Farmers." *Journal of Rural Studies* 43:27–39.
Hay, Pete. 2006. "A Phenomenology of Islands." *Island Studies Journal* 1(1):19–42.
Hernández, Bernardo, Maria Carmen-Hidalgo, María Esther Salazar-Laplace, and Stephany Hess. 2007. "Place Attachment and Place Identity in Natives and Non-natives." *Journal of Environmental Psychology* 27(4):310–19.
Herslund, Lise. 2019. *The Creative Class Doing Business in the Countryside. The Routledge Companion to Rural Planning*, edited by Mark Scott, Nick Gallent, and Menelaos Gkartzios. Abingdon: Routledge.
Joosse, Sofie and Ann Grubbström. 2017. "Continuity in Farming—Not Just Family Business." *Journal of Rural Studies* 50:198–208.
Kasperiuniene, Judita and Vilma Zydziunaite. 2019. "A Systematic Literature Review on Professional Identity Construction in Social Media." *SAGE Open* 9(1):2158244019828847.

Katchova, Ani L. and Mary C. Ahearn. 2016. "Dynamics of Farmland Ownership and Leasing: Implications for Young and Beginning Farmers." *Applied Economic Perspectives and Policy* 38(2):334–50.

Kelly, Nick, John M. Bennett, and Ann Starasts. 2017. "Networked Learning for Agricultural Extension: A Framework for Analysis and Two Cases." *The Journal of Agricultural Education and Extension* 23(5):399–414.

Kelman, Ilan and Godfrey Baldacchino. 2016. *Island Studies: Critical Concepts in Geography: Volume IV: Venturing Beyond Nissology*. London: Routledge, Taylor & Francis Group.

Kindsiko, Eneli and Yehuda Baruch. 2019. "Careers of PhD Graduates: The Role of Chance Events and How to Manage Them." *Journal of Vocational Behavior* 112:122–40.

Klerkx, Laurens, Emma Jakku, and Pierre Labarthe. 2020. "A Review of Social Science on Digital Agriculture, Smart Farming and Agriculture 4.0: New Contributions and a Future Research Agenda." *NJAS-Wageningen Journal of Life Sciences* 90:100–315.

Madianou, Mirca and Daniel Miller. 2018. "Polymedia: Towards a New Theory of Digital Media in Interpersonal Communication." *Economic and Social Changes Journal* 143(1):334–56.

Madureira, Lívia, Timothy Koehnen, Miguel Pires, Dora Ferreira, Artur Cristóvão, and Alberto Baptista. 2015. "Advisory Services for Small Scale Farmers: How Effective are their Responses to Farmer Needs and Demands?" Final Synthesis Report for AKIS on the Ground: Focusing Knowledge Flow Systems (WP4) of the PRO AKIS. May 2015. (www.proakis.eu/publicationsandevents/pubs).

Martins, Rute and Maria Partidário. 2020. "Transitions in Rural Areas Motivated by Demands for Ecosystem Services: Empirical Results from Portugal." *Journal of Rural and Community Development* 15(1):136–55.

Mills, Jane, Matthew Reed, Kamilla Skaalsveen, and Julie Ingram. 2018. "The Use of Twitter for Knowledge Exchange on Sustainable Soil Management." *Soil Use and Management* 35(1):195–203.

Modestino, Alicia S., Keimei Sugiyama, and Jamie Ladge. 2019. "Careers in Construction: An Examination of the Career Narratives of Young Professionals and their Emerging Career Self-Concepts." *Journal of Vocational Behavior* 115:1–21.

Nikitkov, Alexei and Barbara Sainty. 2014. "The Role of Social Media in Influencing Career Success." *International Journal of Accounting & Information Management* 22(4):273–94.

Olanrewaju, Abdus-Samad T., Mohammad A. Hossain, Naomi Whiteside, and Paul Mercieca. 2020. "Social Media and Entrepreneurship Research: A Literature Review." *International Journal of Information Management* 50:90–110.

Park, Yongho and William J. Rothwell. 2009. "The Effects of Organizational Learning Climate, Career Enhancing and Work Orientation on the Protean Career." *Human Resource Development International* 12(4):387–405.

Pindado, Emilio, Mercedes Sánchez, Jos A.A.M. Verstegen, and Thomas Lans. 2018. "Searching for the Entrepreneurs among New Entrants in European Agriculture: The Role of Human and Social Capital." *Land Use Policy* 77:19–30.

Pinkard, Nichole, Sheena Erete, Caitlin K. Martin, and Maxine McKinney de Royston. 2017. "Digital Youth Divas: Exploring Narrative-Driven Curriculum to Spark Middle School Girls' Interest in Computational Activities." *Journal of the Learning Sciences* 26:477–516.

Polanin, Nicholas, Meredith Melendez, Jenny Carleo, Jennifer Matthews, Robin Brumfield, Barbara O'Neill, and Jeff Heckman. 2017. "Social Media: Cultivating Peer-to-Peer Farm Women Networks in New Jersey." *International Journal of Agricultural Science* 2:37–41.

Rainie, Lee and Barry Wellman. 2012. *Networked: The New Social Operating System*. Cambridge, MA: MIT Press.

Richardson, Julia, Uma Jogulu, and Ruth Rentschler. 2017. "Passion or People? Social Capital and Career Sustainability in Arts Management." *Personnel Review* 46(8):1835–51.

Rotz, Sarah, Evan Gravely, Ian Mosby, Emily Duncan, Elizabeth Finnis, Mervyn Horgan, Joseph LeBlanc, Ralph Martin, Hannah T. Neufeld, Andrew Nixon, Laxmi Pant,

Vivian Shalla, and Evan Fraser. 2019. "Automated Pastures and the Digital Divide: How Agricultural Technologies are Shaping Labour and Rural Communities." *Journal of Rural Studies* 68:112–22.

Royle, Stephen A. 2014. *Islands: Nature and Culture*. London: Reaktion Books.

Royle, Stephan A. and Laurie Brinklow. 2018. "Definitions and Typologies. Pp. 1–18 in *Routledge Interational Handbook of Island Studies*, edited by G. Baldacchino. London: Routledge.

Ruparel, Namita, Amandeep Dhir, Anushree Tandon, Puneet Kaur, and Jamid Ul Islam. 2020. "The Influence of Online Professional Social Media in Human Resource Management: A Systematic Literature Review." *Technology in Society* 63:101335.

Salomone, Paul R. and Robert B. Slaney. 1981. "The Influence of Chance and Contingency Factors on the Vocational Choice Process of Nonprofessional Workers." *Journal of Vocational Behavior* 19(1):25–35.

Schaufeli, Wilmar and Arnold Bakker. 2004. "Occupational Health Psychology Unit-Utrecht University." *Utrecht Work Engagement Scale* 1(1):4–5.

Schmitt-Wilson, Sarah, Madison R. Hanson, and J. Mitchell Vaterlaus. 2020. "Young, Educated, and Choosing Rural: An Exploration of the Factors Related to Young Adults Choosing to Move to Rural Communities." *Journal of Rural and Community Development* 14(4):94–113.

Schwab, Klaus. 2016. *The Fourth Industrial Revolution*. New York: World Economic Forum, Crown Business.

Shortall, Sally, Annie McKee, and Lee-Ann Sutherland. 2020. "The Performance of Occupational Closure: The Case of Agriculture and Gender." *Sociologia Ruralis* 60(1):40–57.

Simões, Francisco and Nazaré Brito do Rio. 2020. "How to Increase Rural NEETs Professional Involvement in Agriculture? The Roles of Youth Representations and Vocational Training Packages Improvement." *Journal of Rural Studies* 75:9–19.

Stockdale, Aileen and Sara Ferguson. 2020. "Planning to Stay in the Countryside: The Insider-Advantages of Young Adults from Farm Families." *Journal of Rural Studies* 78:364–71.

Stryker, Sheldon. 1994. "Identity Theory: Its Development, Research Base, and Prospects." *Studies in Symbolic Interaction* 16:9–20.

Suddaby, Roy and Peter Jaskiewicz. 2020. "Managing Traditions: A Critical Capability for Family Business Success." *Family Business Review* 33(3):234–43.

Sullivan, Sherry E. and Akram Al Ariss. 2021. "Making Sense of Different Perspectives on Career Transitions: A Review and Agenda for Future Research." *Human Resource Management Review* 31(1):100727.

Sullivan, Sherry E. and Yehuda Baruch. 2009. "Advances in Career Theory and Research: A Critical Review and Agenda for Future Exploration." *Journal of Management* 35:1542–71.

Sutherland, Lee-Ann. 2015. "EIP-Agri Focus Group. New Entrants into Farming: Lessons to Foster Innovation and Entrepreneurship." Discussion Paper. Retrieved July 11, 2021 (https://ec.europa.eu/eip/agriculture/en/publications/eip-agri-focus-group-new-entrants-final-report).

Unay-Gailhard, İlkay, Alfons Balmann, and Franziska Appel. 2018. *Dimensions of SURE-Farm Farm Typology for Farm Resilience Assessments*. Horizon 2020 SURE-Farm project public deliverables D1.3, Project no. 727520. Retrieved July 11, 2021 (https://www.surefarmproject.eu/wordpress/wp-content/uploads/2019/05/D1.3-Farm-Typology-RP1.pdf).

Unay-Gailhard, İlkay, Miroslava Bavorová, Zuzana Bednaříková, and Elena V. Ponkina. 2019. "I Don't Want to Work in Agriculture!" The Transition from Agricultural Education to the Labor Market in Rural Russia." *Rural Sociology* 84(2):315–49.

Utz, Sonja. 2016. "Is LinkedIn Making You More Successful? The Informational Benefits Derived from Public Social Media." *New Media & Society* 18(11):2685–702.

Vallerand, Robert J., Yvan Paquet, Frederick L. Philippe, and Julie Charest. 2010. "On the Role of Passion for Work in Burnout: A Process Model." *Journal of Personality* 78(1):289–312.

Veenendaal, Wouter P. and Jack Corbett. 2015. "Why Small States Offer Important Answers to Large Questions." *Comparative Political Studies* 48(4):527–49.

Willock, Joyce, Ian J. Deary, Murray M. McGregor, Alister Sutherland, Gareth Edwards-Jones, Oliver Morgan, Barry Dent, Robert Grieve, Gavin Gibson, and Elizabeth Austin. 1999. "Farmers' Attitudes, Objectives, Behaviors, and Personality Traits: The Edinburgh Study of Decision Making on Farms." *Journal of Vocational Behavior* 54(1):5–36.

Xie, Xiaoru. 2021. "New Farmer Identity: The Emergence of a Post-Productivist Agricultural Regime in China." *Sociologia Ruralis* 61(1):52–73.

Yaghoubi Farani, Ahmad, Saeid Karimi, Nasim Izadi, and Pouria Ataei. 2018. "Effect of Virtual Social Networks on Entrepreneurial Behaviour of Agriculture Students in Iran." *Applied Economics* 51(8):1–10.

Zagata, Lukas and Lee-Ann Sutherland. 2015. "Deconstructing the 'Young Farmer Problem in Europe': Towards a Research Agenda." *Journal of Rural Studies* 38:39–51.

ANNEX 1

Supportive Data-set Used in the Study

Quantitative surveys ($N = 23$) were administered with young farmers interviewed at the end of their narrative stories, and lasted 20–30 minutes. The study used open-ended questions in the quantitative survey to give a chance to explain a prior closed-ended question, and to check on errors in understanding.

Closed-ended questions in the quantitative survey. In addition to measuring the ways individuals experience their career via narratives, adding a more quantitative dimension allows us to more precisely understand the frequency of use of digital communication tools, and their role on work engagement. Our quantitative survey consisted of four parts: Part 1: **general information**: farm and farmer characteristics; Part 2: **work engagement**: to measure work engagement we used Ultrich's work engagement scale (Gerards et al. 2018; Schaufeli and Bakker 2004) whereby respondents were asked to rate the eight statements on a seven-point scale ranging from "never" to "always"; Part 3: **digital communication at work**: to measure the use of digital communication tools, we use fifteen statements on a five-point scale ranging from "not at all" to "to a very high degree." Based on the Digital Economy and Society Index (DESI), we developed four main items of connectivity, human capital, use of Internet, and integration with digital technology; and Part 4: **formal and informal networks**: to measure social interaction via online networks, seven statements were used to capture informal and formal network connections for work. Each item was rated on a five-point scale ranging from "not at all" to "to a very high degree." The questions were pre-tested with pilot surveys and adjusted based on the pre-test results. Our interest was in undertaking a quantitative analysis that gathered numerical data to determine statistical results to be considered for future research.

Open-ended questions in the quantitative survey. The study used open-ended questions during the quantitative survey that served as supportive qualitative data to narrative stories, and were particularly employed for the Q2 analyses. Open-ended questions help to design the internal structure of the narrative by timeline

(Part 1), to explore further the role of digital communication tools on work engagement (Part 2), and to name the used tools with examples (Part 3 and 4).
Expert interviews (N = 15) were administered via face to face meetings, and lasted 60 minutes. The overall aim of expert interviews was to analyze, and assess the involvement of youth in the farming profession by considering different farm types in the study region.
Data sampling approach for expert interviews. Experts in the study regions were selected via direct contacts of collaborated academic partners on the island. Experts were selected based on their capacity to classify typical farms in the region, as well as to identify further the farming career entry decisions by youth for each of the defined typical farm types. Different expert interviews with government and civic society actors (policy makers and officers from government agencies, non-profit organizations and agricultural networks) carried out.
The guide for expert interviews. An interview guide was produced by the main researcher, and mainly followed the farm typology approach (Unay-Gailhard et al. 2018) that included a guiding questionnaire that aimed to construct typical farms in the region. Experts were asked to specify the most important 3 to 10 farm types of the study region, according to the three structural farm dimensions: (1) farm size (e.g., small, medium, large); (2) farm specialization (e.g., mixed farms, greenhouse farms, milk farms); and (3) managerial ownership (e.g., family farm, intermediate farm family farms that were supplemented by hired labor, but which did not exceed 50%, and non-family farm where hired labor contributed to the majority of the workload). The interviewer made sure information was gathered on typical farm types; not just addressing the numbers of farms but also a farm type's share in production or land use. The two primary objectives of constructing the farm typologies with experts and discussing the farm entry decisions of youth into these farm types were (i) to consider farms where statistics on average farm characteristics were not representative of the majority of the farms in the studied region, and (ii) to take into consideration the heterogeneity in small farms that represented a spectrum of different farm types, such as business farms, 'lifestyle' farms, part-time farms, and were more likely to show different new entrant career construction paths.
Process of expert interviews. Once the expert was identified, meetings took place at their workplace. The expert interview meeting consisted of three parts: in the first part, the main researcher stated the aim of the project and explained the purpose of the interview (10 minutes). The second part contained open-ended questions that aimed to construct typical farm types in the case study region (30 minutes). The third part was devoted to discussing the involvement trends into the farming profession among youth, particularly aiming to capture the differences in each defined typical farm (20 minutes). Besides the information gathering dimension, expert interviews were intended as a physical access to active young farmers (narrators/research participants).

ANNEX 2
Details of Research Participants (Narrators) Profiles

Interviewed active young farmers' profiles in terms of three dimensions of farm typology. (1) **farm size:** by considering the island scale, participants identify the size of their farms as very small, small, medium, or large; (2) **farm specialization:** participants on both islands involved with organic and non-organic production. In Chania, participants were involved with mixed farms (olives, honey, wine), fruits, avocados, greenhouses and olive farms, as well as farms with olive oil, a microbrewery, and wine production. In Terceria, the participants were involved with farm types including milk (dairy specialists), other grazing livestock (special cattle, sheep and goats), permanent crops (fruits and citrus fruits), mixed farms (greenhouses, grazing livestock), greenhouses, and a hypotonic farm; (3) **managerial ownership**: participants self-identify themselves as a farmer with different responsibilities on a family farm, intermediate farm and a non-family farm.

We captured that the managerial ownership particularities on the islands change the administrative definition of young farmers. For some, even if they are the main person responsible for daily operations on a regular basis, their parents still hold all administrative legal rights of the farm. For several narratives, this issue can be explained by the aspect of island culture of the farmland being legally inherited after the death of the farmland owner. However, this managerial ownership particularity finds its place in the literature for mainland countries as well, particularly among small family farms (Sutherland 2015).

Interviewed active young farmers' profiles within different conceptualisations of island life. Based on the categories proposed by sociology of island life studies (Baldacchino 2018; Royle 2014) participants grouped as: (1) **non-migrating "islanders"** ($N = 9$): natives born on the island who followed their education and career paths on the island; (2) **return "islanders"** ($N = 12$): natives born on the island who followed their education and/or career development off the island, but that have returned back to the island; (3) **settlers** ($N = 1$): those coming "from away"; (4) **part-time islanders** ($N = 1$): those originally from the island but who are now second-home residents and temporary workers.

In the study (particularly for Q3), we focus on the sample of **return "islanders."** This is made to provide insights about the relationship between career construction, in-migration decisions to the island, and digital support. However, our study does not aim to be relational by linking provided categories.