Issue Mapping
FOR AN
Ageing Europe

LAYER CRITIQUE

NEO-CARTOGRAPHY

VOLUNTEERING

63+

TEA

63+

PENS

DIGITAL METHODS

CARE WORKERS

60+

ACTIVE AGEING

65+

NORDIC WALKING STICKS

GOOD PLACES TO GROW OLD

65+

65+

65+

65+

Richard Rogers
Natalia Sánchez-Querubín
Aleksandra Kil

65+

67+

SOLIDARITY BETWEEN GENERATIONS

ANTI-AGEING FOOD

Issue Mapping for an Ageing Europe

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1. Introduction: Issue mapping, ageing, and digital methods

1.1   Issue mapping

Stakeholders, students, issue professionals, workshop participants, practitioners, advocates, action researchers, activists, artists, and social entrepreneurs are often asked to make sense of the social issues that concern and affect the organizations and projects they are involved with. In doing so, they have to cope with information sources both aggregated and disaggregated, where opposing claims clash and where structured narratives are unavailable, or are only now being written. At the same time, the issues must be analysed, for they are urgent and palpable. The outcomes of the projects also need to be communicated to the various publics and audiences of their work. These issue analysts employ a wide range of strategies and techniques to aid in making sense of the issues, and communicating them, and as such they undertake, in one form or another, what we call 'issue mapping'.

In a small workshop setting, the analysts may draw dots and lines on a whiteboard, and annotate them with sticky notes and multicoloured markers, in order to represent actors, connections, arguments and positions. At the sign-in table, at a barcamp, hundreds of activists write down on a large sheet of paper the URLs of their organizations or projects, forming a long list that is typed into the computer for the mapping to proceed. Analysts will harvest the links between the websites, and put up a large map for the participants to pore over and annotate. The attendees will ask questions about the method behind the mapping, and also how their nodes can become larger and less peripheral. Indeed, issue mappers may use hand tools and software to capture and process network and issue data. They output visualizations that show alignments, reveal patterns and display affinities. They are just as likely to display disalignments and opposition.

Issue mapping takes as its object of study current affairs and offers a series of techniques to describe, deploy, and visualize the actors, objects, and substance of a social issue. It is concerned with the social and unstable life of the *matters on which we do not agree* and with how the actors involved are connected to each other, or otherwise associated with each other. Ultimately, the aim is to produce mappings that will aid in identifying and tracing the associations between actors involved with an issue, and to

render them both in narrative and visual form so that they are meaningful to one's fellow issue analysts and their audiences.

This is a practical guide to contemporary issue mapping for issue analysts, increasingly using online data and software, but also coloured markers and sticky notes. It is intended to be a companion for those who already include or wish to include issue mapping in their work. We would like to introduce the techniques and tools together with mapping theory. We believe that only half of the problem lies in how to retrieve and process digital information, and the presence of tools and their manuals do not necessarily guarantee a good mapping. Instead, we believe that it is necessary to provide researchers with conceptual frameworks that will assist them to imagine what could be achieved with the tools and data, and especially what kind of questions they can answer.

Issue Mapping for an Ageing Europe, as the title suggests, documents the practice of mapping the social issue of ageing in Europe, using online tools and data. We chose the case study of ageing, among other reasons, for it is a contemporary issue with increasing activity around it. Ageing as an issue refers to the instability currently arising from the idea of a society in which for the first time the old outnumber the young. What is at stake? According to whom? What is to be done? How to map and communicate the substance and the conflicting expressions of the issue, so that action is both captured as well as taken?

In order to proceed, we have selected three leading authors who have shaped the practice of issue mapping, namely, Bruno Latour and his theories about social cartography, Ulrich Beck and his writings about risk cartography, and, most recently, Jeremy Crampton and his work on critical cartography and neo-cartography, the latter of which refers to the work by those outside the profession of cartography using online mapping tools and applications. Taking ageing as a case study, we apply the authors' concepts and, crucially, operationalize them into mapping techniques with digital methods and tools. Each of the chapters is dedicated to the application of one author's cartography or mapping in a practical way: How to map ageing as a controversy? How to map ageing as a risk and how to map ageing from the perspective of critical neo-cartography, employing the new online mapping tools, such as Google Maps? The chapters also build iteratively upon each other, for Latour's social cartography is taken up in Beck's risk cartography, and Crampton's is compatible with Latour's and especially Beck's. Our project is thus a layered description, containing multiple social, risk and critical mappings of the issue of ageing in Europe (see Figure 1). It also inquires into (and seeks to demonstrate) the productiveness of bringing
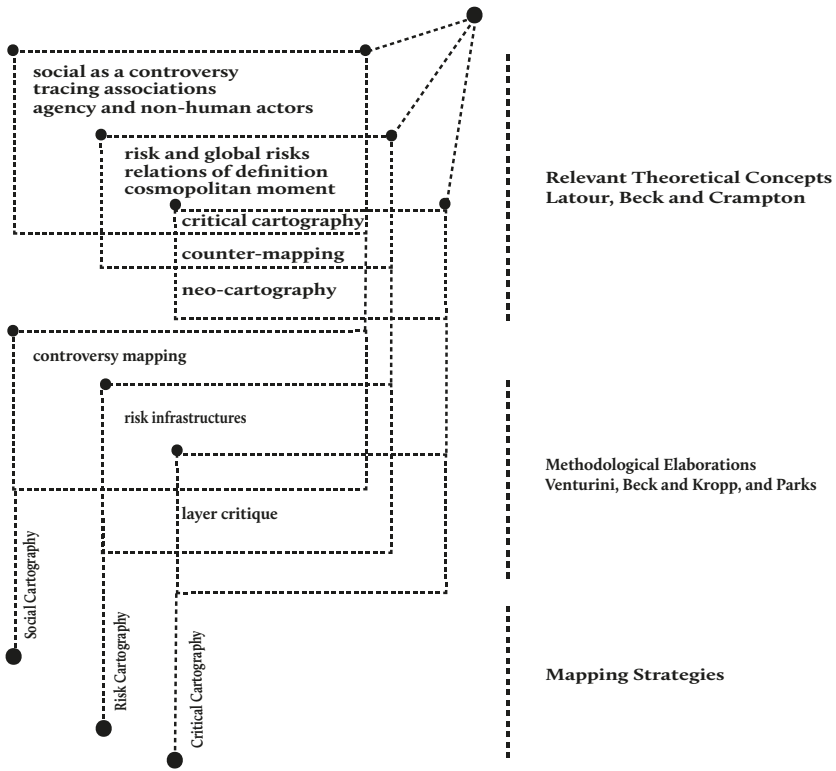
Fig. 1: *Methodological elaboration of cartography theories for issue mapping.* The graphic displays a three-layered methodological development. The first layer contains concepts extracted from the works of Latour, Beck, and Crampton. The second layer contains methodological elaborations on them by Venturini, Beck/Kropp, and Parks. The third layer contains the resulting mapping strategies, namely social cartography, risk cartography, and critical cartography.

together operationalizations of social, risk and critical cartographies in a single issue-mapping practice.

In discussing the famous Maya Atlas project of the 1990s, a mapping that aided indigenous peoples make land claims to the Belize state, Crampton quotes from a recent reflection on the project: '[Maps] are [...] practices that weave together power and social relations. The effective indigenous "counter-map", then, is one that unsettles the very categories that constitute the intelligibility of modern power relations' (Crampton, 2010, p. 125). To Crampton (like Latour), mapping is a practice of tracing relations and redoing categories. Like for Beck a 'good' issue mapping also displays the points of view of the down-streamers and victim states. One of our cases concerns care worker migration to places with ageing people and fewer

trained staff or local family members to look after them. As we discuss in our mapping, the question is whether those ageing places recognize that the source nations also need care workers themselves.

1.2   The ageing issue and its place in Europe

Ageing is currently a subject of some concern, and is under analysis by issue professionals in Europe. How to anticipate the interlocking issues and problems associated with increased life expectancy? When are demographic shifts challenging which sectors of society? When (and where) are we able distribute the responsibilities of caring for populations living longer, and take advantage of longevity? In the past few years different parties have prioritized the issue of ageing in their agendas, each emphasizing what they consider as urgent. In the event, the European Union designated 2012 as the European Year for Active Ageing and Solidarity between Generations with the overall objective 'to reverse the idea that older persons are a burden on society. As Europeans live longer and healthier lives, governments are looking for ways to involve older persons more in society and to keep them active; these changes could result in economic benefits for society as a whole' (Eurostat, 2011, p. 9). Putting the issue on the calendar is a means to take it up in earnest and to mobilize actors to organize events, and generate attention to them and the issue more generally. Somewhat differently, social entrepreneurial organizations such as the Young Foundation in the United Kingdom, partnering with such issue-focused, non-governmental organizations as Age U.K., are putting forward means to prevent or future-proof (as it is called) a social crisis associated with the care of an older population. The numbers they put forward in the debate express the urgency, and in doing so also show how issues become such through formatting them with pithy statistics. We term such formatting of issues to grant them urgency, 'issuefication'. As a case in point, according to the Young Foundation life expectancy in the U.K. 'is increasing at more than five hours a day, every day' (Young Foundation, 2012, p. 2). There is also action to be taken. The Foundation encourages new equilibria between sick and healthy, and longer participation of the elderly in their communities.

Both the expressions as well as consequences of this new demographic (im)balance are subjects of public debate. When are people considered to be old and according to which sectors? How will society cope with greater numbers living with chronic illness at the same time that the work force is dwindling? How should individual and state responsibilities be weighed?

Will privileged nations drain care workers from less privileged nations? How will ageing motivate migration across countries? Which places will become (good) ageing places?

The heterogeneity of the questions associated with ageing makes it a special kind of distributed issue, both in the sense that it crosses a number of broad sectors but also in that it moves across cultural and geographical borders. It mobilizes large sets of resources and people across the globe. In other words, what it 'means to grow old' is tied intensely to local, international and transnational agendas, to employment markets as well as policymaking: ageing is defined by place at the same time that it is producing new geographies. A mapping of ageing is pertinent and potentially useful in the hands of the decision-makers and all others involved.

The contents of this book capture and report on good practices of issue mapping (a phrase we prefer over 'best practices'). In mapping ageing, we also aim to contribute to the stabilization of the ageing debate, as any mapping does, however fleetingly. Most of all, we also would like to share
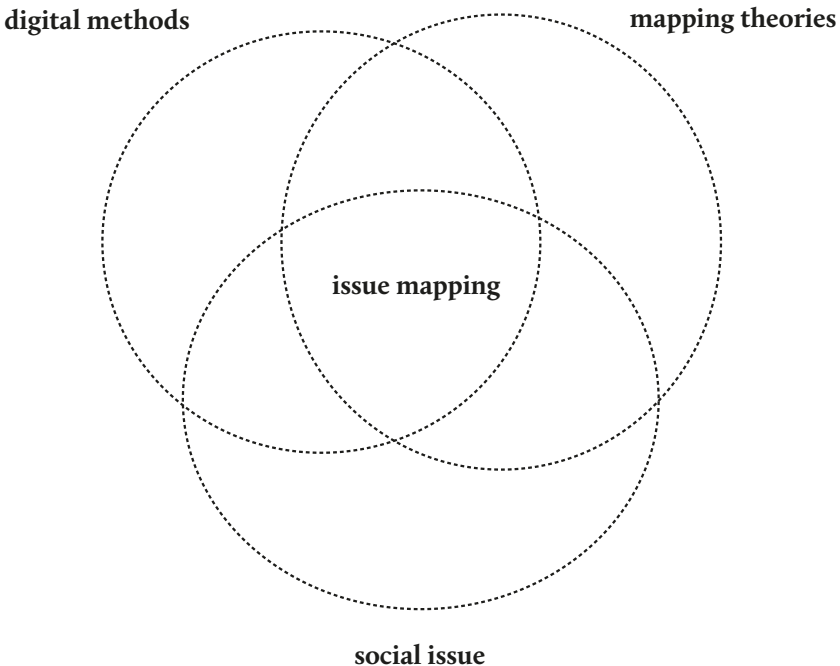
Fig. 2: *Simplified schema of issue mapping*. Mapping theories, digital methods (with tools), and the social issue together comprise the issue mapping.

our operationalizations of mapping theory (the cartographies), the digital methodologies and the nitty-gritty practices of how to map. While it is not meant to be generic or universalizing in the sense of a toolbox that may be carried to the next social issue, *whatever* it is, it does offer some recipes for how to map (as well as literal recipes for what to eat, the anti-ageing menus, treated in the conclusion).

In the following we would like to introduce briefly a selection of mapping theories put forward by Bruno Latour, Ulrich Beck and Jeremy Crampton and the concepts that we consider relevant for a practical approach to issue mapping. The authors serve as different triggers, organizers and catalysts, showing how one issue creates different assemblages of people, ideas and things depending on the moments the questions are posed. Figure 2 is a simple representation of the issue, theory, and method, where together the mapping is formed. It is an ideal representation, yet it serves as a reminder that neither the theory, nor the method, nor the tool alone or two in tandem comprise good mapping practice.

1.3   Mapping theory: Social cartography, risk cartography, and critical neo-cartography

The first section and layer of our project is dedicated to a mapping of ageing as a social issue and controversy. To guide us in this process we employ some of the key concepts developed by French sociologist of science, anthropologist and philosopher Bruno Latour. From the large body of work produced by Latour we focus on his guide to mapping, *Reassembling the Social: An Introduction to Actor-Network-Theory* (2005). This book is meant to be a travel companion for social researchers, and especially for the sociologist of associations and the practitioner of actor-network theory, bodies of thought developed by Latour, with contributions from Michiel Callon, John Law, Annemarie Mol, Noortje Marres and others. In fact, Latour writes that his book responds squarely to a demand for a more practical and straightforward explanation of the bases of his theories and of what could constitute the work of deploying the state of affairs of an issue. For this reason to us *Reassembling the Social* is an extremely useful and practical text that echoes throughout the entirety of this book. Three sets of key concepts can be considered to be especially relevant to the practice of issue mapping: namely, Latour's redefinition of the social as not structure but movement, the redefinition of the role of the social researcher as tracing associations created by the actions of the actors involved in a controversy, and thirdly,

Latour's widening inclusion of non-human actors as equally relevant (or at least not to be forgotten) in a given controversy.

From the outset Latour differentiates between two opposing definitions of the social, and how to study (and map) it. The two opposing ways to think about the social should be taken into account before any attempt at social cartography and issue mapping. On the one hand, Latour explains, there is the idea of the social as a pre-given substance. Its existence is assumed as sorts of phenomena called 'society', 'social order', 'social factors' or 'social dimensions'. Such thinking has consequences for the study of the social, and a social cartography, where one would seek structure, order and forces, and where one's maps would show social infrastructures of the given powers. In that case, society and the social are used as a kind of context in which everything is framed and explained. Latour is highly critical of the pre-given social, and social forces, some out there, and others hidden: it is a sort of 'magic glue' that helps explain everything else (Latour, 2005, p. 5). Latour puts forward another approach. He advocates understanding the social not as a substance but instead as the movement of actors constantly in the process of (re)assembling, (re)associating and (dis)agreeing.

> [T]here is nothing specific to social order; [...] there is no social dimension of any sort, no social 'context', no distinct domain of reality to which the label 'social' or 'society' could be attributed; [...] no 'social force' is available to 'explain' the residual features other domains cannot account for [...]. [S]ociety, far from being the context 'in which' everything is framed, should rather be constructed as one of the many connecting elements circulating in tiny conduits. (Latour, 2005, pp. 4-5)

This shift from structure to movement is a key insight for mapping, for it forces the analyst to trace instead of dig, expose or unveil. Furthermore, the social that was usually used as an explanatory category in more traditional endeavours, becomes for the Latourian researcher the question in need of an answer, and that to be mapped. That is, the social is not the explanation for the state of affairs of an issue; instead the state of affairs of an issue is precisely the social being performed by the actors. To be mapped are the actions and associations that assemble different actors together into a state of affairs that is not pre-given but instead performative: 'Even though most social scientists would prefer to call "social" a homogeneous thing, it's perfectly acceptable to designate by the same word a trail of *associations* between heterogeneous elements [...] *a type of connection* between things that are not themselves social' (Latour, 2005, p. 5).

The social is the trail of connections, a particular movement of re-association and re-assembling. Society is what is produced with the connections. It is active, performing and redesigning itself. The social is 'visible only by the *traces* it leaves (under trials) when a *new* association is being produced between elements which themselves are in no way "social"' (Latour, 2005, p. 8). It is the role of the researcher to trace these associations in order to describe how the social comes into being. The way to do so for Latour is to follow the actors themselves:

> The task of defining and ordering the social should be left to the actors themselves, not taken up by the analyst. This is why, to regain some sense of order, the best solution is to trace connections *between* the controversies themselves rather than try to decide how to settle any controversy. (Latour, 2005, p. 23)

Instead of presenting, in advance, a divided and classified list of the actors, domains and methods that are meant to compose the social, Latour suggests that controversies should be taken as a starting point and then the focus should be on the struggle, the action, and the movement. In other words, Latour advises his readers when the social is triggered, so the actors, agencies, group formations, and their associations become visible and therefore traceable.

In the most practical terms, Latour, in the role of a guide, proposes five types of instructions for the researcher, and the social cartographer, to look into in detail. The first states that there are no groups, but rather only group formations. By this Latour explains that there is no such thing as fixed groups a priori, but instead group-like formations in becoming that are in continual development, that are often arrangements that change and whose boundaries need to be defined over and again. A group formation, contrary to a group, requires constant input of actions to define its boundaries, limits, and meaning. Crucially, the researcher is instructed to follow the actors themselves and render visible the group formations, instead of assuming the existence of groups. Latour's emphasis on association as foundational for how the social comes into being is not only an emphasis on group formation as opposed to pre-existing groups, but also that assemblages are not stable but dependent on the behaviours and actions being performed between actors.

At this point in the argument Latour introduces the distinction between a mediator and intermediary, which is useful both conceptually and practically for mapping, as it provides a pointer to what or whom to concentrate on when mapping. An intermediary 'transports meaning or force without

transformation', and its outputs are predictable (Latour, 2005, p. 39). (It is like a black box which has stabilized what it produces, including the interpretation.) On the other hand, a mediator's input cannot predict its output, for every time it is different. Mediators 'transform, translate, distort, and modify the meaning or the elements they are supposed to carry' (Latour, 2005, p. 39). They may lead the researcher (and move the action) in multiple directions. It is always uncertain if an entity is acting as a mediator or intermediary, and it is a question always worth asking.

The second instruction set begins with the thought that we never act alone – 'We are never alone in carrying a course of action' – and the actor is not the unique source of the action (Latour, 2005, p. 43). What makes all of us do the same thing at the same time? It is in a network where action is distributed and translated. The researcher's task is to map out agency: What causes transformation, and what is the figuration or format of action? This particular question prompts the researcher to take seriously action formats, that is, how issues are made into matters of concern and calls for doing something about them, collectively. The third set of instructions concerns non-humans. '[O]bjects, too, have agency' (Latour, 2005, p. 63). To include objects implies changing what agency and action mean. Anything that changes the state of affairs (that acts) is on the map (as a mediator). To paraphrase Latour, map not just human-to-human connections or object-to-object ones, but the zigzag from one to the other. However, this is not simple 'symmetry between humans and non-humans', but the call to ignore the assumption of such a division (Latour, 2005, p. 76). The fourth instruction is equally crucial, for it fills in further the notion of an issue, and a specific form of its study, alluded to above as issuefication. It is to consider the difference between a matter of fact and a matter of concern. Getting the facts straight does not necessarily result in the end of the disagreement. Track instead how facts come into being and are deployed so as to form matters of concern. (One recalls the Young Foundation's deployment of facts to make ageing a matter of concern: life expectancy in the U.K. 'is increasing at more than five hours a day, every day'.) Relatedly, the fifth guideline is that we are mapping and writing accounts of what is termed, second-degree objectivity. When and to whom are matters concerns, and how are they expressed and formatted as such? Which facts are deployed by whom? Ultimately, a good account traces the network and helps us to describe the state of affairs composed of actors and things that make other actors and things do something.

The practical implications of actor-network theory are explored further by Tommaso Venturini, who describes in detail a didactic version called

controversy mapping, particularly useful for issue mapping (2010; 2012). Controversies are the crucibles where collective life is melded and forged, the social in its so-called magmatic state (hence the title of Venturini's 2010 article). The process of binding this collective life often becomes a complex disagreement in which the actors proliferate claims and concerns and when the most crucial beliefs are questioned. For Venturini, it is a kind of laboratory where social turmoil is performed and thus where the researchers should insert their tools and observe the action. Not all controversies are equally well suited for mapping, however, and he has advice, following Latour. Avoid cold controversies (where there is little movement), avoid boundless controversies (where demarcation is difficult) and avoid underground controversies (where accounts are not public or suppressed). To find the discourse, or to map the arguments, move from statements to literatures, to actors and their networks, and to the cosmoses (ideologies) and cosmopolitics (construction of a collective, however temporary).

Consequently, in the first section we apply Latour and Venturini's concepts in a mapping of ageing. We are interested in tracing how the issue of ageing comes into being precisely through the interaction of the actors and things concerned with it, together with their opinions, roles and positions. We are interested in the formats in which ageing becomes a tangible issue, the vocabularies that are being used to talk about ageing, the literatures, and the sources of authority on how ageing as an issue comes into being and is sustained. How is ageing 'done'? How is it made into, and formatted as an issue? In other words, we are concerned with the multiple answers to the questions, What is ageing? and How is ageing becoming an issue?

Ageing has become un-black-boxed; its transition from a matter of fact (biological process) to a matter of concern (formatted as an EU issue year, with an NGO platform) comes forward in a number of reduction-resistant conflicts and heated debates, staged in a public realm. We intend to describe these stagings. Stakeholders have realized that ageing cannot be taken for granted anymore. It affects welfare states, healthcare systems, and individuals' wellbeing, shifting from an inevitable human state to a bundle of uncertainties and contradictory claims and interests. Its basic parameters are not easy to capture for decision-makers and issue professionals, as they try, though, to parametize ageing issues and manage ageing effects. While doing so, the issue professionals sometimes strive to render ageing with fewer complexities, such as the title of the European Year of 'Active Ageing' and 'Solidarity between Generations'. The magmatic flow of collective life is being stabilized through the means by which the issue is arranged and set out. The European Year of Active Ageing (as it is henceforth called)

brings together actors in 'platforms', with sub-issue lists and event agendas, as we describe. Our mapping is also to help navigate the issue landscape using online tools; as Latour states, we use the same digital technologies that allow complexity to expand and the buzz to circulate, but this time to order the flows (Latour, 2007). Or, in Venturini's terms, 'when we describe controversies, we contribute to the solidification of some portions of social magma' (Venturini, 2010, p. 268).

The second section and layer of the project is dedicated to a mapping of ageing as a risk. To guide us in this process we deploy Ulrich Beck's ideas about contemporary 'world risks' and cosmopolitics. From his extensive body of work we are particularly interested in *World at Risk* (2009), which captures contemporary social theory on risk, including the expansion of the scale and scope of risks beyond borders and lifetimes, as is the case with ageing. In this book Beck explores the political dynamics of world risks, the differences between contemporary and modern risk management and the central role that the anticipation of a catastrophe plays in the structuring of the world as we experience it today. We chose to wade into three key concepts from *World at Risk* that are considered to be particularly relevant for the field of issue mapping and descriptive of Beck's larger argument: the definition of world risks, the description of their political dimension in terms of 'relations of definition' and media staging, and the controversial idea of world risks as potential catalysers for an assemblage of global solidarity, defined by Beck as a 'cosmopolitan moment of enlightenment'. Also, we refer to the work of Gerard Beck and Cordula Kropp, who (like Venturini for Latour) elaborate on the practical applications of Ulrich Beck's ideas, culminating in a mapping methodology, called risk cartography.

In short, Beck defines risks as the present thematization of future threats or catastrophes. In other words, risks exist as the outcome of both our impossibility to fully know the consequences that our present actions will have in the future and the contradictory desire to try to predict and control these unknowns. The emergence of an increasingly uncertain future, Beck argues, comes also with the loss of belief in any kind of superior power that could be held accountable for an unexpected turn of events, for example, the forces of nature, the will of god, an omnipotent scientific rationality and even of the idea of destiny. Instead, Beck's concept of risk puts forward an existence that depends entirely on decisions, which bring error, ignorance, the promise of control and possible self-destruction. It is worth noting how Beck's emphasis on risk as the consequence of decision-making processes excludes a more limited understanding of risk as the product of mistakes or miscalculations. In its place, Beck highlights how risks are often the

results of the success of civilization. A pertinent example would be how the victory of industrialized production is leading us towards the risk of a global warming crisis. Consequently, the category of risk opens up a world beyond a clear distinction between knowing and not knowing and binary categories such as good or bad and right or wrong. The world as described by Beck is ruled by an experiential dimension of suffering based on the constant anticipation of the catastrophe and the anxiety of trying to prevent and control that which we do not know.

There are two types of risks in Beck's argument. The first type is a calculable and contained risk born as a product of modern society. It belongs to an era where statistics and probability started to be a central tool of governing, and with them, the impression that the consequences yet to come could be anticipated, prevented or at least compensated. For example, the insurance system born during this period of industrialization is based on the calculation of the probability of accidents and failures and in the simultaneous calculation of artificial equivalencies to create a compensation system. As a result, it became possible to calculate the likelihood of a factory worker becoming ill, suffering an accident, or dying. Therefore, these scenarios contained risks, bound to a space, an industry, even a nation, or any third party that could be held accountable for it and could compensate the system or the individual for its loss. As a result, social rules of accountability, compensation, and precaution created a sense of security as part of a social contract in the face of an open and uncertain future. In other words, risk became normalized and predictable: the known unknowns.

However, world risks, the second type described by Beck, are resistant to such calculations, prediction, and compensation developed during modernity. World risks are large-scale global threats. They are incalculable risks that cannot be anticipated as their reach and effects cannot be foreseen and a type of compensation system is then not possible: they belong to a world that is dominated by the anticipation of the so-called unknown unknowns, as Beck terms them. They are not the events but the consciousness of the possibility of such events and the relentless and failed conceptualization of the scenarios in which they might possibly come into being: the true reach of a world risk is unimaginable.

An environmental crisis, a global financial crisis and terrorist threats typify world risks. (Beck also mentions ageing in passing.) All ignore boundaries of all kinds, ranging from national borders to more intangible ones such as boundaries between what is real and virtual, between local and global, and finally between humans and objects. Furthermore, they transgress the boundary making of scientific disciplines or authorities of

nation-states and individual life spans and responsibilities as well. As a result, we have become an insurance-less society in which insurance protection paradoxically diminishes with the size of the threat. The new threats offer irreparable damage so monetary compensation is incalculable. The scale is so large that to plan for the worst conceivable accident is impossible as it cannot be foreseen, and the accident will have no limits in space or time but affect life as a whole forever. For example, as Beck bluntly puts it, how could the effects of global warming as a secondary effect of modernization, be compensated, when the risks are so enormous that a population loses its air to breathe? Risks are no longer contained, and the traditional logic of experimentation no longer holds. In the meantime the world has become the laboratory. The world is the test tube, where a nuclear reactor explodes in order to test its safety.

A second characteristic of world risks is that they are not only global in the prediction of the scale of their consequences, but also in the sense that they unfold as a shared experience of anticipation, as social constructions, rather than as a shared reaction. World risks populate the space of collective fears and shared crises. The unknowingness that characterizes world risks also transforms them into a controversial reality that needs to be discusses and debated. This struggle is described by Beck in terms of 'relations of definition', analogously to Karl Marx's 'relations of production'. In this sense, risks exist as multiple and often contradictory staged versions of the future and as a consequence their reality can be dramatized or denied according to who (of all affected parties) decides what is and what is not a risk. The less calculable a risk, the weightier it becomes culturally. For example, Beck highlights the dominant relations of definition that accord the engineering and natural sciences a monopoly position to say what is safe or unsafe and what to do about it. Therefore, Beck would argue, risk exists only as a 'virtual reality or the real virtuality', employing language developed by the sociologist Manuel Castells (1996). This means it exists as something that has not yet taken place, yet is real in the sense that it is mobilizing and organizing action – 'risk presupposes decision'. For example, 'it is not the terrorist act, but the global staging of the act and the political anticipations, actions and reactions that are destroying the Western institutions of freedom and democracy' (Beck, 2009, p. 10).

With the notion of relations of definition and a call for action Beck is simultaneously introducing the idea of inequality in relation to global risks. A globally shared concern does not necessarily mean a balanced distribution of power or of responsibility. Instead, world risks open the door for complex sub-politics (dealings). They brings about the clash of risk cultures

and of the collective perceptions of what is a risk, how it should be handled, and in the interest of whom. As a result, there are risk winners (profiting from risk) and risk losers.

These imbalances can be understood in terms of flow, and risk geographies: risks are transported or exported across space (contaminated waste) and across time (future generations). Henceforth, Beck locates risks in a special type of perceptual and cognitive schema of how society as a collective acts when confronted with openness, uncertainty, and the obstruction of its self-created future. Reactions can include denial and apathy and political 'methodological nationalism', where the hazard definition and mitigation/insurance are limited to and by the nation-state while excluding the side effects on others. Additionally, as another risk management strategy, so-called decision-maker nations organize themselves in transnational or (regional) assemblages, e.g., the G8 or the EU, giving shape to a multinational methodology that to Beck translates into the already standardized schema of 'us versus them'.

Beck provides the reader with a different option: the possibility of a 'cosmopolitan moment of enlightenment'. He argues that there is a need to manage risk collectively, as it is unavoidable that all parties are affected and involved. It provides an opportunity for the egalitarian re-union of societies, since risks are in fact substantial matters of concerns that raise vulnerability on a global scale. World risks put people in shock, and they can provide a moment of enlightenment and transformation (a cosmopolitan moment), as they open up the opportunity for a new beginning with fresh possibilities of action. It is a call to include potentially affected non-nationals in decision-making. There are no more 'proud nations' but rather cosmopolitans. The sharing of traumatic experience makes for global neighbours. Global risks are not only 'side effects' of modernization, but also awareness-raising for how to cope with modernization.

Before concluding this section about risk we would like to briefly review some important contributions from scholars who have studied how to map risks scenarios, in the Beck tradition, also in dialogue with Latourian thought. Gerald Beck and Cordula Kropp introduce a key concept, risk infrastructure, with the invitation to analysts to make them visible. This type of mapping seeks to trace the connections and understandings that are often unnoticed: 'common credos, technical norms, routines and political path dependencies' (Beck and Kropp, 2010, p. 7). For Beck and Kropp mapping 'constellations of risky things, procedures, institutional frameworks, narratives and knowledge' is of great import, for the mappings would play a key part in the communication of risk governance.

For these authors the strategy of linking Latour, the sociology of association and Beck's thought, together with understanding risk in terms of infrastructure, is a necessity dictated by the nature of contemporary risks ('world risks' in Beck's phraseology): they are 'embedded in networks of manufacture, interdependent, and more and more global assemblages which are no longer in the hands of experts or (national) authorities alone' (Beck and Kropp, 2010, p. 2). As they no longer respect boundaries they are binding together fields, spheres, and entities of diverse provenance.

These new risks described by Beck as boundless, incalculable, and unpredictable in their spatial and temporal reach are further elaborated by Beck and Kropp as 'complex and fluid landscapes of manufactured uncertainties with up-to-now unseen risk motilities, "full of unexpected and irreversible time-space movements," [...] treat[ed] under the concept of "risk infrastructure"' (Urry, 2004, p. 97; Beck and Kropp, 2010, p. 3). From Latour's thinking, Beck and Kropp additionally find useful for risk mapping the idea of mediators making others do unexpected things. '[T]hese [mediators] are often enough identified retrospectively as the risk-producing relations of entities' (Beck and Kropp, 2010, p. 4). Also using Latour's ideas on mediators allows the inclusion of non-human actors and thinking in terms of material-semiotic risk networks.

The move further is to describe how risk cartography can be operationalized. Beck and Kropp advise issue analysts to 'gather the various risk claims coming from different protagonists in the controversy and link them to the related positions, engaged statements and arguments in order to render visible the otherwise invisible network of risk and risk-related operations and negotiations' (Beck and Kropp, 2010, p. 5). In fact, they boil it down to a series of questions about the main types of entities to be mapped in risk cartography: 'the protagonists (who is involved?), the matters of concern (what is at stake?), the statements (what are the knowledge claims, and what are we afraid of?) and things (what can be done?)' (Beck and Kropp, 2010, p. 10). In this practice we are especially aiming to display the strength and dominance of protagonists by tracing who is allowed to speak, and whose voice has been quieted. Mapping the 'cut-down of speaking subjects' (referencing Michel Foucault) figures as a key component (and output) in the research project (Beck and Kropp, 2010, p. 8). Do the victim states, together with the decision-makers, have the capacity to express the stakes?

Accordingly, we apply Beck's theories about world risk and Beck and Kropp's approach to risk cartography in a mapping of the ageing issue. Considering ageing through the lens of risk allows us to reflect upon the issue as a device that triggers different actors to connect with each other (or

not) in response to a situation in which they are for the moment involved but unequally affected. Ageing is a coming crisis; from its staged virtuality it sets in motion numerous measures of prevention and anticipation distributed in political agendas, the market, policymaking as well as humanitarian work. In this respect, using risk as a framework for a mapping of ageing raises questions such as: How is the *globe* responding and organizing itself in the face of an ageing crisis yet to come? What kinds of alliances are being formed and what kinds of risk infrastructures are they giving shape to? What kind of equalities and inequalities are emerging, and are they being anticipated as part of an ageing crisis? Can we identify ageing risk donors and ageing risk receivers? Who are the discerning voices and whose are the infrastructures where the agendas are made? Which actors are performing as mediators and are more responsible than others for inducing action and movements regarding an ageing world? And, finally, Beck opens the way for a crucial question: Is the ageing crisis promoting a shared reaction of solidarity? (And, if so, can we trace and map such a cosmopolitan moment of enlightenment?)

The third section and layer of this book is dedicated to a critical neo-cartographic mapping of the ageing issue. To guide us in this process we use the ideas of Jeremy Crampton and focus on his book, *Mapping: A Critical Introduction to Cartography and GIS* (2010). We are interested in three key concepts that we consider especially relevant for issue mapping. First, Crampton's critical approach to the mapping impulse, second his definition of counter-mapping as a practical methodology of critical mapping, and third, the operationalization of such critical mappings using neo-cartographic tools, especially the layers on digital maps for geolocating and annotating information. To further elaborate on the layer, we refer to Lisa Parks's work on Google Earth and the 'Crisis in Darfur' layer, where from a critical perspective she addresses the usefulness and limitations of that digital mapping project, focusing on its potential as information as well as humanitarian intervention (2009). Parks offers an important basis for what we interpret, and further develop, as a *layer critique* in terms of the modes of intervention made possible by digital mapping tools.

With Jeremy Crampton as our guide, we finally engage with the cartographic map (or what was once known as the map proper), together with the modes of knowing and communicating that obtain in it. Crampton begins by introducing the reader to the notion of a critical cartography. The first move in developing critical cartography is a historical description of the pairing of cartography with scientific objectivity (instead of an artistic production with intention and subjective criteria) and of an

apolitical reading of maps (instead of an interpretation of maps as tools of governing, ideology, and power). Crampton considers both developments as mythical. He defines maps as ways of making spatial knowledge instead of ways of mirroring a territory. They perform by constructing visual claims and telling hardly arguable, or often unassailable, stories capable of exercising power with a high degree of efficiency. Furthermore, Crampton defines maps as specific forms of knowledge, embedded in a time, space, and rationality of bio-politics that produce categories that have effects. To map in this 'traditional' way is to control, settle and institutionalize – to present as matters of fact division and categorizations that are in themselves historicizable and localizable. Crampton discusses maps also in terms of artificial political and social agreements.

To combat a notion of mapping as an activity politically and scientifically neutral, Crampton proposes a critique of the so-called mapping impulse. For Crampton assuming a critical stance does not mean abandoning cartography but rather unpacking the assumptions behind mapping, examining categories of knowing, and inventing alternatives to them. A critique of mapping implies tracing the different ways in which the rhetoric of the map can transform the nature of space and how it reflects or serves interests. For example, How does a place (open and to some extent undefined) become a location (with coordinates and characteristics that define it)? How do lines become partitions and therefore boundaries and tools of inclusion and exclusion? How do names become inscriptions, carved in stone or printed on signs, becoming expressions of ownership and governance?

Additionally, for Crampton to be critical and respond to a dominant cartography is also a matter of practice: the tool for the mapping critic is consequently mapping. Map, or be mapped! For example, Crampton refers to a tradition of artistic appropriation of maps in order to elaborate political narratives of resistance. Artistic movements that have adopted the map as an object include the Situationists, psycho-geographers and more contemporary representatives of the locative media arts (Tuters and Varnelis, 2006; Thielmann, 2010). Crampton highlights how the presence of digital mapping tools such as Google Maps or mobile phone apps using GPS, and the resulting practice of a neo-cartography including layering, augmenting, map hacking, mash-ups and other practices with the geospatial web are opening the spectrum for critique even further and playing a crucial role in counter-mapping practices: 'Maps could also work for "the people," a theme that has been at the heart of not only the recent surge in map hacking and the geospatial web but of participatory GIS […] the weapon of the map could be turned to other ends beyond those of the state' (Crampton, 2010,

p. 19). Specifically, Crampton talks about a practice of counter-mapping using critical neo-cartography, by which is meant the use of the digital mapping tools by online practitioners (as opposed to trained cartographers). The idea of resistance to oppressive regimes of knowledge, shared by Beck, could lend itself to critical cartography that takes after his risk analysis to some extent. Beck's approach teaches us how to recognize the risk winners and the risk losers, and neo-cartography offers us tools to counter-map on the behalf of the latter (and of course the former, too). Producing counter-maps also may be taken as a Latourian manner of mapping, in the sense of multiplying the maps and points of view, as we discuss.

It is easy to forget that until recently satellite images such as the ones we can access on Google Earth, the aerial views of cities and the detailed images of streets, buildings, and landscapes as the ones available with tools such as Google Maps and Google Street View were mainly available for use by the state, the military as well as specialized private sectors (not to mention particularly advanced hobbyists and academics with privileged access). Access has been retooled. However much it is in Lisa Parks's terms, '*the digital corporation*, as opposed to the state, international agencies, or NGOs, [...] distributing information', the public access of these maps makes them from the outset potential objects for critical cartography in Crampton's sense (Parks, 2009, p. 542).

We would like to focus specifically on one neo-cartographic object that we think is especially suited for an operationalization of a critical carto-graphic practice: the layer, together with its potential for counter-mapping. We would like to build upon Lisa Parks's work concerning the 'Crisis in Darfur' layer in Google Earth and specifically its critical framework. To summarize, Parks wrote a review of the 'Crisis in Darfur' layer, the joint project by Google, Inc. and the United States Holocaust Memorial Museum (2009). The layer resides in the category of Google Earth's Global Awareness layers that allow users to pan and zoom through annotated digital maps on Appalachian mountaintop removal, Santa Cruz mountain logging, Gombe chimpanzees, Aral Sea shrinkage, Elephant poaching in Africa, and others. On the 'Crisis in Darfur' layer, photographs are superimposed on specific geographical placemarkers. They are the images of burned villages, wounded women, starving children and other tropes that correspond to the devastation suffered by the victims of armed conflict. Parks identifies several problems with the composition and promotion of the layer that we consider are in themselves relevant points for critical cartography and can be generalized and applied to other case studies. We are in a way approach-ing layer critique as an anti-framework, or as a set of pointers for mappers

to keep in mind so as to be able to withstand critique, especially if one's goal in issue mapping is awareness raising, communication or (in the case of the crisis in Darfur) a so-called information intervention.

Parks develops four categories of analysis to evaluate the relevance of the layer as a device capable of raising awareness, writing stories, and offering a wider perspective on events: When does a layer describe a set of events and leave to the user the task of navigating them, and when does it present an already organized narrative that reproduces the map-maker's ideology or cosmos, in Latour's sense? The first Parks puts forward is image literacy, and in particular 'the shifting role of the satellite image' (2009, p. 536). For Parks the 'Crisis in Darfur' project diminishes the potential for a literacy of satellite images. It instead converts them into an entry point for zooming in on individual and personal narratives of the Darfur victims. The distance provided by the satellite image, however, would allow for the events on the ground to unfold in the language of patterns and structures of movement. The event flows, recurrence, quantity, and proximity to each other could work as an invitation for the user to interpret the effects of devastation from a different perspective than the one of the fetish of the wounded body of the war victim, especially of the feminine body. Parks goes further to affirm that 'the satellite image is useful as a site/sight of focus because its abstraction and indeterminacy keep acts of interpretation and practices of knowledge dynamic. The satellite image is a sight that must be read' (Parks, 2009, p. 538). In other words, to focus on the individual and affective, instead of the pattern, cancels the potential of another storytelling, equally evocative, of the satellite image and the challenge it can present to the map user to set off a chain of inquiry, investigation, reflection as well as questioning about position and perspective. Parks emphasizes the usefulness of satellite images to describe aspects of a given conflict that are 'mostly spatial or geopolitical that cannot be reduced to images of the wounded body alone. They can expose territorial dimension of atrocities' (Parks, 2009, p. 540).

The second critique put forward by Parks refers to timeliness, or more specifically the temporality of the interface. For Parks time is a determining element in the use cases for a layer: the when is as important as the where. Especially when the layer aims at an intervention it requires a newness, freshness, and continual updating that differentiates it from historical documentation or records of the past. The challenge is to create compelling and useful mappings that could potentially serve to stabilize a controversy or act as a guide for those who need to take decisions, deploying the present as open instead of closed. In other words, there is a distinction between monitoring and documenting. 'Ultimately, Crisis in Darfur functions as an

archive of violent conflict that unfolded while being observed but without intervention' (Parks, 2009, p. 540).

The third point raised by Parks is 'the practice of conflict branding' and digital capitalism. At this point Parks brings attention to the relationship between digital corporations and global conflict content: Google owns the software and crucially the means of distribution of the content, also controlling access. This is an invitation to think about the role the corporation plays as actors and mediators in the deployment of a conflict as well as (in Beck's terms) on how the responsibility of such a task is no longer in the hands of nation-states but of a transnational corporation with decision-making over responsibilities, indignation, and interventions.

Finally, the last point raised by Parks criticizes directly the implications of using layers with the aim of promoting a practice of *information intervention*. Formulating the map's purpose is an important point for the issue map-maker as it directly addresses the question of who are the desired viewers and users of the mapping or the layer. It also questions the potential for using information and the map as a type of intervention. As a case in point, distributing images and information about the atrocities in Darfur, according to Google, raises global awareness, media attention, and traffic to websites; in other words, via the media and via the layers there is more awareness about the situation in Darfur. '[W]hat is striking here[, however,] is that success is measured by an increase in world media attention to the Crisis in Darfur project itself and traffic to the USHMM website as opposed to an impact upon international policy or change in the conditions of Darfur' (Parks, 2009, p. 543). Parks likens this salubrious media attention to what has been called the CNN effect in which there is the perception that international reporting and global attention lead to changes in global policy. Attention and change are not the same, however. Furthermore, Parks highlights that the inhabitants of Darfur themselves cannot access the website or the layers for it is forbidden to download the software owing to the economic sanctions put into place by U.S. legislation. Parks concludes with open questions that can be reformulated towards the layer-makers: How to create mappings that encourage accountability, acknowledgment and intention as opposed to regret and lament? What kind of representational, navigational and narratological means might lead to not only awareness but also more and better policymaking? What is the role of satellite images and maps in these processes?

We apply both Crampton's ideas about critical cartography and neo-cartography as well as Lisa Parks's insights on layers in a critical cartographical mapping of ageing. In this chapter we take up anew many of the

concerns that have come with the mappings of ageing both as a social as well as risk controversy and rethink them geographically, bringing into relief the where. Connections are being made across nations, including those by non-governmental organizations in an issue group-formation called the AGE Platform Europe, a main issue portal associated with the European Year of Active Ageing. Information and actors such as care workers and older people are also travelling across borders, in a sense leaving traces and leading the issue map-maker to the territorial distribution of the ageing issue, or to ageing places. In other words, we wish to explore how the ageing crisis is creating platform-based as well as place-based ageing issues. How is the issue being formatted and situated, and where can one age (well) and not so well?

1.4 Digital methods for issue mapping: New formats, data, and traceability

The operationalization of the above-mentioned theories into mapping practices, and the actual mappings produced, owe their effectiveness to digital methods. As we set ourselves the task of moving from theory to practice, and taking the practitioners and issue analysts along with us, we also made the decision to place the emphasis on the question of the how. For example, How can the researcher identify and trace the actors in the ageing space? How can the researcher know what type of information is relevant to map ageing as a social, risk, and place-based issue, and how can she capture and organize this information? What types of tools are available for doing so? How to balance the abundance and complexity of the information presented with the desire for a practical approach? How to keep up with the rapidly changing information panorama? We found in digital methods a bridge. They allow us to operationalize concepts such as associations and traces that become relevant in our theoretical framework into less abstract forms such as links and mentions, to name just two. It is also our use of software tools (some of which we have developed ourselves) with built-in digital methods that allow us to process (and visualize) small and also larger amounts of digital data and to deploy complex issue networks in order to tell stories with maps.

Furthermore, using digital methods in intersection with mapping theories is currently of relevance as the web and the ubiquity of digital technologies are affecting how a social issue is communicated, and staged. The web also has an impact on the way issues are studied. For instance, the

web has opened new channels for action, communication, and participation for the actors involved in a controversy; as a consequence it has rendered visible the importance of these channels or mediators (human or not) in the evolution of a debate, and the unfolding of an issue. How to take advantage of the crucial role and agency that technology has in the making and staging of current affairs? For this reason, we believe it is urgent to continue the development of methodologies for issue mapping that are compatible with, and plugged into, the abundance and complexity of online information, keeping in mind Parks's critiques concerning the absent effects of information interventions as well as Venturini's (discussed below) that the World Wide Web is not the world.

As said, the online opens a range of interrelated opportunities and elements for issue mapping, for example, in the types of issue stagings in spaces such as search engines and platforms. Capturing hyperlinks and common content across websites allow for the study of associations between the actors linking to each other, the specific framing and formatting of the issues at hand and the things they refer to. Other digital behaviours such as commenting on a news article, highlighting a passage in an Amazon Kindle book, and activating location services on one's computer or smartphone would leave additional traces, and could become mapping data. Latour's famous commandments, 'follow the actors themselves' and just describe the associations, could become operationalized, at least in part by detecting actors' presence (as well as absence) in online spaces over time, and observing the variegated alignments constituted by interactions as well as shared substance (Latour, 2005, p. 12).

Digital methods, more generally, can be located in the larger area of Internet-related research, and situated alongside current analytical approaches in digital research that regard the web as a source of data in contrast to a placeless cyberspace or a stand-alone virtual society (Woolgar, 2002; Watts, 2007; Wellman, 2011). The current period thus marks a change in research outlook and imagination from studying online culture only to studying societal formation and condition with the web. There remains the question of the site of grounding of newly made claims with web-based data. Can they be grounded in the online, and if so under which circumstances does the online become the baseline? Here digital methods seeks to address the issue of the limitations of studying the social with the web – what Venturini refers to as the difference between the World Wide Web and the world. Ultimately, digital methods is a research framework, a collection of techniques and a growing array of software tools for doing social research with the web. It makes use of so-called natively digital devices and objects

(such as search engines and hyperlinks) and the methods of the medium rather than migrated or digitized method (such as online surveys) (Rogers, 2013). That is, it builds on top of medium devices in order to render their techniques productive for social research. More specifically, the protocol of digital methods is to follow the medium so as not to be caught off guard by unstable media (such as the disappearance of an API) or the ephemerality of content (when a site is updated or taken offline). One looks for objects that are available including tags, links, timestamps and threads, and how dominant platforms and devices handle them; it learns from and seeks to repurpose these medium-specific methods, or methods written for the medium such as the results of the ever-evolving algorithms behind Google's web search.

When applying digital methods to issue mapping, and particularly to social, risk as well as critical cartography, we take advantage of how 'the advent of digital mediation' enables 'social traceability' (Venturini, 2012, p. 801). As was mentioned, social traceability may begin with hyperlinks and specific keywords used across websites, and when documented and aggregated they may depict associations between actors, and substantive alignments. Furthermore, making use of traces means that not only the actors themselves leave traces that then can be found in a nebula of entities and bonds, but also that a researcher may leave a thread running back to the entry points, so as to be able to retrace one's (or another's) references and data points. Digital methods often also visualize the analytical steps (the research protocol or process) as part of the map, which is another form of traceability. Finally, digital methods not only provide techniques and tools that allow us to capture, analyse and re-render the process of working with digital data (as will be exemplify below) but they also lend a vocabulary to describe these research tasks (such as scraping) and the knowledge they produce (the issue mappings).

One of the tools occasionally used in our projects, called Google Insights for Search (later merged with Google Trends), could be seen as an example of a tracing device. It fits the description as one of the '[d]ozens of tools and crawlers [that] can now absorb [the] vast amount of data and represent it again through maps of various shapes and colours so that a "rumour" or a "fad" becomes almost as precisely described as "a piece of news", "information", or even a "scientific fact"' (Latour, 2007, p. 2). The tool digs into a history of searches and shows when and where searches were conducted. It seems relevant when one would like to compare traditional hierarchies of sources with underprivileged accounts (through their associated issue keywords), as the social cartography, risk cartography, and critical cartography invite us to do.

We should bear in mind, however, the argument put forward by Venturini that in mapping and in other practices the Internet cannot stand in for the world. Approaching the digital realm must be done carefully, he writes, for '(1) search engines are not the web; (2) The web is not the Internet; (3) the Internet is not the digital; (4) the digital is not the world' (Venturini, 2012, p. 803). The Internet and web offer data that may be captured, analysed, visualized, and made public in derivative works (e.g., as an information graphic or map). Exploring the web by using search engines and other online data sets and tools, we may not be equipped to grasp some networks, especially those lacking digital mediation. As a case in point, certain Polish NGOs engaged in the ageing issue in Europe do not have websites, but are mentioned by umbrella organizations. However much they may have traces left by others, their own accounts may be absent. For which issues, actors, and places are the digital data maps wanting? There is a corollary. Which maps tend to come out of an online issue mapping? What are the benefits, but also the limits, of those produced by digital methods together with online data? Finally, even if they are well done, do the maps engage the audience and encourage the issue professionals to react? Compared to the maps produced by other means, will ours be incorporated in the actors' PowerPoint presentations and written accounts of the ageing issue? These are larger questions, and as we also do in ours, we invite practitioners and issue analysts to consider them throughout in relation to their own issue mappings.

1.5   Digital methods and the visualizations employed in the mappings

Digital methods is a framework for research with a collection of medium-specific techniques and software tools to do analytical mapping work using the web and its data. The techniques and tools employed here may be grouped according to the ways in which they collect and approach web data. (For further descriptions, also see the glossary of digital methods tools mentioned in this book.) One could imagine preferred digital methods for social, risk as well as critical cartography, respectively. For example, geotools, such as a geoIP lookup instrument or Google heat map, may seem more suited to critical neo-cartography, while network mapping tools, such as Navicrawler, to social cartography. In practice, however, most tools and techniques are used across the three mapping approaches, so we group them here according to the most used.

The first set of digital methods could be described as employing *search as research.* Broadly speaking, search as research is the practice of repurposing an engine's search capabilities for social research, instead of, for example, market trend research or search engine optimization (which are the other common repurposings). It approaches engines as resonance analysis devices that provide source and keyword hierarchies, thus seeing in engine results social epistemological value. The main tool used is the Googlescraper, also known as the Lippmannian Device. It scrapes Google engine results, so as to be able to count the quantity of keyword mentions on websites, and read the keyword's use in context. The results are visualized in clouds, either issue clouds, where the keywords are resized to reflect the quantity of instances that appear on a given page/site or a set of them, or in source clouds, where the sources are resized according to keyword counts. Search as research with the Googlescraper relies on *query design*, meaning the crafting of an engine query so as to be able to answer research questions put to one or more online sources. Working with the Googlescraper includes the use of a research browser, where one prepares the search engine to serve as a research machine by clearing one's browsing history and cookies, thereby obtaining unfettered results (to the degree de-personalization of engine results is possible). There are also separate sub-engine scrapers, so one may query just blogs, news sources, etc.

In the social cartography chapter a query design technique for issue mapping is applied using the Googlescraper. The goal is to identify the agenda of an umbrella group of NGOs involved in the ageing issue through an analysis of ageing issue keyword frequency on their websites. The method takes advantage of a feature of the actors' websites, for NGOs have the tendency to neatly list their issues under a similarly named menu item, such as issues or what we do. The issues are harvested manually and become keywords, and the websites become the URLs to be queried with the Googlescraper. The aim is then to visualize the relevance that is granted by this set of organizations (and each one individually) to each of these issues. The outputs of the tool can be interpreted in a manner similar to an agenda of the group formation and as an indication of issue commitment, that is, those issue keywords that are deemed relevant through mentions and those otherwise marginalized. For instance, according to the analysis, Western European NGOs are concerned with mental health issues and have produced copious materials on the issue, while concerns about violence against the elderly (and elderly women, in particular) remain marginalized and addressed more by those operating in newcomer EU countries. An actor's power to generate visible content, and therefore influence the information space, is

at question. Where are such issues in the issue hierarchies of an initiative such as the European Year of Active Ageing, and to the NGOs that populate a platform in order to make ageing into particular matters of concern?

In the risk cartography chapter the query design is different as is the use of the Googlescraper. Two terms circulate in the ageing debate: 'brain drain' and 'care drain'. The first refers to the migration of high skilled workers, including those in the healthcare sector, from their countries of origin to more developed nations in search of better opportunities. The latter is a newer term closer to the ageing trend: low-skilled workers migrating to become caregivers of the elderly in developed nations, while leaving a shortage in their homelands. The U.K. is a popular destination for both types of migrants. With this in mind, a network of websites related to the ageing issue in the U.K. is queried for the two terms using the scraper: Who has adopted the terminology and in which contexts? Is the (potential) damage done to source countries acknowledged? Along with the weighted lists and issue clouds the tool also returns the passages where the term appears (keywords in context), which invites the researcher to return to the source. 'Care drain' is often inserted as a footnote in documents and news reports (and with it perhaps also the vulnerable population of low skilled migrants that are associated with it). 'Brain drain' is more mainstream, but also mentioned in the context of not only health professionals but also occasionally care workers. Here the Googlescraper serves as a means to inquire across a set of actors into term impact, uptake and more specific document placement.

The action of scraping is central to how 'search as research' is operational-ized. Scraping is an automated practice of data collection and is special for it makes 'digital social research *practically* possible' (Marres and Weltevrede, 2013, p. 313). The richness of web data and the opportunities it offers for issue mapping and other social research practices alike, however, are entangled with the mechanisms that are used to make the data available and practi-cally re-searchable. The Googlescraper in a sense takes over the logic and metrics of the engine, and as such 'search as research' should account for engine effects. Indeed, engines work according to principles of relevance based on website inlink count, user popularity as well as source freshness and longevity, and interesting research would take into account, and utilize, these characteristics as features.

A second set of digital methods and tools used in the book are related to the geographical web data. Local domain Googles (e.g., google.nl or google.pl) are used to delimit and analyse national or language-based spheres and perform comparative studies. Additionally, the IP addresses of website

hosts, website registration data, and top-level country code domain names are employed by issue map-makers to pinpoint, or map, information, sources, and actors with some approximation. With the starting point of the research being a placed-based issue (ageing in Europe), addressing the questions of how an issue such as ageing redraws borders, motivates potential migrations, and awakens national (or transnational) interests relies on geodata. To study issues in relation to places and locations using digital methods also invites thinking about the sense of the local that is put forward by search engines and other digital devices. Here the term 'local' often means that which is produced by the local domain Google search engine, and the sources (of ageing issues) that result.

For example, in the critical cartography chapter the term [ageing] is queried in local domain Googles of different European countries using the native language(s). The output is a series of ranked lists of sources, each addressing different (also local domain produced) issues related to ageing. Each list speaks of how ageing is defined (or done) in a European country or language space. A Spanish organization, for instance, asks people what they would like to be when they grow old, while in Germany an art show exploring the sexual life of the elderly is held. Also, using this technique, anti-ageing tips, food and recipes are collected and visualized. There is an anti-ageing European shopping basket. Advice given to the ageing are ranked, and tips to age well collected. The questions of the local are thus mapped, and collected so as to return to the European contribution to the ageing issue. What is the place of local concerns in European initiatives such as the Year of Active Ageing, and how are the various locals represented and distributed? How does the collection of European local concerns complicate but also enhance those of the European Year?

Lastly, a third set of digital methods aids issue mappers in gaining insights into actor associations by following the networked structure of web data. As mentioned the quantity of hyperlinks, user click behaviour, together with the freshness and longevity of sources, make content rank higher or lower in search engines (an object of consideration in search as research). However, digital methods adds a second way for researchers and issue mappers to engage with linking behaviour. To the understanding of the web as a computational platform that outputs ranked lists (and hierarchies of sources) is added the notion of a 'selective associational space', where linking between actors and information is purposive and directed (Rogers, 2012). Thus a selectively interlinked set of actors (and other web objects) dealing with the same subject matter may demarcate and be treated as an issue space.

Studying linking behaviour in these terms opens new avenues for issue mapping, in a practice concerned with how and in what terms actor and information associate with each other. Following the directionality of links becomes a means to trace these selective associations and to describe the networks they disclose. When the actors are engaged in the same issue area, selective association through linking or not linking demarcates an issue space for the analyst. This inroad has proven especially useful to study NGO behaviour both in terms of organizational networks (how they form a group with each other) and of issue networks (how a group formation of diverse actors comes together around issues, with or without each actor's knowledge) (Rogers, 2004). In social cartography an outlink analysis of a group of Polish NGOs reveals a sense of a fragmented local issue space, which is subsequently confirmed through a keyword resonance analysis of each of the organization's names across all the NGOs. Neither do they link to nor do they really mention each other, but they are mentioned together in connection with European Year events, suggesting that the Year prompts group formation and renewed issue activity. We also step into the U.K. ageing issue, and ask, If the ageing of the British population has effects across the world (distant care drain), are those affected areas recognized? An outlink analysis is performed of British NGOs which reveals an absence of affected parties and a network that remains mostly local (in the sense of the abundant presence of the top-level country domain,.uk). Here we ask questions concerning the conditions under which Beck's cosmopolitan moment of enlightenment may transpire.

Tracing and analysing networks (entities associated to other entities) are undertaken beyond outlink analysis. In the style of social cartography (but also risk and critical cartographies) associations may be traced in multiple manners. Issues are traced back to NGOs that are then linked to specific countries (domain names), making local issues; NGOs become associated because they share issues, showing alignments; speakers are linked to their countries of origin and then to places that they mentioned in their speeches, granting centrality to certain ageing places. Returning to Venturini's instruction, and summarizing, in the following issue map-makers are tracing how actors are connected to statements and statements to each other, thereby forming literatures about ageing in European places. (Later we reformulate statements as issue language and literatures as projects.)

This introduction began with an issue and moved towards theories and digital methods in order to gather data and trace associations between different entities. Now it arrives at the question of *how* to turn data, ready-to-use visuals outputted by tools, and observations or travel notes (in the

Latourian sense, as we come to) into effective visualizations. To develop the means to visually communicate findings so that maps can reach an audience, be used, and shared is part of what we have termed good practices for issue mapping. The aspiration is for the map to enter the issue space and be used in the PowerPoint presentations given by the stakeholders, students, issue professionals, workshop participants, practitioners and other analysts and map-makers. How to communicate the issue mapping?

The outcomes of the mappings are expressed through visualizations such as issue clouds and lists; layered and annotated cartographical maps; network graphs, alluvial diagrams, and other line maps; flow charts and mediator maps; and bubble matrix charts (with a temporal element) and a timeline. (The choice of the visualization is mainly elaborated in the figure captions.) Just as certain digital methods allow one to operationalize issue mapping aspirations, as, for example, mapping not only the associations but also the hierarchies between actors, also certain visualizations types aid issue mappers in communicating such differences in hierarchies through a visual medium. The types of visualizations are also chosen because they aid in data storytelling, or communicating the tangible outcomes and findings of the issue mappings. Here they are introduced and grouped in the same manner as the methods, by frequency of use, but we also would like to stress how certain visualizations fit well with particular methods, data, and questions.

The first group – issue clouds and heat lists – are suited for analysing and presenting textual data when the aim is to emphasize the presence, relevance, and influence of certain issues, statements, and actors in a space. By manually counting words or scraping results from search engines, the issues in online news reports and other website content are given numerical values that determine their status. In issue clouds words are resized based on the frequency of mentions in a body of text, and are occasionally accompanied by an inset (zooming into issues that are marginal in the cloud) for they have become less legible. Issue lists communicate hierarchies across sets of actors, for example in a cross-country comparison or a comparison between the EU agenda, and specific country agendas. In the event, data have been captured using search engines and the lists are rankings of engine results; ageing issues hierarchies are also compared across local domain Googles, such as google.co.uk and google.pl, showing contrasting priorities.

Heat lists are lists where terms are shaded using a colour scale from warm to cool, according to the salience of a term in a textual data set. In one instance, issue lists are placed next to each other and the *temperature* is a means of comparison. Such a technique aids us, for example, in comparing

the priorities of Polish NGOs and the AGE Platform Europe, finding that while women's ageing issues are a hot topic in Poland, they are absent in the transnational platform.

The second type of visualization are layered and annotated cartographic maps that relate issues and actors to their geographical coordinates. Geographical outline maps (of Europe) are layered with information, showing in one case which countries have the most NGOs participating in the ageing issue platform, and which places are holding ageing issue events. These are the visual means for our *layer critique*. Indeed, layered and annotated cartographic maps are especially productive while performing critical cartography, as they provide the means to augment and re-draw known spatial conventions, while focusing on the study of issues. Heat maps with areas shaded are used to communicate the disparate levels of participation of European countries in the Year of Active Ageing, including those which hold only a gathering to open the European Year and forgo any other event. There is also a particular mapping convention that we have used. Borrowing from well-known country resource maps (such as those charting natural resources or cuisines per region), we have a map that is annotated to show what each European country has to offer to the ageing issue, such as particular foods for ageing, or philosophies.

The third set of visualizations are computer-generated and hand-drawn network graphs, alluvial diagrams, and a line map (for the risk cartography). These allow tracing associations between entities, while emphasizing aspects such as directionality, strength and specificity of association as well as centrality, peripherality and clustering of actors and issues. As such they are an additional set of techniques and metrics to operationalize Venturini's call to include hierarchies in the analysis. For example, outlinks from websites are visualized as network graphs to stress which actors are referred to (Who is also seen as important or having an impact?) and which are absent, thereby having little or no purchase. In one mapping U.K. organizations do not link to websites in the affected countries where care workers are sourced.

Alluvial diagrams are employed to visualize the relations and flows in small bipartite networks (connections between entities of a different kind) by using streams; the width can be made to represent the number of times a specific actor mentions the others. In one case, concerning quoting and quoted places, the diagram shows the extent to which sources are parochial or less so, naming only their own country or multiple ones when discussing an issue. It also thus shows the countries substantively driving the issue language formulations. A risk mapping in the style of Ulrich Beck

is visualized in a line map showing connections between protagonists, matters of concern, statements and things. For example, the Vodaphone Foundation links the elderly population with smart phones with the statement that cheaper goods await them online.

A final set of graphics includes flow charts and mediator maps, where the emphasis is on movement and circulation, and those who prompt it. For example, care workers are migrating across European countries (and some are staying put), owing to online job portals and agencies. We also have bubble matrix charts (with an aspect of time built in) as well as a timeline itself which shows the evolution of the ageing issue space in Poland, and the means by which it became formatted as a women's issue. The bubble matrix charts show issue trends. For example, certain ageing topics sustain attention through a prolonged period of time in the news, such as Alzheimer's disease, and others are more 'seasonal' issues as loneliness, addressed during the winter holidays.

To conclude, in the following sections there are descriptions and visualizations of ageing-related issues, approached from the social, risk, and critical neo-cartographic perspectives, together with the methods as well as the tools used. In presenting the methodologies of social, risk, and critical cartographies, with an extensive mapping of the ageing issue, we also follow Latour's metaphor of a travel guide in *Reassembling the Social*, which was aimed at note-taking 'practitioners [...], helping them to find their bearings once they are bogged down in the territory' (Latour, 2005, p. 17). What we have added is a kind of gazetteer, yielding diverse information and resources on ageing places and why they may be so named.

2. A social cartography of ageing

2.1 Ageing as a social issue

The role and status of older people in contemporary Europe, and indeed elsewhere in the world, is in flux. There is a heavily ageing population throughout Europe, and in the European Union there are decreasing resources to address the consequences of the trend through state-sponsored initiatives (Carone and Costello, 2006). The importance of this ageing issue and all its surrounding themes are in evidence in the 2012 EU project, the European Year for Active Ageing and Solidarity between Generations. It brings together European organizations and governments, not to mention researchers, social entrepreneurs and other issue professionals, focused on finding 'innovative solutions to economic and social challenges facing the ageing European population', with one goal 'to help empower older people to stay in good physical and mental health and contribute more actively to the labour market and to their communities' (AGE Platform Europe, 2012a). Among its many initiatives, the Year has occasioned ageing-related NGOs from nearly 30 countries to form the online platform, the AGE Platform Europe. (To express its affiliation with the European Year project, it has chosen the .eu top-level country code for its website, age-platform.eu.) Of interest initially are the actions and specific roles of the European non-governmental organizations in the research and provision of well-being strategies for the elderly as the populations grow older. How is the issue being addressed and by whom? How is ageing being made into a matter of concern? In other words, how is it being issuefied?

NGO umbrella websites can be said not only to organize activities and mobilize actors into collective action but also express an issue agenda (Warkentin, 2001; Carpenter and Jose, 2012). Here we study how particular actors (non-governmental, governmental, and others) render ageing as their issue. The language they use and the alignments they make also may demonstrate how issue professionals create or revive a matter of concern. Issuefication, which is examined here, may be described as the labour of each entity participating in a debate or as a set of skilled activities, which invite the actors to *make a difference*, and so to remain active and associated in a network of the issue.

2.2   How to trace associations: Operationalizing social cartography using digital methods

'If a dancer stops dancing, the dance is finished. No inertia will carry the show forward' (Latour, 2005, p. 37). This carefully constructed analogy, put forward by Latour, alludes to the movement necessary to create the fabric of the *social*, which is in a continual state of reconfiguration by virtue of the associative dynamics of actors creating and recreating ties. So as to be able methodologically to trace the social as it comes into state, the researcher must not resort to considering it 'a special domain, a specific realm, or a particular sort of thing, but only as a very peculiar movement of re-association and reassembling' (Latour, 2005, p. 7). Insisting on the study of dynamics, Latour also believes that the demonstration of any kind of social artefact or order must be constantly renewed, as it 'can never be simply postulated' (2005, p. 53). For Latour, 'there is no society [...] but there exist translations between mediators that may generate traceable associations' (2005, p. 108). The traceable associations that arise from these dynamics should be described, rather than interpreted, and the analytical frameworks, if at all deployed, arise from the actors' accounts, rather than the analysts'. How to map the action?

Building on the work of Latour, Tommaso Venturini has developed a detailed methodological toolset for the application of social cartography. To map one must go as slow as possible and also be methodologically promiscuous, as the use of different toolsets may output complementary – or even oppositional – viewpoints that enrich the overall research work. Multiply the methods, tools and maps. The general instruction to the researcher, again methodologically, is the necessity of giving actors the benefit of the doubt (and thus the floor or the microphone), and to recognize the value of their ways of seeing and their accounts of the topic at hand, thus in a sense turning over to the actors method as well as theory.

When is one able to chart the movement of the social and trace associations? When does the social scramble (so to speak)? The rationale for choosing controversies (over other phenomena to study and map the social) lies in the moment and its productivity; controversies stir up the social, its richness, and its dynamics. They prompt movement. With the involvement of different (and unequal) actors, the tendency is to expand the debate and delay its immediate resolution, and the conflict or opposing viewpoints they stimulate are all important features to justify the investigation of controversies. In other words, as associations are forged, and oppositions developed, the constant renegotiated nature of the social is palpable through

the unfolding of controversies. As Venturini puts it: 'both liquid and solid at the same time [...] in a ceaseless mutual transformation [...] the social is unremittingly constructed, deconstructed and reconstructed' (2010, p. 264).

Venturini puts forward certain rules in the selection of a relevant and researchable controversy, touched upon in the introduction. The first two are somewhat similar, *avoid cold controversies* and *avoid past controversies* (2010, p. 264). Ideally, controversies must be at the peak of their debate activity, and the observer should not be chronologically removed from them. The third rule's importance, *avoid boundless controversies*, is discussed in terms of doability, where the choice to map not climate change (the big issue), but climate change adaptation (the narrowed issue) would be a case in point. And as the social is stirred by debate in public or out in the open, the fourth rule states *avoid underground controversies*, or those which may slope towards conspiracy theory.[1]

The tracing process follows a specific set of pathways, beginning from *statements and moving to the literatures*. To map the controversy, one makes a collection of arguments (expressed as slogans, phrases, keywords, terms, etc.) aired in the chosen debate involving the matter of concern, and from these statements demarcates the literature (or corpus). Where and by whom are these statements being made and taken up? By tracing the web of relations of those arguments, and identifying the actors involved in their production/dissemination, one moves on from *literature* to *actors*. As the researcher identifies the web of relations of those actors, that is, how they relate to each other and to the arguments, she is directed from *actors* to *networks*. Subsequently, the researcher seeks to identify *cosmoses*, or the underlying ideologies that organize the networks.[2] Finally, Venturini states that actors (and not scholars) 'are responsible for deciding controversies', a comment that positions the researcher as having a limited impact on the objects and subjects of study (2010, p. 268). To summarize Venturini's perspective on the topic of the politics of controversy mapping, 'the cartography of controversies takes the strongest political stand: not just changing the world, but giving others the chance to do so' (2010, p. 269).

In a separate text Venturini also describes how to map, in the sense of which statements, literatures, actors and so forth to choose from, and whether (and how) to order them: 'the task of unfolding the complexity of controversies should never be separated from the task of ordering such complexity' (2012, p. 797). The main challenge of this aspect of the cartography of controversies lies in properly attributing relevance to all the points of view, and at the same time attributing the significance of some over others, according to the rule of proportionality. 'Being proportional in

social cartography means giving different visibility to different viewpoints according to 1) their representativeness, 2) their influence, and 3) their interest' (Venturini, 2012, p. 798). Not all statements are equally interesting to the actors and not all actors are mediators who can change the course of action of a debate. It is important to communicate these differences through the mapping. It is also important to retain hierarchy. Equal weight should not be given to both sides of the story (or to the many facets). There should be no 'talk show [...] equity' (Venturini, 2012, p. 798).

The main advantages of conducting such research through collecting web data and applying digital methods are the *accessibility*, *aggregability*, and *traceability* of the statements and literatures as well as their connection to actors and of actors to each other. Associations between these elements can be identified through the traces left by digital behaviours and specifically those on display such as outlinks (connecting one digital space with another), shared vocabularies by actors in comment sections on blogs and news sites and in the frequency of keywords in sets of documents, to name just a few. They can be identified, clustered, mapped, and the resulting work can be stored, re-accessed, and re-evaluated. One may make numerous maps, multiplying the views, and each dot may be traced back to the source. Meeting the social cartography protocols, the traces are hard-linked, and the maps are reversible.

Having briefly mentioned the guidelines of combining controversy mapping with digital methods, we proceed with the mapping of the issues surrounding the ageing debate with a kind of preview. First, we study the ageing issues as they are defined by AGE Platform Europe on their newly updated .eu website, and compare them to the issue lists of the local NGOs who have joined the platform. The research asks, What is present on the European agenda, in the particular format of the Year as formulated by the Platform, and how are these issues spread among local NGOs doing the issue that year? We examine which issues gain visibility in the local contexts, and which local issues (so to speak) are not on the EU agenda. If there are increasingly no specific issues in member states, in a domestic realm, could we speak in terms of the Europeanization, or EUropeanization, of ageing issues?

Subsequently, we zoom in on how ageing is issuefied in a single member state (Poland) via the AGE Platform members based there. The decision to move to Poland is made not only because of the specificity of its issues and formats (e.g., Grandmother's Day and the University of the Third Age), but also because we found that Eastern European countries (as EU newcomers) have been adopting the EU issue framing more than other EU countries (as

represented by the activities of the NGOs). Thus we are interested in how to describe and interpret the Europeanization of issues in newcomer countries.

In the next undertaking, attention is paid to those formats that are most dominant in the domestic debates on ageing-related controversies (on the stages we have managed to capture, in the U.K. and again in Poland). We look at the British debate over public sector pension reform, where there were street protests and strikes in 2011 and 2012, mapping the actors and alignments that are particularly relevant. Not only is there a tension between issue languages (as one would expect in a debate), but also different cosmoses may be identified through reference to such mundane objects as tea and pens. Those who have time to drink tea (and organize tea parties) as well as those who wield or push the pen as an instrument of power are cosmos-subjects, so to speak, in the retirement age controversy network. The last step is to map the Polish pension and retirement reform debate, where the proposal is to raise the retirement age to 67 for both men and women, who previously retired at ages 65 and 60, respectively. Mapping as a practice becomes all the more apt when it is observed that protest marches follow the precise route of legislation in the Polish capital, Warsaw, from the parliament to the prime minister's office. In Poland, unlike in the European Year of Active Ageing, retirement becomes a women's issue not only for the differentiation in retirement age, but also for older women's discrimination in the workforce. Also introduced are instantiations of 'active ageing' that do not include working longer. Ultimately, however, federal legislation passes under the banner of Europe's active ageing, the EU language employed by the Polish government to legitimate the goal of raising the retirement age.

2.3   Ageing as a European issue? The EU initiatives and local agendas

The intention of the first part of the project is to map ageing issues (matters of concern) by examining the AGE Platform Europe, a significant group formation for making and addressing the ageing issue in Europe. The network is comprised of approximately 165 European NGOs, unified by an interest in working with issues surrounding 'people aged 50+' (AGE Platform Europe, 2012a). As previously described, the decision to map issues surrounding ageing within Europe also is taken in relation to issue activity, and the launching of not only the 2012 European Year for Active Ageing but also the AGE Platform Europe. On the Platform is a directory of all partner organizations with their respective contact information, including websites (AGE

Platform Europe, 2012b). To collect data to map, one central organization from each EU country is selected from the directory and their respective websites harvested. Using the news archives from each of the websites, all news releases from January to December 2011 are logged; within each news report, the issue being addressed is recorded, along with the primary actors indicated from the report – such as professionals, institutions, research projects, etc. In terms of Venturini's pathway method, we start with a list of statements or in fact keywords. By recording the data separately per month, it is possible to add an extra layer of analysis that shows if there is a link between time of year and issue prevalence, and if certain countries could be considered issue leaders.

It is important to note the rationale for NGO inclusion in the corpus. The fact that some member countries do not have registered NGOs, or that the available NGOs do not have websites, or that many of those websites lacked the required news section, or the relevant period archived, ultimately narrows the data set to 14 countries. (Here we recall that the World Wide Web is not the world.) When there is more than one candidate, the organization deemed most significant is chosen, so that we retained hierarchy (some NGOs are much larger than others) but also representation from smaller as well as newcomer states. The final list includes the websites from FNG (France), 50 Plus (Greece), ADA (Italy), Projecto Tio (Portugal), CEOMA (Spain), Association Balta Maja (Latvia), Foundation Samaritanus (Poland), Zivot 90 (the Czech Republic), Forum Pre Pomoc Starsim (Slovenia), Charity Association Donka Paprikova/Tulip Foundation (Bulgaria), Age U.K. (the United Kingdom), Age Action (Ireland), Seniorer I Tiden (Sweden) and the Slovenia Federation of Pensioners (Slovenia).

A first impression is that a heightened sense of the local is behind the multiplicity of viewpoints in the debate; there is a total of 163 issues and sub-issues addressed by the AGE Platform members. Working on the assumption that an issue shared by many of the actors deserves more visibility than others (the significance point made by Venturini), a visibility hierarchy is put forward in a representation – a word cloud, or in fact an issue cloud (see Figure 3). For an issue space, clouds display the salience of issues and sub-issues, and to emphasize this point, Figure 3 includes an inset, a zoom into the issue cloud, depicting the marginality of 'violence against the elderly' in relation to those more resonant.

The greater the number of actors behind the issues the higher the level of visibility for the issues inside the cloud, with the top ones across this data set being pensions, Alzheimer's, active ageing, IT skills, health, care homes and healthcare. Health-related issues tend to form a major cluster

Fig. 3: *Ageing issue cloud*, cumulative with inset. The cloud visualizes NGOs' ageing issues, extracted from the news sections of the AGE Platform Europe members' websites, January to December 2011. The issues are resized according to frequency of mentions. The inset shows the marginality of the issues, such as violence against the elderly, in relation to the most prominent keywords in the cloud. The cloud is produced using Wordle.net, and the inset is added manually. AGE Platform Europe members: http://www.fng.fr, http://www.50plus.gr, http://www.adanazionale.it, http://projectotio.net, http://www.ceoma.org, http://www.baltamaja.lv, http://www.forum50.org, http://www.zivot90.cz, http://www.forumseniorov.sk, http://www.zdus-zveza.si, http://www.tulipfoundation.net, http://www.ageuk.org.uk, http://www.ageaction.ie, and http://www.spfpension.se.

inside the cloud. The cluster groups such issues as health (issues related to the actual state of health of older people) and healthcare, but also specific conditions that we note are more prevalent in the language of Western European countries: Alzheimer's and dementia. Pensions and IT skills are two matters of concern that stand out from other issues and are in the top

five according to actor reference, but also active ageing almost as if in step with the EU policy preferences for 2012.

At the same time, as Venturini argues, the social cartography space should also be filled with the presence of 'disagreeing minorities', for despite their marginality, they have the potential to unlock 'original perspectives', or in this case reveal powerful senses of the local (2012, p. 798). This approach in turn is two-fold: discover the issues as well as their owners and locations. Thus, first, the considerable number of smaller issues and sub-issues in the cloud that are supported by figures lower than ten actors represent a galaxy of diverse European NGO activities directed towards the needs of the elderly, with such interesting examples as sports and cultural activities for the Nordic countries: creativity, writing, elderly emotions, table tennis, and recreation; or for certain Southern and Eastern regions, another set of issues: violence, world day to combat violence against elderly, emergency care and assistance. There is even a specific issue (or issue format) in a country, Grandmother's Day and (a day later) Grandfather's Day in Poland. All together, approaching the most and least visible issues in the cloud, according to the countries providing the actors mentioning the issues, we can gain a sense of majorities, minorities, and the local. Old Europe, a reference to non-newcomer EU countries, tends to be more active in the issue space, in Latourian terms perhaps acting as mediators, or at least influencing the distribution of issue visibility inside the cloud, with the U.K. being a suggestive example in that it introduces nearly by itself the most representative issues in the top ten. The NHS reforms and care homes (as perhaps the specific language indicates) are issues discussed in the U.K. NGO space. Country clusters also emerge when focusing on the type of actors and referencing behind the most representative issues in the cloud. Thus established EU countries such as the U.K., Spain, France or Portugal are behind the Alzheimer's issue. Embracing active ageing (the EU issue frame) are such newcomers as the Czech Republic, Slovenia, Poland, and Latvia. By visualizing the issue space in this manner, it is also possible to ascertain the universality or locality of the issues and also the links formed between countries (so-called issue alignments). It can be interpreted as a visualization of how these statements (issue keywords) relate to each other, and therefore lead the researcher towards additional pathways. Now we ask, who are the drivers behind these issues (actors) and which are the associations between them (actor-networks)?

These relationships between issues and countries are subsequently mapped as a bipartite network, a network with two types of nodes, and then represented as an alluvial diagram, as mentioned in the introduction (see Figure 4). In identifying and analysing the main issues inside the data
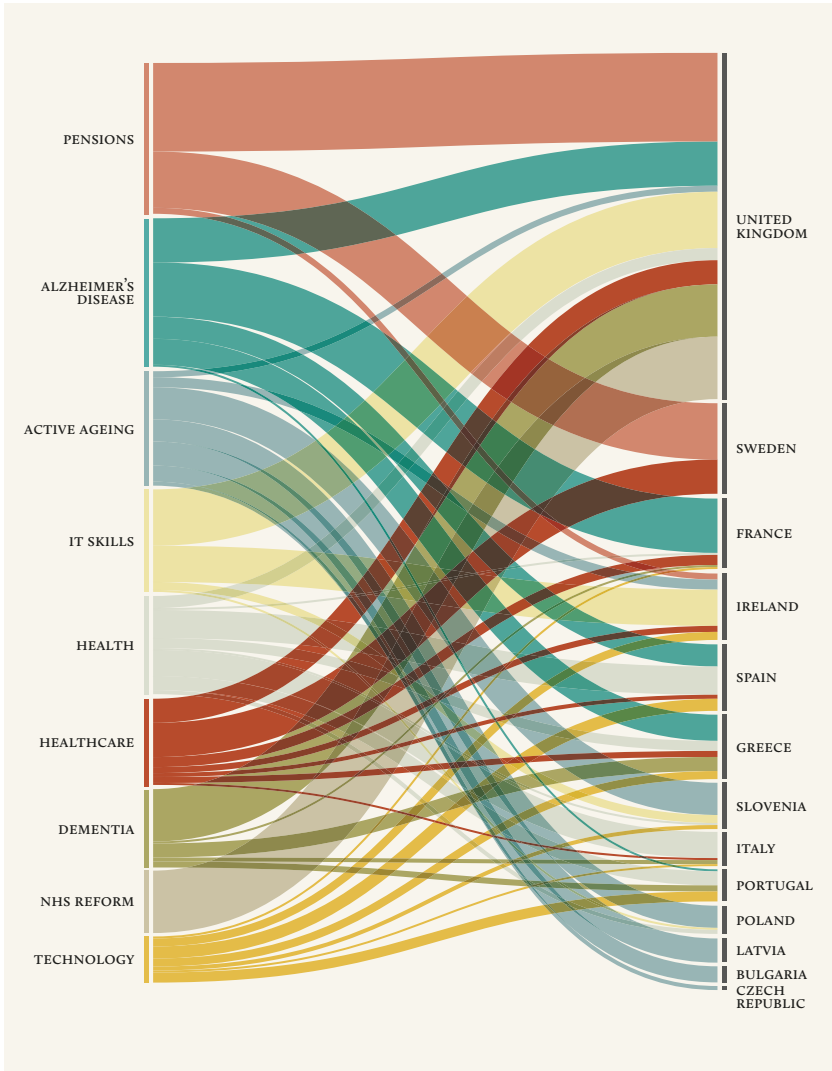
Fig. 4: *NGO issue distribution by country*, bipartite network, represented as an alluvial diagram. The width of the streams indicates frequency of NGO mentions of the issues, extracted from the news sections of the AGE Platform Europe members' websites, January to December 2011. Nodes located on left side of the diagram represent issues and nodes on the right side the countries where the organizations that mention the issues are located. The diagram is generated using the Pallozio script. AGE Platform Europe members: http://www.fng.fr, http://www.50plus.gr, http://www.adanazionale.it, http://projectotio.net, http://www.ceoma.org, http://www.baltamaja.lv, http://www.forum50.org, http://www.zivot90.cz, http://www.forumseniorov.sk, http://www.zdus-zveza.si, http://www.tulipfoundation.net, http://www.ageuk.org.uk, http://www.ageaction.ie, and http://www.spfpension.se.
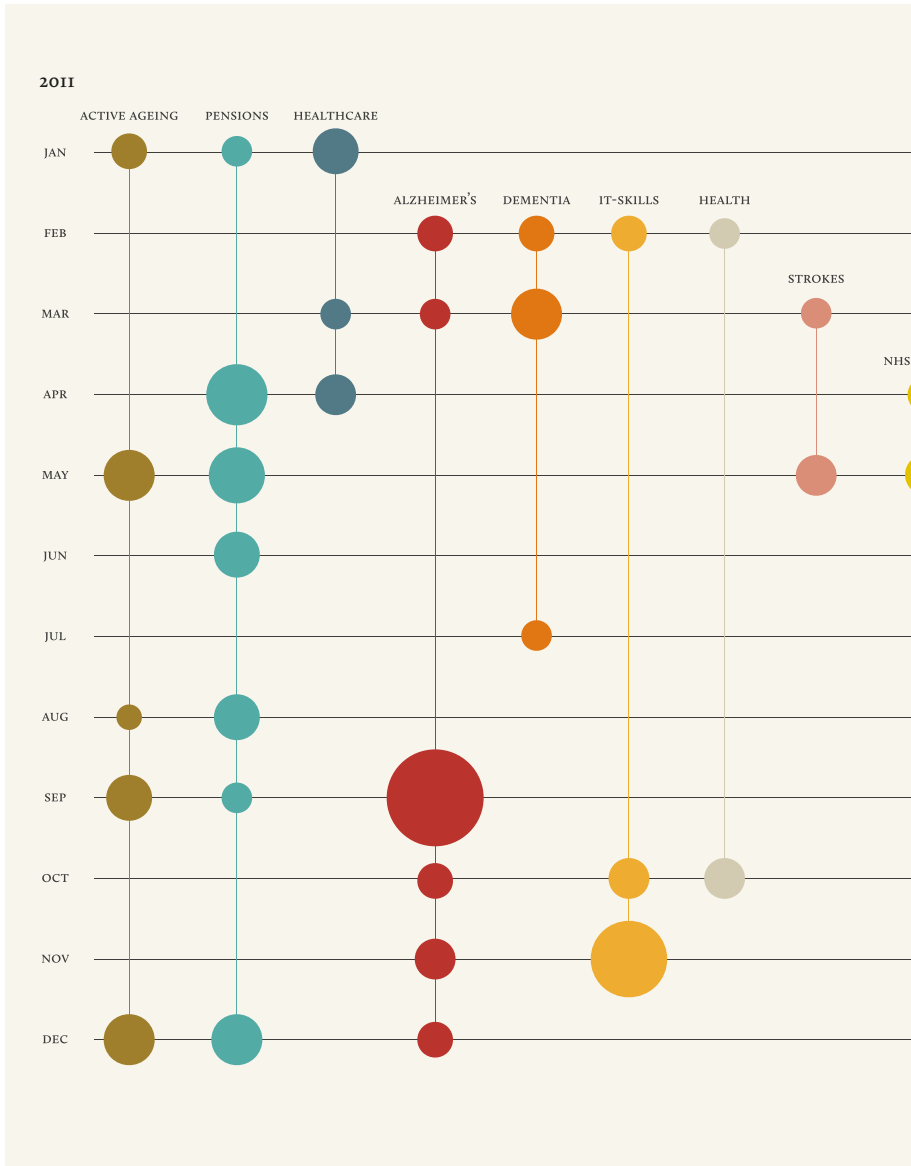
Fig. 5: *Ageing issue trends*, depicted as a bubble matrix chart, where the size of the bubble represents frequency of mentions. Chronological distribution of the top five NGO issues, extracted from the news sections of the AGE Platform Europe members' websites, January to December 2011. Since there are more categories than months, time is represented on the vertical axis, inviting the reader to read the chart from top to bottom. The left side of the graphic displays the issues that remain relevant in the news during the year 2011 and their variations per month, and the right side

SCAMS TECHNOLOGY	JAN
ELECTION MANIFESTO	FEB
NATIONAL CONGRESS OF ELDERLY NATIONS	MAR
REFORM AGE DISCRIMINATION RETIREMENT	APR
CARE HOMES	MAY
EDUCATION ELDER ABUSE	JUN
DIET INAPPROPRIATE ENERGY PRICES	JUL
HEART PROBLEM TRANSPORT BRAIN HEALTH	AUG
HEART CONDITIONS	SEP
DEPORTATION OF ELDERLY INTERNATIONAL DAY OF OLDER PERSONS	OCT
LEGISLATION VOLUNTEERING	NOV
LONELINESS	DEC

the issues that appear as isolated or as unique cases, as they were mentioned only once during the year. The chart is produced by repurposing Adobe Illustrator's built-in graphing tools. AGE Platform Europe members: http://www.fng.fr, http://www.50plus.gr, http://www.adanazionale.it, http://projectotio.net, http://www.ceoma.org, http://www.baltamaja.lv, http://www.forum50.org, http://www.zivot90.cz, http://www.forumseniorov.sk, http://www.zdus-zveza.si, http://www.tulipfoundation.net, http://www.ageuk.org.uk, http://www.ageaction.ie, and http://www.spfpension.se.

set collected from the AGE Platform's network of members, the resulting depictions are efforts in second-degree objectivity, i.e., showing not only what the issues are, but where they are and to whom.

When issue salience in the NGO news is mapped over time (throughout 2011), one takes note of the prevalence and temporal fluctuation of specific topics. In terms of temporal fluctuation, there are calendar, platform, and event effects. Issues may be associated with particular days of the year (dedicated days on the issue calendar as well as the European Year itself), with seasons or times of the year (holidays and issues) and specific events (issues arising from a news report). There are also relatively stable issues. What is initially clear from the Ageing Issue Trends chart is that certain issues maintain a strong presence throughout the year (see Figure 5). These include pensions; other prevalent topics are the related Alzheimer's and dementia issues, with Alzheimer's affected as well by the calendar, climbing, and peaking around World Alzheimer's Day on the 21st of September, an international calendrical issue format (like the national ones, Grandmother's and Grandfather's days in Poland). With respect to the issue of active ageing, the European terminology branding the Year, it was unable to maintain issue strength two months in a row but reappears as a relevant issue through the year, with interest peaking in December, just before the 2012 Year of Active Ageing is set to launch. There are also certain issues that could be seen to be gaining relevance owing to the specificity of the month in which they fall. Indeed, loneliness and volunteering become more prevalent issues in November and December as Christmas approaches. These are issues that are absent from issue lists throughout the rest of the year even though such issues would still be relevant to the actors concerned. Events also animate issues. There is a rise in care home mentions as elderly abuse becomes a visible issue, arriving specifically around the time of the reporting of abuse at Rostrevor House nursing home in Dublin in May 2011 and the financial difficulties faced by the central British care home provider Southern Cross in June 2011 (Age Action Ireland, 2011; Age U.K., 2011). There is also a strong indicator of issues specific to particular countries appearing on the chart. References to the United Kingdom's NHS become visible in one month, showing the main health service as a strong actor in concerns around ageing. This is visible with the separate Swedish issue of the deportation of the elderly and inappropriate drug use in other months. What is clear from this map is that very few issues maintain a strong presence throughout the year. The other issues occur at intervals in short, sudden episodes, peaking around particular issue days, seasons or news, and (for the 'active ageing' term) the fashioned European Year events.

Another conclusion to be drawn from this sub-study is that there is a geography of ageing issues – there are those common to countries and there are uncommon ones, too. There are issues shared by blocs of countries, so to speak, and European Year activities tie those as well as others together. As a case in point, regional concerns are identified, including the Western European countries' attention to Alzheimer's and dementia, mostly ignored in Eastern and Southern European countries. Newcomer EU members tend to embrace the new European projects, including the issues of the European Year. We first turn to the uncommon concerns, and take as our case local Polish ageing concerns, and the extent to which there remains activity around them, given the new European emphasis on active ageing.

2.4   Polish ageing NGOs, issue formats and the local variation on Europeanization

In order to study the specificity of local issues, and the extent to which the local issues are being Europeanized (especially in newcomer EU countries), we would like to take up the case of Poland (with its specific issue identified previously), again with AGE Platform Europe as the entry point. In the Platform, there are two Polish actors listed as full members: Foundation Samaritanus and the Foundation for Women's Issues ('Ja Kobieta'). The first has its own website, whereas searching for the latter leads to Forum 50+ Seniorzy XXI wieku, the association that gathers 22 Polish NGOs concerned with ageing under one umbrella website (with 9 of them having individual websites). According to its 'about section' it is an informal association of organizations that share the mission of improving seniors' quality of life. Samaritanus, the not-for-profit organization focused on the needs of the elderly, is also a part of Forum 50+. Using a digital methods tool called the Link Ripper, we gather the outlinks from the websites (usually found in the members section). In a mapping procedure, we draw a node and line map of the outgoing links from the websites (see Figure 6). With one exception, Polish ageing NGOs link only to non-Polish ageing organizations, both inside and outside Europe. There are no common co-links (i.e., outlinks to the same organization); that is, no two Polish organizations link to the same Polish or non-Polish organization, perhaps filling in the description of the umbrella group as an *informal association* of Polish NGOs dealing with similar issues. It also could indicate a splintering of the local, or loosening of local ties, owing to a lack of shared issues, or even because the international partnerships have become more significant than national ones.
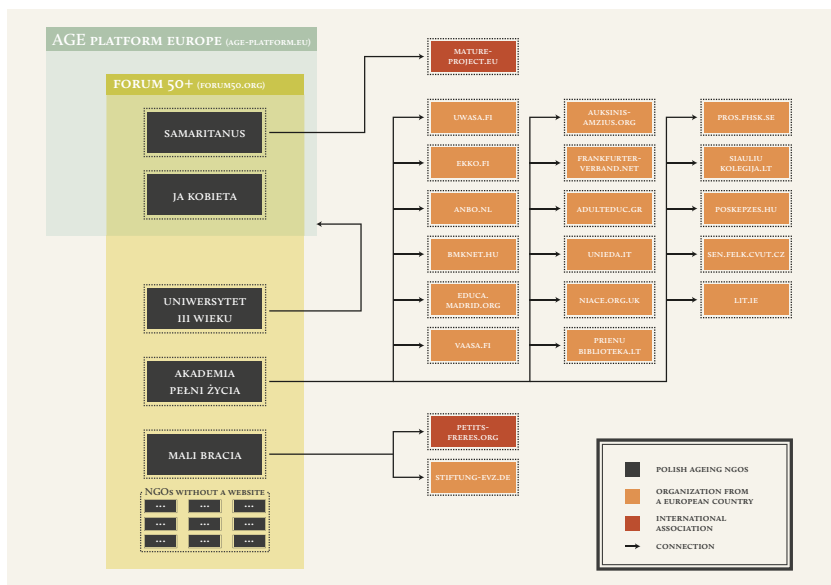
Fig. 6: *Polish ageing NGOs*, websites' outlinks map. Depiction shows outlinks from Polish ageing NGOs generally are not common, with each having different linkees, be they international or national partners, authoritative sources, etc. Links manually harvested from the websites of Polish NGOs listed on Forum 50+, http://www.forum50.org, 1 March 2012. The outlinks map is made by hand.

We set out to explore the hypothesis of the loosening of local ties by examining if the NGOs and their websites are associated by means other than outlinks. Since they do not interlink, what may hold this group together beyond their expressed participation in Forum 50+? How to otherwise trace their association or group formation, if it may be called such? Two additional types of queries are employed. First, the names of the NGOs are queried in order to determine if they are mentioned jointly by third parties. Under which circumstances are the NGOs mentioned or listed together? Second, we seek their inter-mentions. Do the NGOs mention each other on their websites, and in which contexts? Do they report on each other's projects, attend each other's events or otherwise group together? Here, in both cases, we are adapting (or inverting) Venturini's step-by-step mapping method, for we seek the actors and their networks, and only subsequently ascertain their statements and literatures (or, in this case, issues and projects). Overall, the analysis is conceived as moving away from an understanding of a network as a stable structure and instead, using a Latourian outlook, studying them as temporary group formations, where the ties holding the actors together are made and unmade through activity and movement. That is, we set out to follow common actor mentions by third parties and actor inter-mentions

so as to map when and how, even if momentarily, these Polish organizations leave traces of their acting together.

Only a small number (of the links retrieved through the first query) makes mention of the Polish NGOs together. They are described as taking part in common activities and events, including their celebration of the International Day of Older People 2012 in Poland. Forum 50+ has organized a picnic for the occasion. The second most significant NGO inter-mention by a third party is the European Year, and preparatory meetings and info-sessions where multiple ageing NGOs gather. A third is a conference, Zaangażuj się! (Get Involved!), organized in February 2012 by the Polish Ministry of Labour and Social Policy. In it a number of the NGOs are participating in a panel named, accordingly, Forum 50+. The ties that briefly bind and form the group appear to be effectuated by the greater calling of the European and national event calendar rather than joint projects, at least according to the engine returns.

To answer the second question (concerning inter-mentions) the names of the 22 NGOs are queried in each of the 9 available websites. When do they mention each other, and for which issues and projects? Are they principally nationally or EU-related? The presence of these inter-mentions is visualized as a network, where the nodes connect to each other by inter-mentions, meaning the name of an NGO appears on the website of another NGO (see Figure 7). The central organizations in the group are Mali Braci Ubogich, focusing on fighting the marginalization of the old and specially addressing the issue of loneliness, followed by Espar50+, dedicated to promoting physical activity in people over 50 years old and connecting generations through recreation. Espar50+ is also the coordinator of Forum 50+. Ja Kobieta, the women's issues NGO (and member of AGE Platform Europe), is also one the larger, central nodes, given the numerous mentions it receives, and one at the time of the query without a website. Foundation Samaritanus (the other member of AGE Platform Europe) is also significant. These organizations are central in the network because the names of the other NGOs are most frequently mentioned on their websites and they are, at the same time, most mentioned by other NGOs; it could be said that they are performing work to form the association and define its boundaries. In the analysis, however, it becomes evident that these central nodes do not mention each other with any great frequency or regularity, apart from the occasions of events (such as the International Day for Older Persons but also Senior Days (when a fair with exhibitors attracts NGOs) as well as the European Year activities. Ja Kobieta is the exception, with particular projects (e.g., finances workshop and a portraits competition for 50-year-old women), announced by other NGOs.
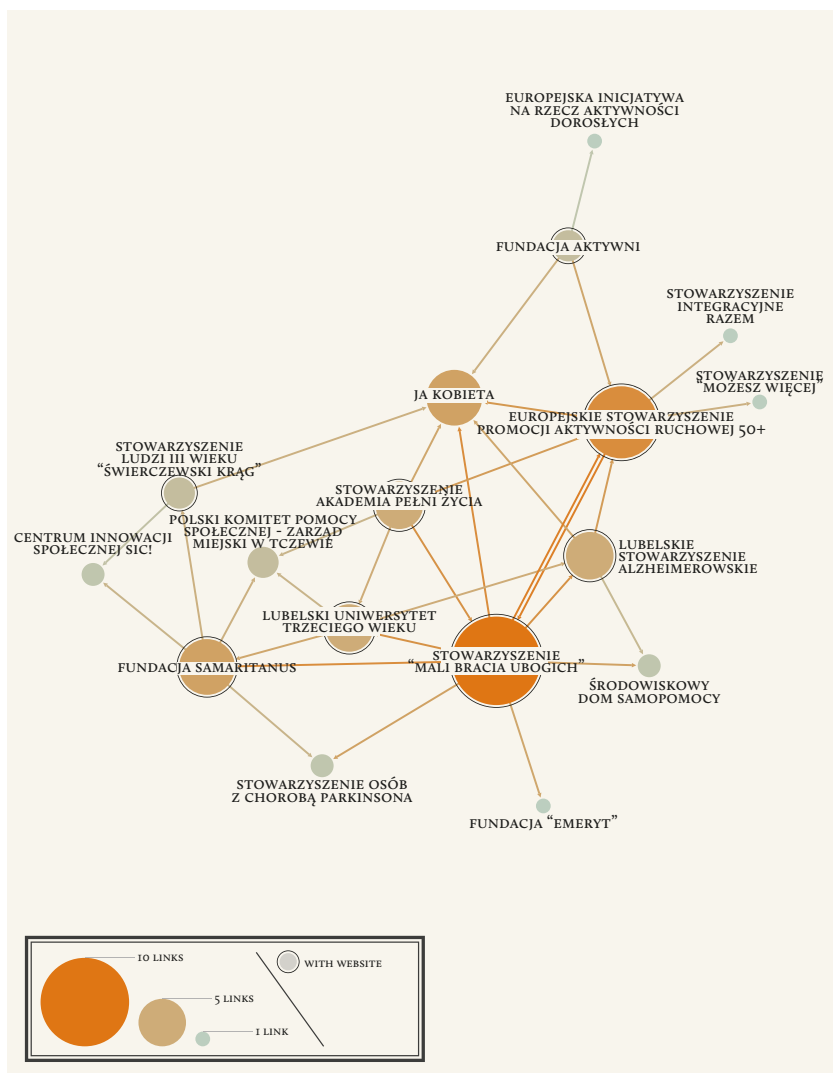
Fig. 7: *Polish NGO inter-mentions map*, depicted as a directed network map, providing a means to trace associations between these organizations online. Links (or edges) appear between the nodes when the name of an NGO is mentioned in one of the websites (inter-mentions). The size of the nodes is determined by the total degree (or number of mentions), and the nodes representing websites are ringed. The inter-mentions occur mainly in connection with shared participation at conference panels and events on 'issue days' such as the International Day of Older People. List of Polish NGOs is from Forum 50+, http:// www.forum50.org. Queries made with Lippmannian Device on 2 September 2013, and converted from a tabular to network data format with Table2Net. The network is produced using the network visualization tool, Gephi, and its built-in layout algorithm, ForceAtlas2.

In sum the NGOs grouped under Forum 50+ do not share outlinks, are only occasionally mentioned together by third parties, and the most central organizations in the larger network do not mention one another significantly. When they do name each other the occasions are calendrical, including local Senior Days, International Older People's Day and the European Year of Active Ageing. The issue calendar, so to speak, appears to be by far the most important impetus for group formation and association. Returning to the original question, the loose ties of the Polish NGOs during the rest of the year cannot be attributed, at least according to these small studies, to the Europeanization of the Polish NGOs and issues. On the contrary, the framework of the European Year and events taking place in it appear to be strengthening a group formation that otherwise seems fragmented, as the outlink, third party and inter-mentions analyses showed. Also of note is the Year's impact on issue mapping. Whilst many of these Polish NGOs could have been invisible to our research techniques prior to 2012, it is the Polish participation in the European Year that not only has brought them together on more occasions, but also made them visible to a European ageing issue mapping.

Indeed the challenge faced during the study of this particular group formation has been the lack of a significant online presence of certain members of Forum 50+ (especially Ja Kobieta), and the implications for online issue mapping. In an attempt to grapple with their offline-ness (so to speak) and still map them with online data, we have employed such strategies as querying for all the names of the NGOs and searching for traces of their behaviour outside of their own space. We also sought inter-mentions, but in both cases the results are sparse, leading to the conclusion that the groups act together on very specific occasions. Without introducing mixed methods (such as interviewing them), it is difficult to conclude otherwise. Here we return to Venturini's warning that the web is not the world, and add that (three) separate and similar web findings still may require further grounding.

The next step in the analysis of the Europeanization or re-localization of Polish issues is to compare the issues of Polish NGOs with those of the main areas of European policy on ageing, according to the website run by the AGE Platform Europe in connection with the European Year. Do Polish organizations share issues with Europe, so to speak? In order to study ageing issue matching and mismatching between Poland and the European Year, we compile an issue list from the Polish NGO websites, where the keywords are nestled under menu items called issues, or otherwise manually extracted. The European set of keywords or statements is taken

from the AGE Platform Europe's list of seven essential policy areas: accessibility, anti-discrimination, employment and active ageing, health, social inclusion, social protection, and solidarity between generations. We first line up the issue lists side by side, so as to gain a sense of the extent to which the Polish issues resonate with Europe's (see Figure 8). While the EU issue list is shorter, there is some overlap between the two, with the Polish terms being somewhat more poignant and the EU's more polished (exclusion, isolation, dignity, discrimination and integration are employed by the Polish NGOs, and anti-discrimination and social inclusion by the EU). Using the Lippmannian Device we also query each of the Polish NGOs for each of the Polish terms, and AGE Platform Europe for each of Europe's issues; this particular query design provides each space's issue hierarchies. Whilst cool (in the sense of a heat list), the European language of inter-generational cooperation has entered the Polish space, as has volunteering, the theme of the 2011 EU Year. The Polish emphasis on ageing women, or ageing as a women's issue, stands out in the contrast between the two issue lists, as does sport and education, showing the interest in such initiatives as the University of the Third Age. There also seems to be a divide in how to fill in the notion of 'active' ageing – where the one refers to working longer, and another to fitness.

Above we found both the trickle of EU issues into Polish ageing vocabularies (inter-generational, volunteering) as well as a particular cleft between the two, with women's issues and active ageing (without joining the workforce) being significant subjects of interest to Poland only. Having pinpointed local issues (not specifically on the EU issue list), we are interested in how those are done in Poland. Ageing NGO attention to women's issues and active ageing are also consistent with the findings made from the link analysis. Among the links extracted from the Polish NGOs' sites are to women's organizations concerned with older women's issues, integration of women of all ages, and overcoming issues with ageing through mountain climbing (menopauza.pl, kobieta50plus.pl, stowarzyszenie-kilimandzaro.pl). Also on the map is the Active Foundation ('Aktywni'), the NGO that combines ageing issues with sporting activity, especially Nordic walking. Nordic walking sticks are not only used by older people to stay fit, but they actively contribute to new representations of ageing and may be considered rather as mediators than intermediaries (returning to Latour's distinction), insofar as they redo the 'active ageing' issue. Such an enunciation of active ageing is not necessarily fully incompatible with the EU's, though the emphasis lies outside of the workplace.

AGE PLATFORM EUROPE	POLISH AGEING NGOS

SHARED ISSUES

ANTI-DISCRIMINATION	PREVENTING DISCRIMINATION
HEALTH	HEALTH PROMOTION
SOLIDARITY BETWEEN GENERATIONS	COLLABORATION BETWEEN GENERATIONS
SOCIAL INCLUSION	INTEGRATION

UNIQUE ISSUES

ACCESSIBILITY	ACTIVATION
EMPLOYMENT AND ACTIVE AGEING	ACTIVITY PROMOTION
SOCIAL PROTECTION	ALZHEIMER'S DISEASE
	CARING
	EDUCATION
	EXCLUSION
	GERONTOLOGICAL PROPHYLAXIS
	INDEPENDENCE
	PATIENTS' DIGNITY
	PREVENTING ISOLATION
	RECREATION
	SPORT
	STEREOTYPES
	TECHNOLOGICAL CHANGE
	VOLUNTEERING
	WOMEN'S ISSUES

MIN   FREQUENCY   MAX

Fig. 8: *Comparison of issue lists between AGE Platform Europe and the Polish ageing NGOs*, visualized as heat lists, shaded according to frequency of mentions. The warmer the colour, the greater the frequency of mentions. Identical words are placed next to each other in order to facilitate comparison between the two lists. Sources: AGE Platform Europe, http://www.age-platform.eu, and Polish NGOs in Forum 50+, http://www.forum50.org, 1 March 2012.

Finally, the Polish NGOs, if they resort to such a definition, use 50 as a lower limit, above which one has aged, whereas the European Year of Active Ageing speaks of life over 60, and indeed over 70 and 80, thereby raising the age that is associated with issues. The age for ageing varies per issue space.

2.5 Which issue formats lend themselves to domestic debates on pension reform? The cases of the U.K. and Poland

As discussed above, the ageing-related issues that animate NGOs in European countries differ somewhat from each other (along particular geographical lines), and in comparison to the European agenda. Poland, for example, has a certain specificity to its issues, at least when one studies the non-governmental organizations. Here we move in the mapping away from the differing minorities to central players in the issue cloud, so to speak, and focus on U.K. political parties in an issue mapping of pension reform and the larger *problematik* of the welfare state. Having mapped language, actors, and alignments (along issue-geographical lines), our focus moves also to the cosmoses, especially the terms (and objects) that appear to do ideological work, providing markers that organize a debate along those lines, too.

2.6 Tea and pens as 'cosmos-objects' in the British public sector pension reform debate

In late November 2011, approximately two million members of U.K. unions staged a strike, the largest British industrial action in decades. Part of a series of actions, the strike was in protest of the government's proposed public sector pension reforms: future pensions calculated on the basis of a career-average scheme, rather than final salaries, an increase in monthly pension contributions, and an older retirement age. Especially the rise in the retirement age is a controversy coursing through British politics. The proposed rise in the public sector retirement age is from 65 years of age to 66 by 2020, 67 by 2028 and 68 by 2046. Prime Minister David Cameron has argued that it is an absolutely necessary measure as there is significant difference between public sector pensions with a lower retirement age and private sector pensions (Ross, 2012). The argument is as life expectancy has now increased, so should the retirement age, thus giving people the chance to work a couple of years longer. On the other hand, leading figures from the Labour Party have stated that in their opinion the reform program is an attempt at 'mass privatization' and that soon enough the reform will abrogate public sector pension rights and prompt the outsourcing of public sector services to the private sector (Curtis, 2011). Organizations and associations are also positioning themselves. For example, the National Union of Teachers has been organizing marches. The British Medical Association, representing doctors and medical students, decided to suspend industrial

action, taking part instead in the government's Working Longer Review board. Besides those protesting and those participating in governmental processes, there are also strong supporters of the reforms, including the Confederation of Business Industry, Institute of Directors, Taxpayers' Alliance, British North-American Committee, and Department for Communities and Local Government.

Given the heightened issue activity, the mapping of the public sector pension reform controversy is a timely exercise. Employing both Latour's and Venturini's insights, including the pathway approach to mapping (moving from statements to literature, from literature to actors, from actors to networks, from networks to cosmos and cosmopolitics), we aim to sketch out the state of the issue, and how it is animated in political discourse. Ultimately, in that space, we find what could be called cosmos-objects – those things (non-humans) such as tea, pens, and strikes that drive wedges and also represent alignments.[3]

One has time for tea (and tea parties) when working others do not. One exercises power with the stroke of a pen. Strikes are unspeakable outside of the fringe parties. Indeed, actors' usage of such objects may be just as telling or more so than the everyday issue framing or specific use of particular issue terms by one party over another, such as Conservatives' persistent use of 'state pension' versus Labour's 'public sector pension'.

We start by exploring the web (and, in particular, news-related websites) for statements, and we trawl the literatures, including government documents on official pages of government agencies, current or archived newspaper articles, reports by independent or state agencies as well as expert points of view on various websites. Studying the literature directs us to a number of actors (those mentioned, referenced, or quoted in the literature). For example, *The Guardian* newspaper reports that on 30 November 2011 the strike against the proposed reforms

> saw walkouts by tens of thousands of border agency staff, probation officers, radiographers, librarians, job centre staff, court staff, social workers, refuse collectors, midwives, road sweepers, cleaners, school meals staff, paramedics, tax inspectors, customs officers, passport office staff, police civilian staff, driving test examiners, patent officers and health and safety inspectors. (Carrell et al., 2011, n. pag.)

Together with the political actors discussed at the outset, all listed above also can be considered as actors and even mediators (in Latour's sense), for they participated in a strike that put the social in motion. Each may not be

Fig. 9: *Cloud of ageing issues on the websites of U.K. political parties, unions and associations involved in the pension reform debate*, with issues resized according to frequency of mentions. Keywords extracted from news and other literatures on the pension reform debate in the U.K. and queried across the totality of websites on 26 February 2012, using the Lippmannian Device. The actors frequently use objects such as wheelchair, bill, pen, walker, classroom, and tea, while other issues such as police pension or picket line appear to be more marginal. Keywords are inputted in the word cloud generator, Wordle.net, and later retraced using Adobe Illustrator. Sources: Unions and associations – http://www.aca.org.uk, http://www.athrawon.com, http://www.atl.org.uk, http://www.bma.org.uk, http://www.bnac.org, http://www.cbi.org.uk, http://www.communities.gov.uk, http://www.cspa.co.uk, http://www.eiopa.europa.eu, http://www.fbu.org.uk, http://www.gmb.org.uk, http://www.iod.com, http://www.napf.co.uk, http://www.nasuwt.org.uk, http://www.nhs.uk, http://www.pcs.org.uk, http://www.pensionpolicyinstitute.org.uk, http://www.pensionprotectionfund.org.uk, http://www.pensionsreform.co.uk, http://www.prospect.org.uk, http://www.public-sector-pensions-commission.org.uk, http://www.straightstatistics.org, http://www.taxpayersalliance.com, http://www.teachers.org.uk, http://www.thepensionsregulator.gov.uk, http://www.tuc.org.uk, http://www.ucu.org.uk, http://www.unison.org.uk and http://www.unitetheunion.org. Political parties – http://www.allianceparty.org, http://www.conservatives.com, http://www.dup.org.uk, http://www.greenparty.org.uk, http://www.labour.org.uk, http://www.libdems.org.uk, http://www.sdlp.ie, http://www.sinnfein.org, and http://www.snp.org.

queried directly, however, in a digital methods procedure. So, we compiled a list of political parties as well as unions and associations representing the strikers, and, using the Lippmannian Device, queried those for the terms we collected in the literatures, as we discuss. The results are visualized as a word cloud, where issues are resized according to frequency of mentions (see Figure 9).

Before coming to the findings, it is instructive to mention briefly how certain objects made our list of keywords, and why we came to think of

them as cosmos-objects. Single-user comments on newspaper websites (such as that of *The Guardian*) produced a number of keywords of some pertinence. The first is 'tea'. In some cases 'tea' acted as a class indicator, a symbol for divide within the public sector between those working in menial, low-paid jobs, and those that do well in the British government by earning a lot more per annum. Such a divide was exemplified not too long ago in a scandal in which government officials, members of Parliament, and ministers were claiming personal expenses as government ones, e.g., on mortgages for second homes. The same idea is given by a union officer from GMB, Britain's general trade union, deriding an idea for a 15-minute strike: 'Maude's proposal for a 15-minute strike is a daft idea. We are asking members to vote for a strike not a tea break' (The New Worker, 2011, n. pag.). A tea break in this instance would signify a lack of fight and willingness to commit to a strike. Another example is how the mayor of Derry, a well-paid member of government, as is said, was forced to cancel his tea party because of strikes. The mere act of cancellation demonstrates a conflict between tea, and those who can hold tea parties, versus those affected by public worker strikes – people who are after basic pay. Here is a comment from *The Guardian* website posted by a user called 'Mokkie': 'I am sick and tired of the constant undermining and slander of public service workers, as if we just sit around drinking cups of tea' (Waldram, 2011, n. pag.). Here is another one by 'Victoria Jones': 'I can't tolerate a government that depicts me as a lazy, pen-pushing, tax-draining bureaucrat who spends my working days drinking tea while waiting for my fat cat pension' (Waldram, 2011, n. pag.). To suggest public service workers sit around drinking tea may be considered derogatory towards the workers themselves. We read of tea drinking as an activity for those who have time to do so, or even see tea as a symbol of lax as well as leisure behaviour. Victoria Jones is seeking to defend her image and explain that she is not a tea-drinking bureaucrat, which brings us to related object, 'pens'.

The contract signed by public employees when taking the job of teacher and healthcare worker included a pension. 'I know of no other contract where one side can impose major change at a late stage at the stroke of a pen'; 'Anne D.' repeats a similar message about governmental pension reforms: 'What other contracts are there where one side can impose big changes through a stroke of a pen?' (Waldram, 2011, n. pag.). Pens here in this instance are wielded by high-ranked government officials and bureaucrats.

Among the objects sought on political party and union websites (through searching them via Google, using the Lippmannian Device) were not only tea and pens, but others collected from the literature, certain of which are
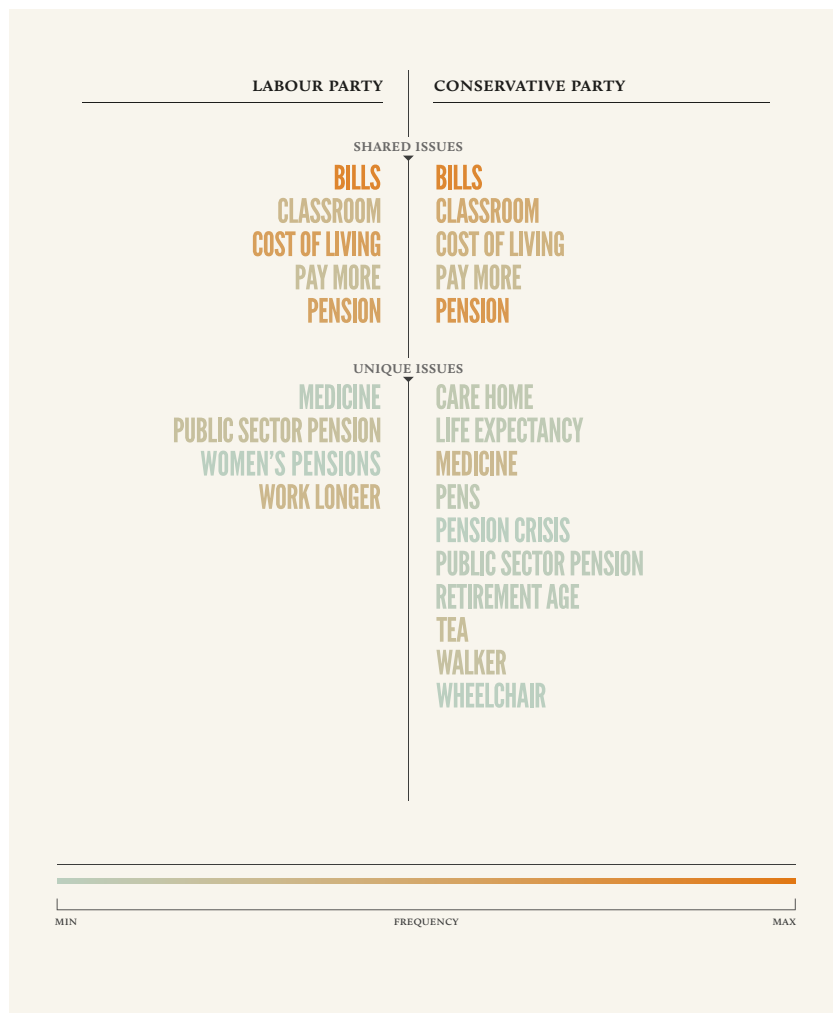
Fig. 10: *Lists of ageing issues and issue objects on U.K. Labour and Conservative Parties' websites*, heat list, shaded according to frequency of mentions. The list (made on 26 February 2012) compares the use of keywords by Labour and Conservative parties involved in the pension reform debate in the U.K. Certain keywords may be described as cosmos-objects or objects that embody and express an ideology. Notable elements are the use of tea and pens in relation to those who do not experience the consequences of the pension reform. Sources: http://www.conservatives.com and http://www.labour.org.uk.

materials that imply more expensive healthcare services. 'Zimmer frame', 'wheelchair', and 'medicine' mean bills and effects on the cost of living, items that recur frequently across the mainstream parties' sites. Figure 10 highlights the Conservatives' keyword frequency on their website, where wheelchair, medicine, tea, and pens are in evidence. Teas and pens are

absent on Labour's site. When viewing keyword output for Labour, two other words stand out: 'pay more' and 'women's pension'. Additionally, the flaunting of the term 'public sector pension' demonstrates their openness to the controversy.

The choice of words, diction used by parties on their respective websites, are also indicators of their associations. For example, it is interesting to note that 'public sector strike' (notably 'strike' in the search term) has only brought results in smaller parties such as the Scottish National Party, SDLP, and the Green Party. Put differently, it is also the lack of the term appearing on the current government's website that creates an association between the fringe parties and public sector workers.

Fig. 11: *Cloud of ageing issues and issue objects on websites of U.K. unions and associations involved in the pension reform debate*, word cloud with issues resized according to frequency of mentions. The cloud (made on 26 February 2012) illustrates the focus and viewpoints of the unions are generally spread rather evenly. Keywords are inputted in the word cloud generator, Wordle.net, and later retraced using Adobe Illustrator. Sources: http://www.aca.org.uk, http://www.athrawon. com, http://www.atl.org.uk, http://www.bma.org.uk, http://www.bnac.org, http://www.cbi.org. uk, http://www.communities.gov.uk, http://www.cspa.co.uk, http://www.eiopa.europa.eu, http:// www.fbu.org.uk, http://www.gmb.org.uk, http://www.iod.com, http://www.napf.co.uk, http:// www.nasu-wt.org.uk, http://www.nhs.uk, http://www.pcs.org.uk, http://www.pensionpolicy-institute.org.uk, http://www.pensionprotectionfund.org.uk, http://www.pensionsreform.co.uk, http://www.prospect.org.uk, http://www.public-sector-pensions-commission.org.uk, http://www. straightstatistics.org, http://www.taxpayersalliance.com, http://www.teachers.org.uk, http://www. thepensionsregulator.gov.uk, http://www.tuc.org.uk, http://www.ucu.org.uk, http://www.unison. org.uk, and http://www.unitetheunion.org.

In the exploration of statements and literature it is evident that unions are significant actors as they represent groups of public sector workers. What we have attempted to do is to sketch their basic ties to viewpoints (and thus to the parties) based on the same keyword list. While each union caters to specific professions within the public sector, the cloud arrays main union concerns: the unions are tied to fringe party issues with their use of strike language such as picket line, public sector strike, and pension strike. While they share terms with others (e.g., NHS pension, care home, wheel-chair), their specific language resonates with a negative stance towards the reforms: pay more and work longer (see Figure 11). In all the effort has been to map the controversy along ideological lines through the identification of the use of certain keywords, material objects such as Conservatives' mentions of tea and pens and fringe party as well as unions' strike talk.

2.7   Staging the pension reform controversy in Poland: Which formats could empower action?

The other national debate on pension reform that we have mapped is the Polish one, a discussion that is changing rapidly, drawing in actors with sub-issues (such as women's issues, as we have seen previously), and leaving aside others, such as the clergy's pensions, as we come to. Akin to the British debate, the main purpose is to map the current state of the controversy as it is presented in the news media, and, additionally, to create a chronology of dispute. We employ the Polish version of Google News as our meta-source set, and aggregate relevant content over a 45-day period, when issue activity is at its height. The captured articles (including blog postings) contain the following search terms (queried in Polish): 'retirement', 'pension', 'retire-ment age', 'pension reform' and 'ageing'.[4] The sub-study's timing could be described as in the middle of the pension reform debate (February to April 2012), with two significant days shaping the results: March 8th is Women's Day, and union strikes are anticipated on the 28th of March; both evinced heated debate and show peaks in media interest.

To identify a beginning to the controversy, we required historical insight and employed another Google tool (Google Insights for Search), querying it for [*wiek emerytalny emerytury*], or [retirement age pension]. A first is-sue *boiling* was in November 2011 when the Polish prime minister gave his inaugural speech and launched governmental proposals to raise the retirement age from 60 for women and 65 for men to 67 for all. It marks the beginning of the timeline (the map), which presents key actors and

their claims, and flags moments of increased media interest (the highest number of results from Google News) (see Figure 12). Women's issues are successfully foregrounded on the timeline, owing in no small part to International Women's Day on March 8th, which is observed widely in Poland. Women's issues spokespersons are rather at odds with governmental legislative proposals, disagreeing with the raising of the retirement age of women, and, interestingly, with levelling it with the men's. Political leaders make opposing statements, while deploying particular formats in doing so, delivering Women's Day wishes and bunches of red tulips. The next section of the timeline in the Spring of 2012 is the expert debate hosted by the Polish president, at the Public Debate Forum, in a session dedicated to solidarity in society and the security of the family. Another actor is the Association of Universities of the Third Age, dedicated to older people's

Fig. 12: *Cloud of ageing issues and issue objects on websites of U.K. unions and associations involved in the pension reform debate*, word cloud with issues resized according to frequency of mentions. The cloud (made on 26 February 2012) illustrates the focus and viewpoints of the unions are generally spread rather evenly. Keywords are inputted in the word cloud generator, Wordle.net, and later retraced using Adobe Illustrator. Sources: http://www.aca.org.uk, http://www.athrawon.com, http://www.atl.org.uk, http://www.bma.org.uk, http://www.bnac.org, http://www.cbi.org.uk, http://www.communities.gov.uk, http://www.cspa.co.uk, http://www.eiopa.europa.eu, http://www.fbu.org.uk, http://www.gmb.org.uk, http://www.iod.com, http://www.napf.co.uk, http://www.nasu-wt.org.uk, http://www.nhs.uk, http://www.pcs.org.uk, http://www.pensionpolicy-institute.org.uk, http://www.pensionprotectionfund.org.uk, http://www.pensionsreform.co.uk, http://www.prospect.org.uk, http://www.public-sector-pensions-commission.org.uk, http://www.straightstatistics.org, http://www.taxpayersalliance.com, http://www.teachers.org.uk, http://www.thepensionsregulator.org.uk, http://www.tuc.org.uk, http://www.ucu.org.uk, http://www.unison.org.uk, and http://www.unitetheunion.org.

learning (and well-being). It held a congress on the occasion of the Year of Universities of the Third Age, which is a national event accompanying the European Year for Active Ageing. The prime minister gave a speech during this congress in which he stressed the importance of active ageing, the EU Year theme, together with raising the retirement age, thus making deft use of the European Year for national policy change.

The next stage of the debate has trade unions, previously backgrounded, becoming pivotal protagonists, particularly Solidarity (NSZZ Solidarność). Unions are against raising the retirement age, but are in favour of partial pensions (or half pensions). They feel pension reform ought to be debated, and put to a national vote or referendum. To draw attention to their positions, the unions organize a strike and occupy the premises around the prime minister's chancellery. This is a common form of protest in which workers pitch tents and demonstrate by blocking traffic. A disagreement is also observed within the governing coalition, and partners have to come to terms with irreconcilable views. They reach a deal; a new retirement law is to raise the age, and equal it, but also embrace half pensions and early retirement. When faced with unemployment, women aged 62 and men aged 65 are entitled to early retirement, but their pension income is halved from what it would be had they reached the statutory retirement age. The last entry on the timeline is the parliament's rejection of the proposed referendum.

The main matter of concern in the debate is raising the retirement age. Is it necessary? Will it help? Should we work even longer? Is *that* active ageing? Perhaps even more importantly, how to come to terms? As the governmental bill is to be voted on in May, some stakeholders hold out hope that there still may be a change in the course of action, and resort to reference to the Polish version of the dictum, *nihil novi nisi commune consensu, or* 'nothing new without common consent' (Sokolińska, 2012). It is a major tenet of Polish civic life, taken from the historic act from 1505 that constituted 'nobles democracy', which wrested power from the king. '*Nihil novi*' in this political sense is interpreted in the vernacular as 'Nothing about us without us' (in Polish, '*Nic o nas bez nas*'). The statement, according to Google search results, is often associated with grassroots initiatives such as those by the unions, and also has well-known formats. They organize a sit-down strike, called '*miasteczko emerytalne*' ('retirement camp') which resembles (not only linguistically) '*białe miasteczko*' ('white camp'), a well-known and fondly recalled strike of Polish nurses that took place in 2007. Vivid demonstrations and a sea of white tents pitched in front of the prime minister's office in Warsaw are considered a media-friendly format. To make it even more
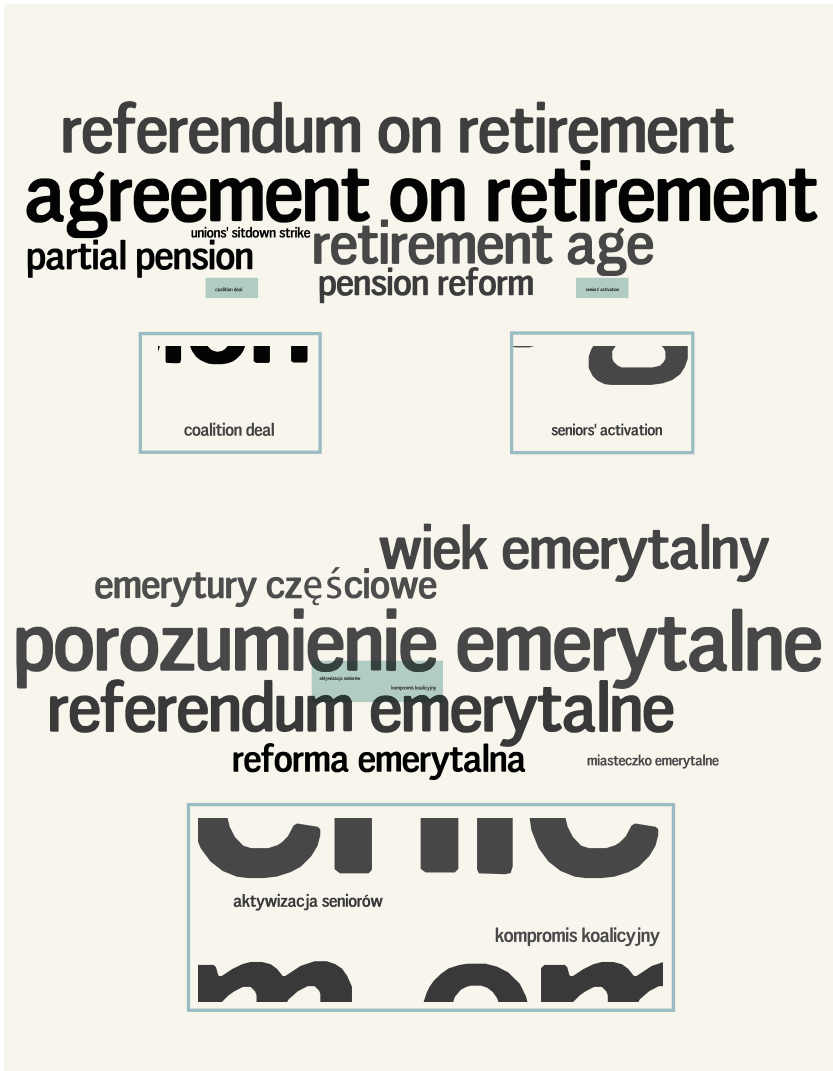
Fig. 13: *The main matters of concern in the retirement age debate in Poland, according to Polish ageing NGOs*, depicted as a word cloud with issues resized according to frequency of mentions in English and Polish. The cloud is adapted from Wordle.net with insets zooming in on marginal issues. The two phrases that stand out are positions on either side of the debate: 'agreement on retirement' (which captures the coalition compromise leaving the retirement age the same, albeit with only half pensions) and 'referendum on retirement' (a contradictory position calling for the people to overturn the government's proposal to raise the retirement age). Issues extracted from Polish NGO websites, and queried across all Polish NGO websites with Lippmannian Device, 8 April 2012. Source: Polish NGOs included in the Forum 50+, http://www.forum50.org.

interesting, the unions march from the PM's office to the parliament, which is precisely the pathway of the retirement legislative proposals. The unions' march may be conceived as geographical inscription, drawing politics in the soil (or carving it into the pavement), a form of counter-mapping that we discuss in the chapter on critical cartography. This specific kind of counter-mapping also elicits public attention.

The issue cloud has retirement age as the key issue, and two phrases stand out, namely 'agreement on retirement' (a phrase used often to describe the coalition compromise) and 'referendum on retirement' (an alternate mode of dealing with the ageing controversy) (see Figure 13). According to the unions, the debate is dominated by experts and policymakers and the people's voice is missing; two millions Poles have signed the petition for a referendum and surveys have shown that some 64 per cent of the population is in favour of the national vote (Polskie Radio, 2012, n. pag.). 'We want to debate', cries a leader of Solidarity (TVP Parlament, 2012, n. pag.).

Polish debate on ageing-related controversies is often phrased in terms of domestic politics (alliances, deals and negotiations). Notably, Europe appears as a benchmark in those situations where Polish policies require additional legitimization by EU institutions; decisions are explained with reference to European standards and recommendations. In this sense, the congress of Universities of the Third Age becomes a place to merge national and supranational points of reference, and the Polish prime minister seizes the occasion to associate the legislative proposals with the concept of active ageing. Whilst the idea is endorsed by the European Union, it serves national political goals. The Europeanization of Polish ageing issues is concrete, manifesting itself in the legislation enacted.

We conclude with something of a coda to the mapping (and timeline that was made). After the parliament had rejected the request for a referendum, a new pension law to raise the retirement age to 67 was signed by the president and came into force in 2013. 'The new regulations will be applied gradually over about 30 years in the case of women, who prior to the reform used to retire at the age of 60. For men, the transition period will be shorter and take 7 years, as they were already working until 65' (World Bank, 2013, n. pag.). The manner in which this gradual change is to be implemented differently for men and women can be said to reflect a Polish issue space in which ageing has been framed as a women's issue and as a measure of triumph for those organizations that opposed treating women – who, it is argued, face disadvantages in the Polish workforce – in the same fashion as men.

3. A risk cartography of ageing

Living longer is a triumph, but living better is a challenge.
— Nicola Robins, Age U.K.

Populations are ageing. Often considered a natural or biological process, more people growing old, or ageing more generally, may be thought of as a societal accomplishment. In the words of Ulrich Beck, ageing is a triumph of modernization (2009). Beck describes a particular paradox of certain triumphs of modernity, which he calls 'self-inflicted insecurities' that are 'affluence-induced' (2009, p. 50; p. 199). One may interpret the issue of ageing populations in a similar vain. Basic, modern principles and policies (such as advanced healthcare for all) are triumphs that also undermine core institutions of society (a stable pension system), producing insecurity as well as risks. The pension and healthcare systems may become overburdened. Who will take care of the aged?

Beck only touches on ageing, mainly writing instead about the threat of the potential environmental destruction associated with climate change, among other outcomes of affluence. Indeed, modernity produces particular kinds of insecurities or 'world risks'. They are potential catastrophes in waiting. They are anticipated, but they are different from risks of old, connected to fate or acts of God. They are also different from risks that may be calculated, however crudely, for the purposes of creating insurance policies. This new category of world risks is no longer considered calculable or controllable, at least insofar as insurance provides a sense that the risk is anticipated and can be covered.

The world risks are novel in space and time. They spread or expand space by exceeding the responsibility of the individual, the group, the institution, and the nation-state. Climate change, together with other risks in the category – terrorist attacks and global financial market meltdown Beck also addresses – are multi-state, multi-actor, but they are also appear resistant to modelling. So too with ageing. Pension schemes are intertwined with markets that transcend the nation-state. Moreover the new risks have long latency periods, accruing potentially over generations, with consequences well beyond today into some unknown future. They are not so much events (such as an earthquake), but rather 'unknown unknowns' that undermine the nation-state's 'ontological security' (Beck, 2009, p. 40).

Certain risks may be considered democratic or rather evenly distributed insofar as a natural catastrophe does not acknowledge the different status of people. Beck, however, makes a clear distinction between those states that produce risks (decision-makers) and those that are victims of it (victim states). Thus, world risk society must deal with the decoupling of location and the responsibility for social decision-making. A decision made by a state about a factory operating in one country may affect the existence of residents in another country. It is implied in Beck's work that the distinction between decision-maker states and victim states exists in practice, with the former being largely developed countries with advanced economies, and the latter the rest of the world.

According to Beck, there are two ways of approaching the radically unequal distribution of vulnerability across national borders. He makes a distinction between two opposite models of global risk inequality: *reciprocity* and *hierarchy*. A reciprocal model means that the benefits and harms of decisions involving risks are distributed equally. In the hierarchical model of global risk inequality, there are states that produce risks and threats, and those that are the victims of them. To Beck the key question concerns how parochial the scope of the risk assessment is. The term 'methodological nationalism' is employed to describe the idea that society is organized, analysed and delimited by nation-states, and global risks are made non-existent in the sense that questions and assumptions exclude the side effects for others outside of them.

The distinctions apply to the issue of ageing and health, where the rise in the number of elderly people in developed countries implies an increase in the number of people who require care. This state of affairs not only calls for a restructuring of the welfare system on the level of the nation-state (which is occurring, as we have seen, with the raising of the retirement age), but also creates a shortage of healthcare as well as care workers. As a result, developed countries actively turn to international recruitment. As healthcare and care workers migrate to developed countries for reasons to be discussed, the source countries may be left with far fewer doctors, nurses, and care workers than is recommended by the World Health Organization's minimum standards (Hamilton and Yau, 2004).

In their noteworthy piece on the 'global tug-of-war' for healthcare workers, Kimberly Hamilton and Jennifer Yau of the Migration Policy Institute, a Washington, DC, think tank, open with the observation that 'in the not too distant past, discussions involving "health" and "migration" would likely have focused on the physical and mental condition of immigrants, or, perhaps, the incidence of communicable diseases in a refugee camp' (2004, n. pag.).

Now it also concerns worker migration, an issue that became particularly acute with the rise of the incidence of HIV/AIDS in sub-Saharan Africa. As they remark, nowadays the connection between health and migration 'can just as readily be illustrated by a hospital in AIDS-stricken Malawi, which has only 30 nurses, 26 of whom have plans to leave the country' (n. pag.). Such statements ground Beck's argument about the relationship between the decision-maker and victim states, and make poignant the observation that the logic of methodological nationalism would render less visible the effects on Malawi of care worker shortages in the west. When discussing healthcare and ageing, do decision-maker states tend to treat the problem of care, and the solution of workers emigrating to it as a national problem, and not so much a situation in the source state? The mapping below grapples with that question.

Beck puts forward a second model of transnational actor-networks for defining and distributing risks. The unit of investigation is no longer national societies but regional spaces and transnational constellations. This model has a regional outlook and may result in 'global assemblages' as respondents to risks, comprised of inter-governmental and non-governmental organizations, governments, academics, experts, consultants, and so forth. Indeed, when on 6 September 2010 the European Commission (2010) proposed to designate 2012 as the European Year for Active Ageing and Solidarity Between Generations it embraced ageing as a *European* issue, employing a regional, if not transnational, outlook.

While the initiative on its face does not seem controversial, an article by the Slovenian newspaper *Slovenski Godbenik* criticises the EU's project for ignoring the culture of member states and for *Europeanizing* the issue (Pavliha, 2012). This concern brings us to Beck's response to methodological nationalism, which, in theory, would adequately deal with not only the unequal distribution of vulnerabilities but also regional and national inputs. In order to engage with the more complex picture of ageing involving worker migration, the issue could be redefined as a *cosmopolitan* one, where those nations affected are also a part of the decision-making. The cosmopolitan outlook acknowledges that local problems may have their causes and solutions on the other side of the world (or on the other side of Europe).

In the following we map the ageing issue in Europe and beyond in a world risk cartographic framework. We begin with mapping the European Year of Active Ageing itself, or at least the risks and matters of concern of the members of the European Year's online platform, called the AGE Platform Europe, the group of non-governmental organizations whose motto is 'Towards an Age-Friendly EU'. The NGOs involved in the AGE Platform

Europe approach the debates on the risks posed by an ageing population in differing fashions and with distinctive claims to knowledge. The purpose of the risk mapping is to render visible the connections between the matters of concerns of the organizations, and their locations. More specifically we take up the Slovenian newspaper's claim, and ask, Is the issue of ageing being Europeanized, and if so by which countries in particular? Which are the decision-makers, or at least those who employ the issue language of the powerful? Are there ageing issue blocs and specific country alignments? Are there isolated issues, and, if so, whose are they?

In the mapping we couple online debate-mapping techniques with risk cartography developed by Gerald Beck and Cordula Kropp (Rogers, 2004; 2010; Beck and Kropp, 2010). In online debate mapping, generally, issue-related data are captured from those web sources that *do* the issue, and also represent it broadly. In the risk cartography approach, an operationalization of Ulrich Beck's conceptualization of the world risk society, the general starting point is to map the 'main types of entities in a controversy', including the protagonists, matters of concern, statements as well as things (Beck and Kropp, 2010, p. 10). Here the basic (online) data set is the content of the news reports found on AGE Platform Europe's website, in the section, 'Age in the News'. In addition, two entire special issues of the European *Parliament Magazine* focused on the topic of ageing also are added, as the publication is frequently referenced in 'Age in the News' (Parliament Magazine, 2011a; 2011b). The risk cartography technique is applied. Thus, each of the entries ranging from June 2008 to February 2012 (the date range of the archives) are read and analysed in an effort to identify, in every individual posting, the four entities in the controversy. For example, accessibility to technology for the elderly (a matter of concern) has such protagonists as Vodafone Foundation and the European Disability Forum, and is organized around the statement, 'Not everyone has the same opportunity to make the most of smartphone applications' (see Figure 14). Among the connected things are the smartphone applications themselves as well as training. The mapping proceeds by plotting actors' associations and ties, and shared as well as isolated issue agendas, including their locations.

The different entities extracted from the source texts and plotted in the risk mapping retain the actor's own language, and are categorized with a light touch. Latour argues that analysts tend to place their own larger explanatory categories over those furnished by the actors they seek to study. From a stance of social cartography such marshalling is problematic for it relies on the 'well-known repertoire' of social explanation, as discussed above: 'we have to resist pretending that actors have only a language while

the analyst possesses the meta-language in which the first is embedded' (Latour, 2005, p. 49). Therefore, the analyst is advised to employ an infra-language instead, 'whose role is simply to help them become more attentive to the actor's own fully developed meta-language, a reflexive account of what they are saying' (Latour, 2005, p. 49). Here the strategy to elaborate an infra-language follows risk cartographic practice: the entities (protagonists, matters of concern, statements, and things) are labelled as such and no further explanatory categories extraneous to the actor's accounts are brought into the analysis. The results are plotted graphically (mapped), so as to show and visibly assess actors' ties and shared or contrasting conceptions of risks concerning the elderly, together with the solutions the parties put forward. What follows now is a description of the results, as well as the actual maps resulting from the risk cartography.

The map shows there is institutional dominance. For example, in terms of the protagonists, Anne-Sophie Parent, the secretary general of AGE Platform Europe, has a much higher than average number of connections, both to statements as well as to things. The organization's and her high level of visibility and activity compared to other protagonists derives from their overall engagement in this issue space. Apart from Parent, Thomas Mann (vice-chair of the parliament's Employment and Social Affairs Committee), Martin Kastler (the parliament's Rapporteur on the European Year for Active Ageing), and Lásló Andor (European Employment, Social Affairs and Inclusion Commissioner) are the other, most connected protagonists organizing the debate around welfare and employment, showing a transnational, institutionalized dominance of the central matters of concern. The data also display isolated, nationally tied protagonists, where one example is a smattering of actors calling for collective redress legislation in the EU (similar to a class action lawsuit in the U.S.), where groups can collectively bring suit. It connects to the larger topic of whether the fundamental institutions of Europe are being undermined by ageing, and, if so, how to seek redress.

As was mentioned before, it is clear from the data visualization that the most prevalent risk identified through the news related to AGE Platform members is the manner in which ageing is straining the welfare state. Indeed, it is mentioned in nearly half of the news postings. There is a clear cluster of shared protagonists and statements between the matters of concern, ageing affects welfare, and ageing affects employment, the most interconnected matters on the map. In those concerns, the statement sharing among protagonists is also in evidence, as specific statistics used to base arguments around the welfare and employment debate are frequently employed. For example, the number of Europeans of working age
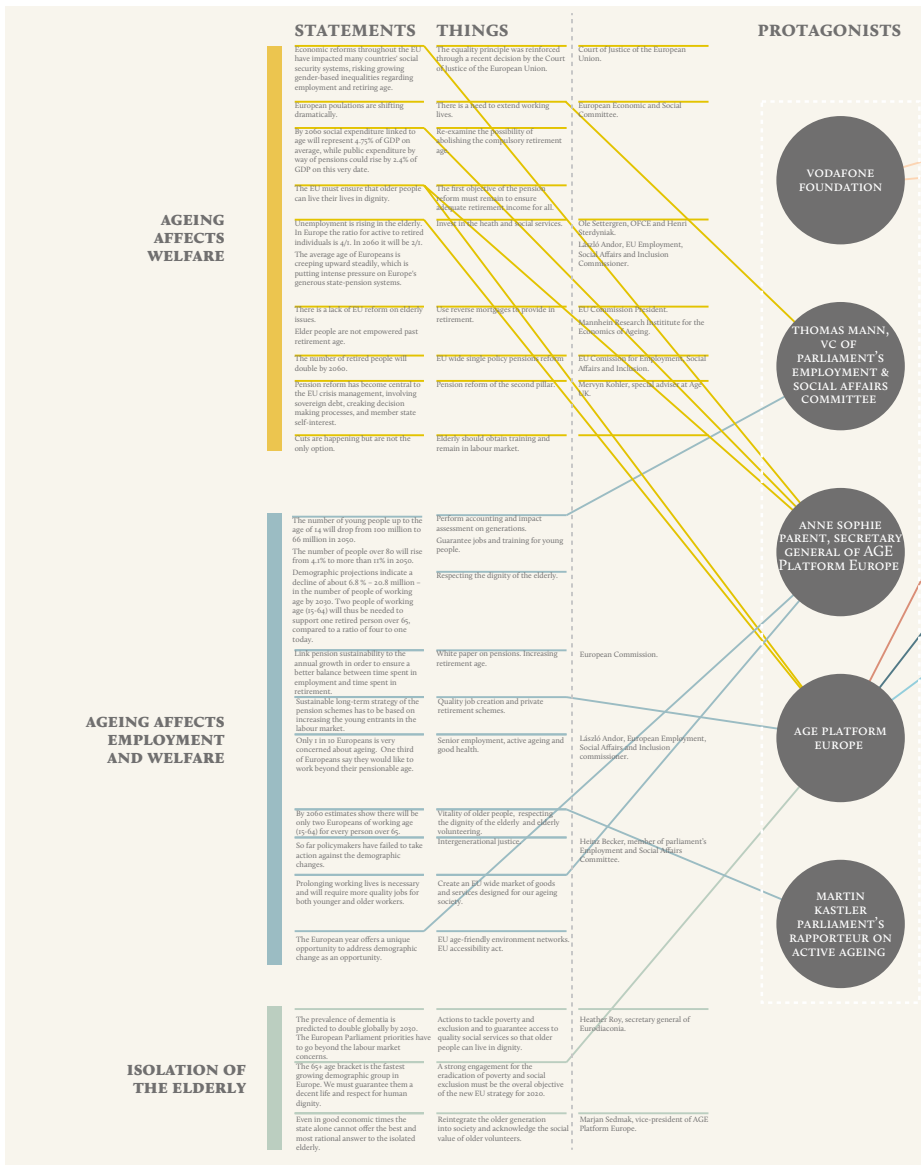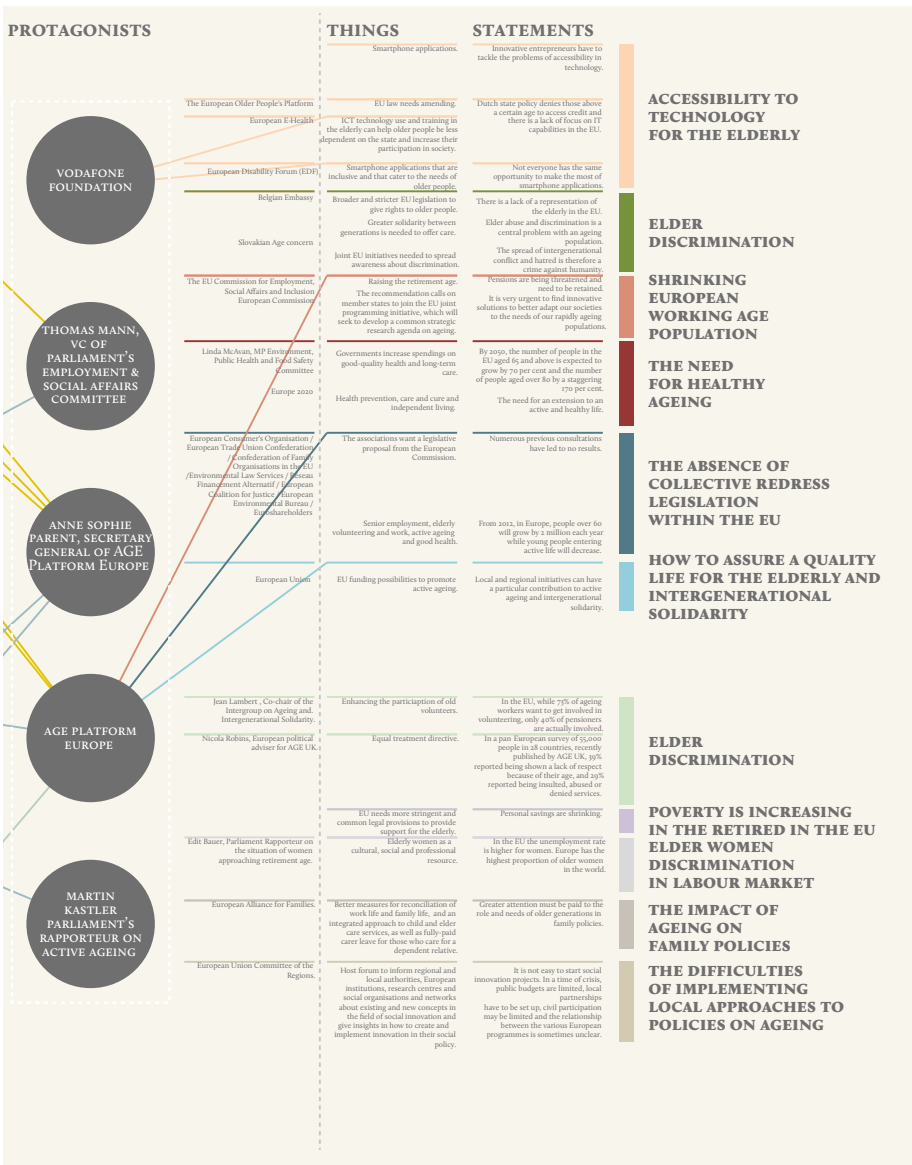
STATEMENTS	THINGS	PROTAGONISTS

AGEING AFFECTS WELFARE

Economic reforms throughout the EU have impacted many countries' social security systems, risking growing gender-based inequalities regarding employment and retiring age.

European poulations are shifting dramatically.

By 2060 social expenditure linked to age will represent 4.75% of GDP on average, while public expenditure by way of pensions could rise by 2.4% of GDP on this very date.

The EU must ensure that older people can live their lives in dignity.

Unemployment is rising in the elderly. In Europe the ratio for active to retired individuals is 4/1. In 2060 it will be 2/1.

The average age of Europeans is creeping upward steadily, which is putting intense pressure on Europe's generous state-pension systems.

There is a lack of EU reform on elderly issues.

Elder people are not empowered past retirement age.

The number of retired people will double by 2060.

Pension reform has become central to the EU crisis management, involving sovereign debt, creating decision making processes, and member state self-interest.

Cuts are happening but are not the only option.

The equality principle was reinforced through a recent decision by the Court of Justice of the European Union.

There is a need to extend working lives.

Re-examine the possibility of abolishing the compulsory retirement age.

The first objective of the pension reform must remain to ensure adequate retirement income for all.

Invest in the heath and social services.

Use reverse mortgages to provide in retirement.

EU wide single policy pension reform.

Pension reform of the second pillar.

Elderly should obtain training and remain in labour market.

Court of Justice of the European Union.

European Economic and Social Committee.

Ole Settergren, OFCE and Henri Sterdyniak.

László Andor, EU Employment, Social Affairs and Inclusion Commissioner.

EU Commission President.

Mannheim Research Inititute for the Economics of Ageing.

EU Commisson for Employment, Social Affairs and Inclusion.

Mervyn Kohler, special advisor at Age UK.

VODAFONE FOUNDATION

THOMAS MANN, VC OF PARLIAMENT'S EMPLOYMENT & SOCIAL AFFAIRS COMMITTEE

AGEING AFFECTS EMPLOYMENT AND WELFARE

The number of young people up to the age of 14 will drop from 100 million to 66 million in 2050.

The number of people over 80 will rise from 4.1% to more than 11% in 2050.

Demographic projections indicate a decline of about 6.8 % – 20.8 million – in the number of people of working age by 2030. Two people of working age (15-64) will thus be needed to support one retired person over 65, compared to a ratio of four to one today.

Link pension sustainability to the annual growth in order to ensure a better balance between time spent in employment and time spent in retirement.

Sustainable long-term strategy of the pension schemes has to be based on increasing the young entrants in the labour market.

Only 1 in 10 Europeans is very concerned about ageing. One third of Europeans say they would like to work beyond their pensionable age.

By 2060 estimates show there will be only two Europeans of working age (15-64) for every person over 65.

So far policymakers have failed to take action against the demographic changes.

Prolonging working lives is necessary and will require more quality jobs for both younger and older workers.

The European year offers a unique opportunity to address demographic change as an opportunity.

Perform accounting and impact assessment on generations.

Guarantee jobs and training for young people.

Respecting the dignity of the elderly.

White paper on pensions. Increasing retirement age.

Quality job creation and private retirement schemes.

Senior employment, active ageing and good health.

Vitality of older people, respecting the dignity of the elderly and elderly volunteering.

Intergenerational justice.

Create an EU wide market of goods and services designed for our ageing society.

EU age-friendly environment networks. EU accessibility act.

European Commission.

László Andor, European Employment, Social Affairs and Inclusion commissioner.

Heinz Becker, member of parliament's Employment and Social Affairs Committee.

ANNE SOPHIE PARENT, SECRETARY GENERAL OF AGE Platform Europe

AGE PLATFORM EUROPE

MARTIN KASTLER PARLIAMENT'S RAPPORTEUR ON ACTIVE AGEING

ISOLATION OF THE ELDERLY

The prevalence of dementia is predicted to double globally by 2030.

The European Parliament priorities have to go beyond the labour market concerns.

The 65+ age bracket is the fastest growing demographic group in Europe. We must guarantee them a decent life and respect for human dignity.

Even in good economic times the state alone cannot offer the best and most rational answer to the isolated elderly.

Actions to tackle poverty and exclusion and to guarantee access to quality social services so that older people can live in dignity.

A strong engagement for the eradication of poverty and social exclusion must be the overal objective of the new EU strategy for 2020.

Reintegrate the older generation into society and acknowledge the social value of older volunteers.

Heather Roy, secretary general of Eurodiaconia.

Marjan Sedmak, vice-president of AGE Platform Europe.

Fig. 14: *Ageing issue map according to risk cartographic approach*, showing relationships between protagonists, statements and things, February 2012. Statements and things are grouped by issue, the lines show which protagonists are associated with which statements and things. In addressing the question of whether ageing undermines Europe's fundamental institutions of modern Europe, the

PROTAGONISTS

- VODAFONE FOUNDATION
- THOMAS MANN, VC OF PARLIAMENT'S EMPLOYMENT & SOCIAL AFFAIRS COMMITTEE
- ANNE SOPHIE PARENT, SECRETARY GENERAL OF AGE PLATFORM EUROPE
- AGE PLATFORM EUROPE
- MARTIN KASTLER PARLIAMENT'S RAPPORTEUR ON ACTIVE AGEING

THINGS

- Smartphone applications.
- The European Older People's Platform
- EU law needs amending.
- European E-Health
- ICT technology use and training in the elderly can help older people be less dependent on the state and increase their participation in society.
- European Disability Forum (EDF)
- Smartphone applications that are inclusive and that cater to the needs of older people.
- Belgian Embassy
- Broader and stricter EU legislation to give rights to older people.
- Greater solidarity between generations is needed to offer care.
- Slovakian Age concern
- Joint EU initiatives needed to spread awareness about discrimination.
- The EU Commission for Employment, Social Affairs and Inclusion, European Commission
- Raising the retirement age.
- The recommendation calls on member states to join the EU joint programming initiative, which will seek to develop a common strategic research agenda on ageing.
- Linda McAvan, MP Environment, Public Health and Food Safety Committee
- Governments increase spendings on good-quality health and long-term care.
- Europe 2020
- Health prevention, care and cure and independent living.
- European Consumer's Organisation / European Trade Union Confederation / Confederation of Family Organisations in the EU /Environmental Law Services / Réseau Financement Alternatif / European Coalition for Justice / European Environmental Bureau / Euroshareholders
- The associations want a legislative proposal from the European Commission.
- Senior employment, elderly volunteering and work, active ageing and good health.
- European Union
- EU funding possibilities to promote active ageing.
- Jean Lambert , Co-chair of the Intergroup on Ageing and. Intergenerational Solidarity.
- Enhancing the participation of old volunteers.
- Nicola Robins, European political adviser for AGE UK.
- Equal treatment directive.
- EU needs more stringent and common legal provisions to provide support for the elderly.
- Edit Bauer, Parliament Rapporteur on the situation of women approaching retirement age.
- Elderly women as a cultural, social and professional resource.
- European Alliance for Families.
- Better measures for reconciliation of work life and family life , and an integrated approach to child and elder care services, as well as fully-paid care leave for those who care for a dependent relative.
- European Union Committee of the Regions
- Host forum to inform regional and local authorities, European institutions, research centres and social organisations and networks about existing and new concepts in the field of social innovation and give insights in how to create and implement innovation in their social policy.

STATEMENTS

- Innovative entrepreneurs have to tackle the problems of accessibility in technology.
- Dutch state policy denies those above a certain age to access credit and there is a lack of focus on IT capabilities in the EU.
- Not everyone has the same opportunity to make the most of smartphone applications.
- There is a lack of a representation of the elderly in the EU.
- Elder abuse and discrimination is a central problem with an ageing population.
- The spread of intergenerational conflict and hatred is therefore a crime against humanity.
- Pensions are being threatened and need to be retained.
- It is very urgent to find innovative solutions to better adapt our societies to the needs of our rapidly ageing populations.
- By 2050, the number of people in the EU aged 65 and above is expected to grow by 70 per cent and the number of people aged over 80 by a staggering 170 per cent.
- The need for an extension to an active and healthy life.
- Numerous previous consultations have led to no results.
- From 2012, in Europe, people over 60 will grow by 2 million each year while young people entering active life will decrease.
- Local and regional initiatives can have a particular contribution to active ageing and intergenerational solidarity.
- In the EU, while 75% of ageing workers want to get involved in volunteering, only 40% of pensioners are actually involved.
- In a pan European survey of 55,000 people in 28 countries, recently published by AGE UK, 19% reported being shown a lack of respect because of their age, and 29% reported being insulted, abused or denied services.
- Personal savings are shrinking.
- In the EU the unemployment rate is higher for women. Europe has the highest proportion of older women in the world.
- Greater attention must be paid to the role and needs of older generations in family policies.
- It is not easy to start social innovation projects. In a time of crisis, public budgets are limited, local partnerships have to be set up, civil participation may be limited and the relationship between the various European programmes is sometimes unclear.

ACCESSIBILITY TO TECHNOLOGY FOR THE ELDERLY

ELDER DISCRIMINATION

SHRINKING EUROPEAN WORKING AGE POPULATION

THE NEED FOR HEALTHY AGEING

THE ABSENCE OF COLLECTIVE REDRESS LEGISLATION WITHIN THE EU

HOW TO ASSURE A QUALITY LIFE FOR THE ELDERLY AND INTERGENERATIONAL SOLIDARITY

ELDER DISCRIMINATION

POVERTY IS INCREASING IN THE RETIRED IN THE EU

ELDER WOMEN DISCRIMINATION IN LABOUR MARKET

THE IMPACT OF AGEING ON FAMILY POLICIES

THE DIFFICULTIES OF IMPLEMENTING LOCAL APPROACHES TO POLICIES ON AGEING

cartography shows that the most prevalent risk is ageing straining the welfare state, mentioned in 45 per cent of the news stories. Risk cartography made from mind mapping software, Mindomo and adapted using Adobe Illustrator. Sources: News sections of AGE Platform Europe, June 2008 to February 2012, http://www.age-platform.eu/en/age-a-the-media/age-in-the-news.

will decline by nearly 21 million by 2030; the number of children under the age of 14 will drop by 34 million by 2050; and by 2060 every third European will be above the age of 65.

The map shows that the statements are varied but elicit concern for a lack of flexible EU legislation to tackle the shifting population demographics and for the culture of extreme budget cuts and their effects. They have a disproportionate impact on older (and retired) people, and may have unknown effects (in Beck's sense) as a larger and larger percentage of the population is elderly. Here population predictions from 2060 are cited. A primary suggestion as a solution or 'thing' by the protagonists to mitigate the risk is to raise the working age, but there are also calls for greater training and engagement of the elderly to sustain their working life naturally, as well as to encourage their volunteering, and organizations to accept older volunteers (the subject matter of the previous European issue year in 2011). These solutions also link to another matter of concern, raised by several protagonists, having to do with technology. There is a decline in the ability of the elderly to engage with new technology, which has social and financial engagement effects. The statements made by protagonists, including the sole, private one Vodafone (albeit through its foundation), highlights restrictions such as the inability of the elderly to use smartphones, thereby disconnecting themselves from contemporary social contact, and also making daily life more expensive, given that cheaper goods are supposedly available online (and may be delivered to the door). Mapping is successful here in that it shows the range of threats posed and how certain 'things' (training as well as a smartphone) may alleviate tension wrought by the decline in finances to support the elderly. It also shows corporate interest at work.

There are more isolated issues, each connected with the larger question of the risks ageing brings to modern European institutions. These include elder discrimination in the labour market, and specifically of older women, the world's largest proportion of whom live in Europe. (Mention of women's issues recalls the specifically Polish matters of concern.) Other isolated issues include the need for healthy ageing, the impact of ageing on family policies, the difficulties of implementing local approaches to policies on ageing, and the absence of collective redress legislation within the EU, as mentioned. What these matters of concern have in common is a focus on the failure of European institutions and policies to address ageing issues, both nationally and transnationally, rather than the actual effects of ageing on the institutions of modernity. In line with Beck's more conceptual calls, here appeals are made for a stronger collaboration through a transnational assemblage.

3.1   Age U.K.'s hyperlinking behaviour

One of the actors linked to marginal concerns on the map discussed above is Age U.K., the British non-governmental member of the AGE Platform Europe. At the same time, we found that to address the concerns, appeals are made for transnational cooperation. We are interested in analysing the connections of Age U.K. with national and international groups, be they governmental, civil society, academic, or otherwise. To what extent does it organize a cross-European or transnational network, or is it as isolated as its issues? How would one begin to map that? Here a hyperlink analysis is performed, using the Navicrawler tool, and the organizations linked from the Age U.K. site are geolocated with the GeoIP tool. The Navicrawler, a Firefox add-on, collects sites' outlinks in a semi-automated fashion, and the GeoIP tool looks up the hosting locations of the websites (via their IP addresses). The analysis concerns the links made from Age U.K. to other organizations, and those organizations' locations.

All the U.K. members are retrieved from the AGE Platform Europe website, and only those 14 with a website listed are retained for further study. In order to find their immediate neighbours, these sites are crawled with Navicrawler, resulting in a list of 376 websites. After exporting the data from Navicrawler, the results are visualized in Gephi, the open-source network analysis tool, originating from the same developers as Navicrawler. After using the GeoIP look-up, we inserted into Gephi the country of each node, and employed a force-based algorithm for graph drawing (ForceAtlas 2), with the attraction force of the graph distributed along outbound links in order to push the hubs of the network to the periphery and put the authorities in a more central position. All nodes in this directed graph are coloured, based on their geolocation and the edges between the nodes display the colour of the node that the edge directs to. So, if an American website links to a U.K. site, then the colour of the edge will be the colour representing the U.K. category in the graph (see Figures 15a and 15b).

The star shapes of the graphs are to be expected since analysis started with 14 websites and only sought the outlinks from those sites. The colour of the nodes and their immediate neighbours are of interest for the research question concerns the extent to which the U.K. organizations are cross-European in the sense that they recognize a cross-section of European organizations by linking to them. The graph is rather homogenous; there is not a wide variety of colours represented. In order to better understand just how homogenous it is, we also made a chart: the top three nations, with nearly 90 per cent of the links received, are the United Kingdom,
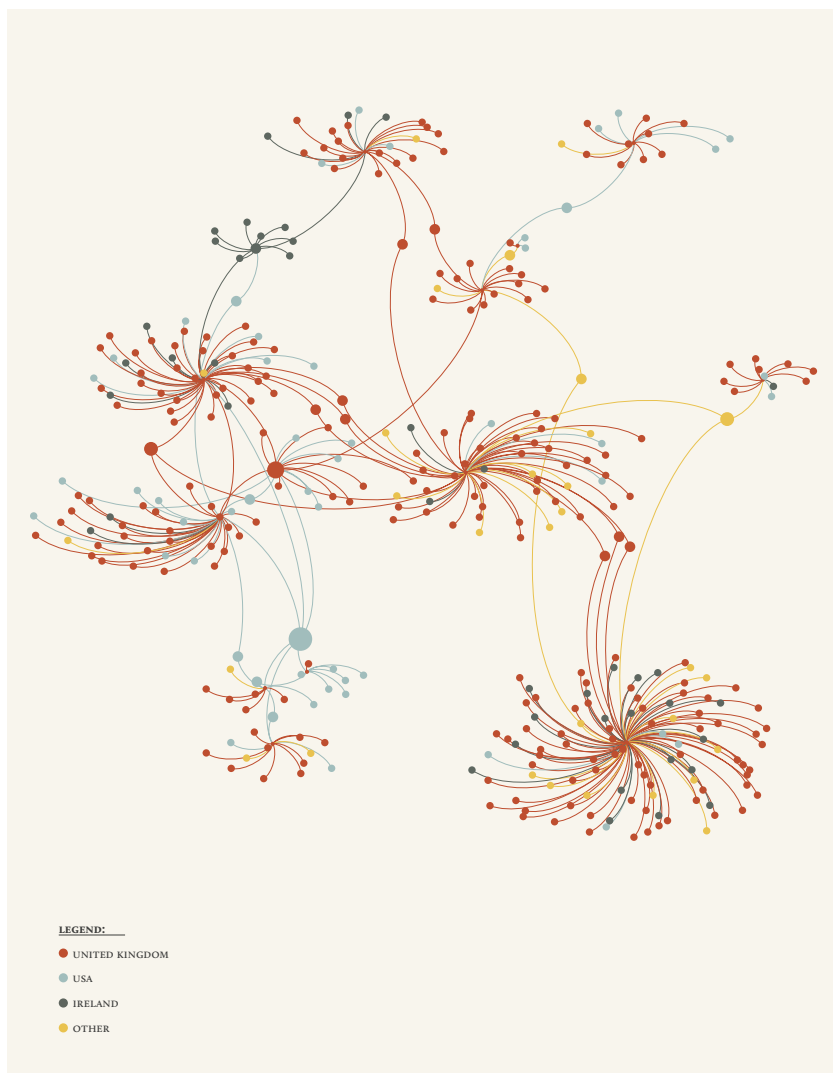
Fig. 15a: *Network depiction of outlinks from the websites of the 14 U.K. members of AGE Platform Europe*, coloured by geolocation, 7 March 2012. Network visualization by Gephi, laid out by force-based algorithm, ForceAtlas 2, and the website geolocations by the GeoIP tool. Nodes are colour-coded to show geolocation of hosts (by IP address), and the colour of the edge shows the target of the link. The vast majority of nodes are hosted in the U.K., U.S. and Ireland. Sources: http://www.ageconcernsabe.org.uk, http://www.agesectorplatform.org, http://www.ageuk.org.uk, http://www.bjf.org.uk, http://www.britishgerontology.org, http://www.cspa.co.uk, http://www.homeshare.org, http://www.narpo.org, http://www.niace.org.uk, http://www.npcuk.org, http://www.olderpeoplewales.com, http://www.pensionerlonline.co.uk, http://www.publicservicepensioners.org.uk, and http://www.wiseowls.co.uk.
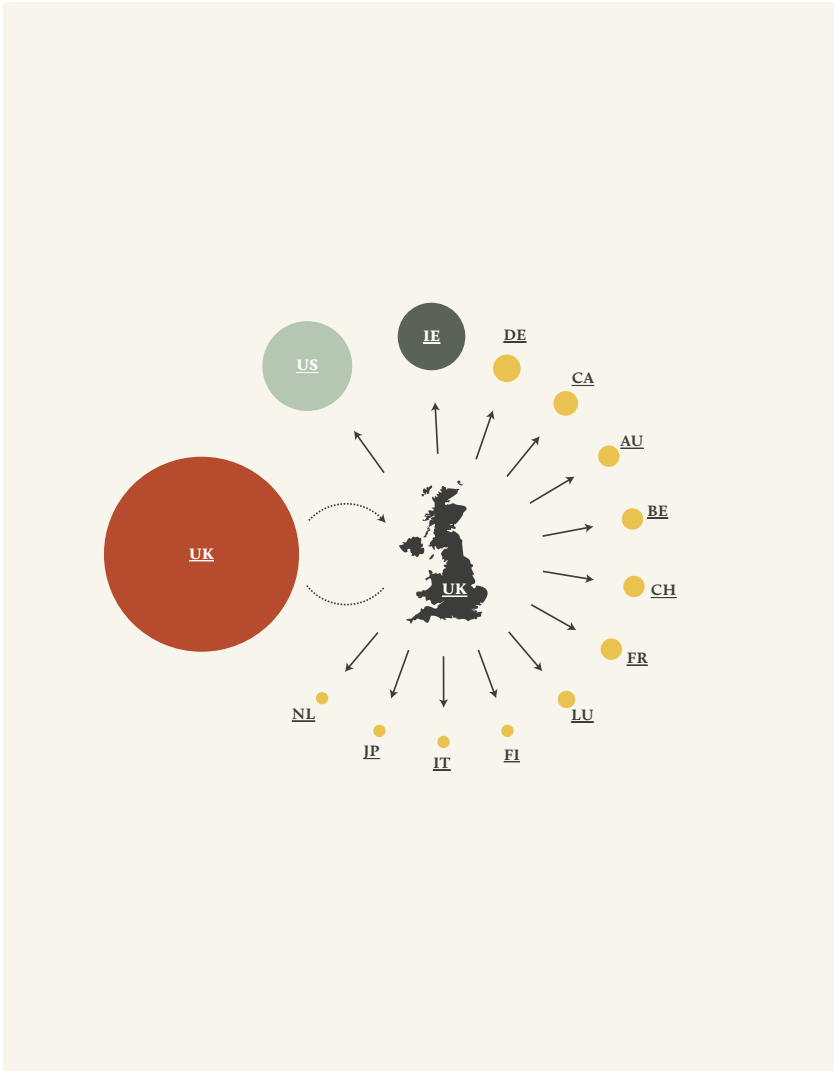
Fig. 15b: *Network depiction of the outlinks from the websites of the 14 U.K. members of AGE Platform Europe*, coloured by geolocation and resized according to quantity of websites hosted by country, 7 March 2012. Network visualization produced by hand, and the website geolocations by the GeoIP tool. The majority of outlinks are to websites hosted in the United Kingdom, the United States, and Ireland. Sources: http://www.ageconcernsabe.org.uk, http://www.agesectorplatform. org, http://www.ageuk.org.uk, http://www.bjf.org.uk, http://www.britishgerontology.org, http:// www.cspa.co.uk, http://www.homeshare.org, http://www.narpo.org, http://www.niace.org.uk, http://www.npcuk.org, http://www.olderpeoplewales.com, http://www.pensionerlonline.co.uk, http://www.publicservicepensioners.org.uk, and http://www.wiseowls.co.uk.

United States, and Ireland. What is surprising is the countries that are *not* represented. The map shows a distribution of countries linked to by U.K. organizations, whereby national (or domestic) linking stands out as does its light recognition of Western and Northern Europe as well as Australia and North America. Out of the picture, so to speak, is the rest of the world. Large swaths of territory remain vacant.

Countries affected by the ageing of the U.K. population (such as lesser developed African and Asian countries) through the migration of care workers (for example) are also absent. That is, mapping may be about the countries that are not on the map as much as those that are. Having found in the short sub-study that the (hyperlink) network around the topic of ageing for Age U.K. is neither a regional (EU-wide) nor a cosmopolitan one, we would like to pursue further Beck's distinction between decision-maker and non-decision-maker states, inquiring into the extent to which lesser developed countries are involved in the (U.K.) ageing issue.

3.2   Care worker migration as ageing issue (in the U.K. and beyond) and the quest for the cosmopolitan moment

The quest for the cosmopolitan moment is how we describe a further risk mapping undertaken on care worker migration to the United Kingdom. How to map the extent to which the divide between decision-makers and victim states is bridged through both recognition of each other as well as a global (policymaking) assemblage involved in the settlement of the issue? Before attempting such a mapping, we require a country list, and therefore begin with a brief description of British immigration trends, where India and Poland (followed by Slovakia, and increasingly Eastern European countries, generally) have been top source countries in the past decade, according to one data source available on immigration (and emigration), the International Passenger Survey, a sample of passenger flows in and out of U.K. airports, sea ports and the Channel Tunnel (Salt, 2010). Over the past two decades, there has been a year-to-year net increase of immigrants; annually more have immigrated to the U.K. than emigrated from it. According to the Migration Policy Institute (the Washington, DC, think tank), the U.K. attracts immigrants at a high rate (though not as high as the U.S.), with some 4.5 million in total from 1997 to 2006 (Somerville and Sumption, 2009). With 2.9 million people emigrating from Britain in that decade, migration has netted approximately 1.6 million people for the population. Immigrants move to the U.K. mainly for economic betterment, to be reunited with their

families, to study abroad, to flee political persecution or disasters, or some combination, according to the Institute. Most would like to work.

In 2008 immigrant workers comprised 12 per cent of the U.K.'s working population, which is twice as many as two decades previously. In terms of the kinds of jobs that immigrants take up in the U.K., they are concentrated particularly in low-skilled and high-skilled areas, with wealthier countries providing workers for white-collar positions (corporate migration, so to speak) and less advanced economies for service jobs, including the social care sector. It is a trenchant distinction for certain newcomers, as immigrants from Eastern Europe, in particular, tend to 'downscale' their type of employment upon entering the British workforce.

Of those sectors where high-skilled immigrant employment is rising markedly are computer software and healthcare. Social care workers, including home carers, social workers and nursing assistants, are considered low-skilled, in governmental definitional terms. Like in healthcare, and perhaps even more so, there is a call for social care workers especially from abroad. Not only are there more older people to be cared for. The Migration Observatory at Oxford also relates that there is a difficulty attracting British workers to the social care sector, especially given the low pay (GBP 6.45 median hourly wage in 2009), making the sector reliant on foreign-born workers from both within the EU and outside of it. In London some 60 per cent of social care workers is foreign, including many from Poland, the Philippines, Zimbabwe, India and Nigeria (Shutes, 2011). One of the more startling, recent statistics for a risk cartography mapping is that more than 75 per cent of British social care workers come from outside the EU; the vast majority is women, leading to what the same researchers have called 'gendered assumptions' about the type of work (Shutes, 2011, p. 5). Collectively, the social care sector is a low-wage, foreign female employment opportunity, increasingly attracting immigrant workers.

To us the question concerns the extent to which the problem is a British one (where methodological nationalism is applied), or also one of care worker drain in other countries (among other issues). One scenario is that social care sector shortages could be considered a worldwide phenomenon, where there is a need for training home-grown home carers everywhere. Another scenario is that those countries with care workers (willing to leave) are being recruited in those countries with the greatest shortages, no matter the consequences for the source lands. In the event, since 2008 British governmental policy has had a points system, which favours high-skilled over low-skilled immigrants, thus reducing the number of migrant care workers from consideration and employment. It is a case where arguably methodological nationalism actually may reduce care worker drain, at least temporarily.

3.3   Migration of healthcare and social care workers and the impacts on victim states

According to the issue fact sheet provided by the World Health Organization (WHO), worldwide there are about 60 million health workers who are immigrants, having moved for reasons of salary, career opportunities, living conditions at home, among others (2010). In the U.K., according to the findings of a survey of internationally recruited nurses, there are major differences in motivation depending on the country of origin (Buchan et al., 2006). For example, nurses from Australia, New Zealand, and the U.S. said the move to the U.K. mainly was connected with travel and 'experiencing a different way of life' (Buchan et al., 2006, p. 4). The U.K. survey also found that two-thirds of the nurses had a recruitment agency involved in their relocation, and nearly half was considering moving again.

As discussed above, for many countries there is a serious threat of healthcare worker loss. As one journalist explained, in reaction to a 2005 study on 'the metrics of the physician brain drain', 'the last place on earth hardly any doctor wants to be is a small out of the way place in Africa' (Mullan, 2005; Wilson, 2005). (It also accounts for the significance of such organizations as Doctors without Borders, which attempt to provide some relief to healthcare worker shortages.) According to the WHO, migration from lower wage countries is often stepwise. Healthcare workers tend to move from poorer to richer climes within a country, and then to higher income countries. In responding to what is sometimes termed the 'medical carousel', the WHO has put forward policy guidelines to stem the flow of care workers from places of acute need to higher income countries, including national training of healthcare workers, and moral sensitivity to the situation in source countries. Nevertheless shortages persist in many countries, the U.K. included, and international recruitment is one means to address them.

There is a growing literature not only on healthcare worker migration but increasingly also on social care worker movement (Moriarty et al., 2012). In discussing the shortages of workers and the spur to recruitment, studies emphasize the widening demographic of elderly people in the U.K., the concomitant demand for social care, the low pay associated with the sector, together with the aforementioned gendered assumptions (Shutes, 2011). Similar to the findings made by Buchan and colleagues on internationally recruited nurses, recent survey work on social care worker migration to the U.K. has found Commonwealth countries supplying the preponderance, including Australia, New Zealand, Canada, South Africa, India, and Pakistan, as well as growing numbers of African and Caribbean workers

(Moriarty et al., 2012). There have been explicit calls for cross-national research into migration patterns and impacts, and invitations to appreciate the complexities of the needs of the countries of origin, which include the availability of care in the source countries but also the remittances families receive from their care workers living abroad (Jones and Truell, 2012). For instance, a study of overseas Philippine healthcare workers made the case that the amount of remittances compensates for the economic loss of worker migration, however much particular surgical procedures are thought to be delayed in the country because of the drain (Bach, 2003). There are other interlocking issues, such as the state of the economy together with labour market pressures, that contribute to the care worker migration issue. For example, the U.K. government has placed a limit on workers entering the country, especially lesser skilled ones. As said, in contrast to healthcare workers, social care workers are considered lesser skilled, thereby limiting their recruitment (Shutes, 2011).

Here it is particularly clear that the consequences of an ageing population have ceased being a nation-state issue, certainly when the nation is not able to provide the necessary care for its elderly population and it turns to international recruitment. How do source countries cope? In certain cases, there has been adaptation to brain drain. The Philippines, India and Cuba have embraced it, so to speak, putting into place infrastructure to train healthcare workers for export (Hamilton and Yau, 2004). In other cases, the outflow of healthcare workers may be calculated, and destination countries compensate source countries. For many countries without such systems in place or without such foresight, migration, however small, can cause system malfunction. Losing a few workers could put countries beneath the minimum standards recommended by various bodies. For example, the WHO's 'Health for All' standard recommends a minimum of 20 physicians per 100,000 people. In sub-Saharan Africa there is 1 per 8,000 people (Mills et al., 2008). There do not appear to be similar schemes to stem the outflow of care workers.

In any case, that developed countries actively recruit care workers from developing countries in order to sustain their welfare system and meet the demands of a rapidly ageing population is an example of global issues with local vulnerabilities, as Ulrich Beck has described it. Here the mapping concerns sensitivities of upstreams to downstreams and vice versa. Is the issue of an ageing population creating what Beck describes as a distinction between decision-makers and victim states? Are decision-makers relying on so-called methodological nationalism, thereby only considering their own backyards? Are there instances (or traces) of global assemblages which form not only to raise awareness but also actively address the world risk (in

Beck's terms)? Here we turn to places usually described as source countries, and the recruitment of their workers.

A 2008 discussion piece in *The Lancet*, the British medical journal, is entitled, 'Should Active Recruitment of Health Workers from Sub-Saharan Africa Be Viewed as a Crime?' (Mills et al.). The case made for such a viewpoint relies on a projection that the ratio of healthcare workers (broadly conceived) to populations, already at dire levels, would worsen severely, should recruitment continue, resulting in a further deterioration of healthcare there. Moreover, the authors critique issue-awareness models, professional codes of practice and other voluntary standards, which they feel have been ineffectual in slowing the outflows of workers. Particular attention is drawn not only to the situation on the ground in African countries but also to the recruitment benefits elsewhere, including the savings made by the U.K. in recruiting over training their own health workers. Recruitment practices themselves (by companies such as RiteAid and Shoppers Drug Mart) are the subject of some attention, for the countries in question already have too few workers in the sector (Attaran and Walker, 2008). Recruitment strategies involve advertising in national newspapers and journals, recruitment workshops, personal emails or text messaging to health workers, and dedicated websites. Offers of employment are accompanied by legal assistance with immigration, guaranteed earnings, and moving expenses (Mills et al., 2008, p. 685).

The policy approaches to the issue of health worker migration in source countries include the regulation of recruitment, and specific worker retention schemes, which may be undermined by independent action on the part of the private sector or conflicting public sector activities, such as certain agencies encouraging migration and others seeking to stem it. Destination countries may put into place regulation to limit recruitment from countries that have enormous shortages and make other efforts to improve retention within the sector without relying on migrant workers. They also may make bilateral agreements with certain countries, as the U.K. has done with China, India and the Philippines. In terms of codes of practices, the U.K., together with the health ministers from all Commonwealth countries, put together the Commonwealth Code of Practice for the International Recruitment of Health Workers (2003), which calls upon the countries to balance the responsibilities of workers to the countries in which they have been educated, and their right to move for (better) work. There are also international as well as national codes of practice, where in each case they provide moral imperatives (respect source country needs), together with a respect for individual rights (people may seek employment). It should be

pointed out that research into the effectiveness of the U.K. (national) code of practice has found that it coincided with, if not contributed to, a decline in healthcare worker migration to the U.K., in two countries in focus in the study, Ghana and Kenya (Buchan et al., 2009). However great the impact, the national code itself, together with the Commonwealth Code, are signs of Beck's cosmopolitan moment.

3.4   Care worker migration to the U.K.: A risk cartography

Nation-states' efforts to redraw the distinction between decision-maker and victim state may be highlighted in making bilateral agreements, promoting training through short-term visas (as opposed to work visas), compensating source countries for losses incurred by healthcare worker migration, and facilitating the migration of healthcare professionals to countries with health worker shortages such as Botswana, Kenya, South Africa, and Zimbabwe (Bach, 2003; Hamilton and Yau, 2004; Shutes, 2011). These efforts should be viewed in light of the fact that the ageing of the European population can no longer be considered a local concern, but instead a phenomenon with global consequences affecting especially those countries that have become sources of healthcare and care personnel – an issue that has been referred to as 'brain drain', 'human capital flight', 'brain poaching', and 'brain circulation'; 'care drain' refers more specifically to care worker migration and the so-called intimate labour performed in caring for the aged and infirm (Bettio et al., 2006). 'Brain circulation', a newer term, refers to the return of those educated abroad (Saxenian, 2005).

When inquiring into the uptake of these issues by those actors involved with ageing in the British context and into the discussions taking place around it online, we found that even though there is recognition of care workers as victims in the ageing space, the issue of care drain remains literally a footnote in the larger debate surrounding other associated issues. Moreover, despite being a geographically-based problem, care drain is often framed as placeless.

Using as starting points the websites of the 14 British organizations participating in Age U.K., in the previous section we mapped a hyperlink network of 376 webpages linked to the issue of ageing. It was described as being mainly limited to websites hosted in the U.K. and U.S., meaning that the network did not include websites geolocated to the places most often described in the literature about care worker migration as experiencing care drain (e.g., Eastern Europe).[5] And if the acknowledgment of the victim's

voice is in Beck's terms a step towards cosmopolitanism, at first glance this network is wanting. In order to pursue the question of recognition further, a technique is deployed that tests the uptake of the terms 'care drain' as well as 'brain drain' in the network of websites. The objective is to determine if the terms resonate at all there, and if they are used to speak of source places and their care workers. In terms of methodology this project represents an inquiry into how to locate and study indications of so-called cosmopolitan behaviour by a set of actors online.

As mentioned previously, care drain refers to the specific displacement of care workers (considered low-skilled under British legislation) from their home countries, where their expertise is needed. Brain drain refers to the larger issue of a country's skilled personnel, including health professionals, migrating elsewhere. The terms are chosen for the analysis here, because in them is embedded a cosmopolitan outlook. They also allows us to delimit an issue space around care workers and the consequences of their migration, and to create a sample that is specific to the topic. In this issue mapping, we are interested in uptake, a simple metric that refers to the acceptance or adoption of particular language or terminology, which can be used as an indication of the degree of recognition of a specific issue by a set of actors. Focusing on the term care drain also touches on issuefication, a label used to describe the processes by which a matter becomes an issue by the formats employed (including terminological innovation) so that they become public and circulate in media, including professional literature (and webpages). The frequency with which the term is used can provide a means to describe its success through adoption. To provide more body to the analysis we also examine the uptake of brain drain and enquire into whether reference is made in the context of its use to care worker migration. The websites that comprise the network are queried for the two terms using the Lippmannian Device, which outputs the frequency of mentions of each term on those websites, the usage of the keywords in context, and the discrete links in which they are featured. Care drain is present on 17 websites out of 376 (on a total of 76 webpages), and brain drain on 92 websites (and more than 1,500 webpages), but no Age U.K. member organizations mention care drain, and only 4 brain drain, albeit in the context of healthcare and not care worker migration (see Figure 16). This is somewhat telling for the issue appears not to be directly recognized or discussed, at least in these terms, by the leading (umbrella) actor in the issue space. Put more starkly, migrating care workers and their issues do not appear to be represented; those matters of concern that do register, however meagrely, are associated with higher skilled migrants who operate in the healthcare system. The
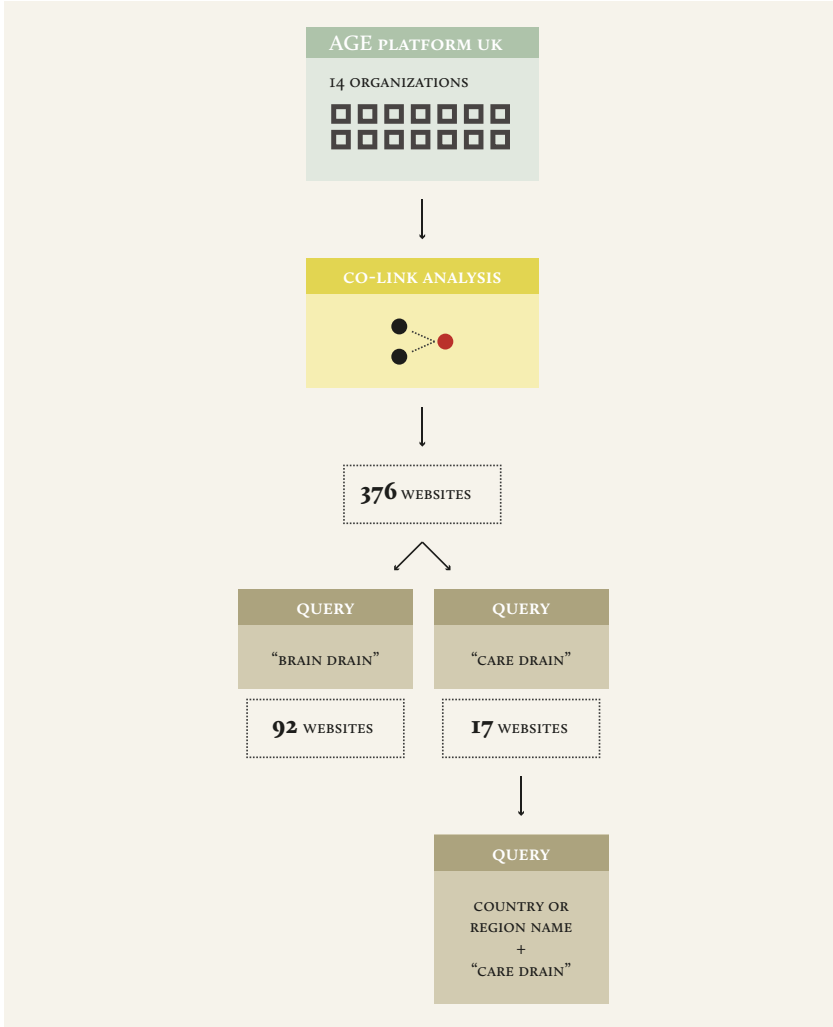
Fig. 16: *Do the issues of care drain and brain drain resonate within the U.K. ageing network?* Research protocol diagram. The link analysis performed on the 14 organizations linked to by Age U.K. lead to an extended network of 376 websites. With the objective of describing this network's recognition of the issues associated with the migration of care and health personnel, the terms ["brain drain"] and ["care drain"] are queried for their frequency of mentions in the set of 376 websites, using the Lippmannian Device. The uptake of the term 'brain drain', often used to describe the migration of high-skilled health workers, is the largest, with 92 out of 376 websites including it. On the other hand, the term 'care drain', employed to frame the migration of low-skilled and informal care personnel, is recognized to a lesser degree, with only 17 websites mentioning it. Lastly, in order to test if the issue of care drain is more often discussed in relation to specific places that are considered sources of care workers, the subset of 17 websites is queried for the combination of ["care drain" "place name"], where the place name is one of those places often mentioned in the literature on care workers. The 376 websites are not listed. The query was made on 2 September 2013.

results of the brain drain query also bear out the fact that the effects on the source country of care worker migration are underappreciated.

The analysis is also concerned with the consequences of care drain as well as the new victims of ageing, in Beck's sense. Seventeen websites from the extended Age U.K. hyperlink network, one degree removed from the seeds, discuss care drain.[6] Most are policy-oriented, academic and research institutions; governmental websites and service providers (including care homes and hospitals that mediate or participate in the migration of care workers) are absent. The low number of governmental websites is somewhat surprising, given the official regulations in place for the recruitment of migrant personnel and thereby the government's seemingly cosmopolitan stance. The term mostly appears in a deep web of academic papers, studies and slides available in PDF format. These documents have as their topic larger issues that link ageing and place. For example, there is the question of how transnational families arrange for the care of their own elderly and the differences between the ageing of migrants and that of natives. Older migrants tend to grow old in more arduous conditions. In these documents care drain is a short section, footnote, or reference. When addressed the theme of gender is predominant, and the issue mainly concerns women who migrate to work in the care sector, confirming the visibility of the gendered assumptions mentioned earlier. A related topic is motherhood since these migrant women often leave their children behind to be raised by their grandparents. Therefore, care drain is not only professional but personal, and children appear to be victims of the ageing issue. The term 'vulnerability' also is used to describe the native elderly population left behind. To conclude, as a set of actors migrant care workers, especially women and their families, are recognized by the organizations and studied as the new victims of ageing.

In order to further characterize this victimhood, a second set of queries is run where the purpose is to enquire into whether care drain is associated with specific populations (such as women) as well as particular places. May we describe which 'loser' places are most often a topic of discussion or used as an example? Following both Venturini and Beck, here the aspiration is to map inequalities, hierarchies, and silenced subjects.

A list of source places is extracted from the literature previously reviewed in this section about migration and care generally: Australia, Africa, Poland, Slovakia, Eastern Europe, Asia, Canada, China, the United States, Philippines, Nigeria, the Caribbean region, India, South Africa, New Zealand, Pakistan, sub-Saharan Africa, Kenya, Zimbabwe, Ghana, Malawi, Cuba, and Botswana. These places are queried in combination with the term [care

drain] in the data set of 17 websites (including the 76 webpages where the term appeared). It was found that care drain has a direct place association: Eastern Europe. It is a source of care personnel for other European countries and in a few instances the negative effects of the migration to the source countries are recognized. Moreover, concern is mooted about how migration has led to an ageing crisis in the region, including the difficulties of growing old in these places. These are undesirable, or loser, ageing places. Of graver concern is the situation of older care workers returning to their home countries after years of isolation and mistreatment in the informal care sector abroad.

Other places have greater frequency of mentions, but do not discuss the consequences of care worker migration in the source country. For Africa, the place most frequently mentioned in this set of documents, care drain refers to other associated issues, including the immigration status of African workers and care workers in the U.K. and the policy that regulates their migration. Australia on the other hand, is framed as being both providers and receivers of a care workforce, but in contrast to Eastern Europe, the discussions refer to it mainly as a receiving country, rather than as a victim. The least represented, however not necessarily less affected by the phenomenon, are Pakistan and the Caribbean region.

To conclude we wish to mention that the website of *The Telegraph* newspaper has a care drain article (in our results) describing a future when the U.K. has an overabundance of medical professionals, who may have to enter the care worker force, or immigrate to 'other countries where medical services [are] in short supply, including Eastern European countries, Australia and New Zealand' (Furness, 2012, n. pag.). Africa, the Philippines, or India, among the largest providers of care personnel for the U.K., are not mentioned as potential destinations, although they may as well be. Here we are reminded of the notion of brain circulation, introduced as a corrective to brain drain, where highly trained personnel, perhaps first or second generation immigrants, return to the country of their parents' or their own origin, be it temporarily, to work, offering some relief to a place of ageing (Saxenian, 2005).

Throughout this chapter we have been mapping the intersections between ageing places and migration, and now we have reached the matter of how ageing as an issue may be mapped geographically, engaging with ageing in Europe as a place-based issue. In the following we set off to remap Europe in terms of its ageing issue needs, adding critical layers, and its ageing contributions, offering a European ageing resources map.

4.   A critical cartography of ageing

We arrive finally at the cartographic map, as the findings we made in previous chapters have led us more and more towards the question of ageing and place. Risk cartography has aided us in thinking about ageing as an issue that urgently requires us to leave the borders of the proud nation-state (and an analytical starting point referred to as methodological nationalism), in favour of the transnational outlook and assemblage, potentially bringing us to what Ulrich Beck referred to as a cosmopolitan moment of enlightenment. In search of this moment we followed the traces left by migrations of care workers from care drain regions to wealthy European nations lacking the sufficient workforce to care for their elderly, examining the policies regulating these displacements. Ultimately, we are interested, in the risk cartography, in how different national and transnational actors are organizing themselves in the face of a coming ageing crisis, and whether there is recognition of *potential* victim states. Likewise, with social cartography we mapped associations between a general European agenda on ageing and the subsequent national (non-governmental) agendas that are put on the table in the form of each European country's participation in the 2012 European Year of Active Ageing. Is Europe's agenda one with its members, or are there particular agenda-setting blocs or corridors, and isolated minorities (themselves with urgent issues such as discrimination against elderly women). There we were alerted by a Slovenian newspaper article of the prospects of EUropeanization, where the EU sets the agenda. In Poland the EU issues are easing their way into the NGO ageing formulations, however much they are adapted (ageing women's issues together with active ageing outside of the workplace, on mountains and with Nordic walking equipment).

Alongside this process, we also began to map ageing issues having to do with place, often connected with travelling human beings, national and transnational policy agendas, immigration structures, work permits, and nationalities. The question of ageing and place had been making its way into our mappings from the beginning. Now in this third set of mappings we would like to engage explicitly with the idea of place. We are presently concerned with identifying and tracing how locations across Europe are being made into (and marketed as) ageing places. Perhaps a better way to articulate our more general methodological question would be to say that we are now interested in mapping the formations of places concerned with the issue of ageing. By ageing places we do not mean, in the first instance,

the locations where people tend to live longest, such as the Nuoro province in Sardinia, the Japanese island of Okinawa, the Nicoya Peninsula in Costa Rica, or the island of Ikaria in Greece. Exceptional ageing places, first described as such in the *National Geographic* in 1973, are now the subject of in-depth research (interviews and observation) into longevity lifestyles, including diet, housing, sleep patterns, and socializing (Leaf, 1973). For inhabitants of Ikaria, the diet is plant-based, the house tends to be one's own, the daily routine includes a nap and often late afternoons, and early evenings, are spent dancing with neighbours and imbibing home-made wine (Buettner, 2012). The tea that is regularly drunk is medicinal. While we also conclude with recipes found during our research, our mapping work concerns less the secrets of old age in the places such as Ikaria that have been termed *longevity blue zones*, and more the implications of greater numbers of older people across European places more generally (Poulain, Herm and Pes, 2013).

To study ageing and place, the framework that we choose to engage with is critical cartography. Broadly speaking, critical cartography offers both a critique and a practice of spatial and place-making activities, especially that of actual maps. We are also interested in what this particular approach could lend to social cartography and risk cartography, with the specific focus on the question of *where*. We use as part of our conceptual toolbox Jeremy Crampton's *Mapping: A Critical Introduction to Cartography and GIS* (2010). The book is an outline of the field of critical as well as neo-cartography, in dialogue with non-professional or amateur contemporary mapping practices that make use of the online mapping platforms, such as Google Maps, Google Earth, and Open Street Maps. From Crampton's larger argumentation we focus on the dual nature of mapping as both the object of and tool for critique. We also concentrate on the potential realizations of critique in practices of counter mapping and neo-cartography, a term we use as a shorthand reference for mapping (by non-cartographers) with the new online platforms. Finally, in the second part of this chapter, we apply these key concepts about critical cartography to the mapping of our case study of the ageing issue and the European Year of Active Ageing. In our critical cartographic work, more concretely, we seek means to augment the outputs of existing neo-cartography platforms. The results are a series of critical mappings on ageing that take the form of cartographic issue layers, placed atop of maps. Ultimately, we create three different issue layers of an ageing Europe.

We have entitled the first one the 'Polish Migration' layer, which is a mapping of migratory patterns of Polish care workers. We use the Polish

local domain Google (google.pl) to identify, via a series of specially formu-
lated queries, the location of jobs offered abroad targeting Polish nationals.
The second issue layer, 'Issue Centres and Peripheries', is in itself a tiered
mapping structure composed of the geolocations of NGOs working on the
ageing issue, their events, and their issue lists, according to the AGE Platform
Europe. We repurpose the publicly available databases of the AGE Platform,
and its map of Europe, in order to situate anew the European debate on age-
ing. We create what could be conceived as a series of 'counter-maps' to the
AGE Platform, showing instead of a flat map the hierarchies among states
(e.g., in number of participating NGOs and in their respective amounts of
activity). A third issue layer is entitled 'Cross-European Comparison of
Ageing Issues', where we again used local domain Googles to geolocate the
top issues per European country in relation to ageing. The outcome is a
resource map, in the style of the geography of local specialties or mineral
deposits, and points to specific ideas, infrastructures, philosophies, recipes,
and other practical contributions each country makes to the issue of age-
ing (according to the search engines). Ultimately the issue layers aid us in
showing on maps the associations between age and place.

4.1   Critical cartography and map-making

Critical cartography embarks in two directions at once: critiquing car-
tography and practicing critical map-making. For the first part of what
Crampton labels a one-two punch, cartography critique begins with the
recognition of the power of the map. It is what Bruno Latour has called an
immutable mobile: 'an instrument that preserves the meaning and truth
claims of scientific observations as they circulate across time and space'
(Crampton, 2010, p. 169). Crampton invites the critical cartographer to
interrogate the map's taken-for-granted-ness. It is achieved by situating
the maps as products of specific historical periods and geographical spaces,
thereby de-universalizing them.

    For the second part of the one-two punch, critical map-making practice is
described as the effort to step beyond the mere display of a map's situated-
ness by presenting alternatives (new maps) in a process of intervention that
may be evaluated: if the way we make decisions (based on knowledge) is
changed, then a political intervention has been made (Crampton, 2010,
pp. 16-17).

    The relevance of performing a critique of maps derives from their (of-
ficial) use. Critical cartography aims also to describe or depict how maps

deliver certain states of affairs and status quos as well as how they are used as matter-of-facts in a debate or in the court of law. To Crampton, referring to the work of Denis Wood and other critical cartography thinkers, there is no need to travel afar to notice the regularity with which the cartographic is used to settle claims and otherwise serve as proof, without resort to any origins stories of how they came into being, and when or where they were produced (the de-universalizing endeavour).

To approach maps from a critical perspective is also to tread against a series of developments in the discipline of cartography that have worked to reinforce systematically the map as an 'at bottom' object or baseline. Crampton describes the explicit desire to link cartography to a 'Swiss-like neutrality about politics', so that it is distanced from propagandistic uses of maps as space documentations by proud nations (in Beck's terms) or by ideological blocs (Cold War) (2010, p. 3).[7] He also describes its move away, in the twentieth century, from art and craft to scientific cartography, which has been cultivated with contemporary technologies of data collection and overlay such as GPS and GIS, and the proliferation of hard representations such as satellite images. It is with some urgency that he argues we continue the critical project and describe maps as objects of persuasion. They are not just the data, but rather samples and collections. They are not just visualizations of the data, but are continuous with the historical practice of map-making (art, craft, convention, and business), and that historical association must be kept in view. In the face of a cartography that is increasingly dependent upon GIS and geographical software, Crampton urges readers to recognize also in these an artifice as in other previous types of mappings. Thus critical cartography confronts the strong associations cartography has with the precision and definitude of the map. In this sense, critical cartography calls for a certain form of reflexivity, or relentless recognition of the map's manufacture.

The method of critique described here – unpack assumptions, historicize and situate, make visible and legible, and challenge the categories of the mappings – does not intend to neutralize the power of maps, however. In this respect Crampton states: '[B]ecause a truth is understood as being produced, socially constructed, or possessing a historicized genealogy does not make it any less of a truth' (2010, p. 106). What changes instead is how the map-maker and map-user can relate to what is presented to them. As Denis Wood showed in his famous Smithsonian exhibition on *The Power of Maps* (and how they may be deconstructed), highway maps promote highways, and private transport over public transport (1992). Crampton argues that both the map-maker but also the map user should recognize

their so-called positionality. '[H]ow was that truth produced? With what effects? And, as reflexivity and positionality would suggest, what is your relationship to [them]?' (2010, p. 106).

More specifically Crampton delves into what maps (and mapping) do to place. 'Critical cartographers [...] argue that mapping creates specific spatial knowledges and meanings by identifying, naming, categorizing, excluding and ordering' (2010, p. 45). Cartography transforms places into locations. In contrast to locations that have a higher degree of certainty, places rely on other attributes than coordinates. A place has a sense of specificity, of being occupied, with designated uses, characteristics, and orderings. They are domesticated. Things have a place; there is a place for everything. In practical terms, critical cartography concerns itself with how maps may transform places. It concerns itself, too, with how lines may become partitions (divisions and separations). It inquires into how names become inscriptions (from carvings to permanent official records and signage). Critical cartography, in other words, considers mapping as a method for redoing place, whose effects can be recognized and challenged.

4.2   Practicing critical map-making

The second development that critical cartography has followed is that of critical map-making, practiced by a more heterogeneous set of actors than cartographers: 'If the theoretical critique cleared conceptual space for alternative mappings, it has fallen to a variety of practitioners outside of the academy to explore what this means in practice' (Crampton, 2010, p. 21). Because our objectives are mainly practical, we are most interested in this second aspect of critical cartography as map-making, and especially how its principles could be operationalized for the mapping of the ageing issue (and other issues, too). As we have related above, from a theoretical perspective critical cartography has conceptual tools for furnishing origins stories to maps (de-universalizing them), and specifying the transformations the maps effect (politicizing them). The practice of critical map-making and production not only unpacks maps, however. It also appropriates and redeploys map-makers' methodologies. The result is a so-called counter-mapping, vested with the capacity to contest. To describe this power, Crampton refers to Wood's *The Power of Maps* (1992):

  [M]aps express the interests of certain groups and these interests are not always explicit. But Wood was no conspiracy theorist, he showed that

the map interests could be made to work for others. This was a very well received argument and it proved something of a manifesto for many counter-mapping projects. (Crampton, 2010, p. 18)

In order to describe counter-mapping, Crampton presents a classification of areas in which mapping has moved towards or produced modes of opposition. For example, he mentions artistic explorations, mappings of everyday experience (which explore the role of space in people's lives, bringing it back to the personal and the psychogeographical), map hacking (neo-cartographies of mash-ups, data set recombinations, map customizations and layering) and maps as resistance (counter-mapping used explicitly to present alternatives to already existing cartographies). Each type is counterposed to the discipline of cartography, and its conventions and security. In that respect another of Denis Wood's interventions is particularly poignant: 'cartography is dead (thank God!)' (2003). Wood refers not only to the liberation of map-making from its disciplining as cartography, pointing out the relatively brief history of the word cartography itself, and the current growth of map-making outside of the discipline. But he also embraces the proliferation of maps and mappings (akin to the Latourian position, discussed earlier, calling for map multiplication).

In this chapter we focus not on the challenges faced by cartography as a discipline, but rather seek to join in the multiplication of the mappings and the maps that result. In order to do so, we would like to operationalize counter-mapping as a neo-cartographical practice of working with online maps and augmenting them. Of the counter-mapping techniques discussed, we are especially interested in the area of map hacking, where we would add to the maps with data collected about the issue of ageing in Europe.

In its simplest version counter-mapping is described by Crampton as 'map or be mapped' (Crampton, 2010, p. 48). The famous work by the Surveillance Camera Players is often given as a prime example of counter-mapping: producing a map so as to avoid being mapped. The group identified in 1998 the locations of over 2,000 video surveillance cameras in New York City and made their own maps of them, so that people could avoid the cameras, or at least be aware of their presence (NYC Surveillance Camera Project, 1998). The counter-map also may succeed existing maps. The Maya Atlas project discussed earlier is a case in point. Counter-mapping in this sense is an expression of how the map has been decisive in both the partitioning of territories, as well as in the subsequent reclamation projects of those territories by making a new map. Here the question concerns which elements of mapping should be one's focus in the counter-mapping. With mapping,

as we mentioned, places have become locations, based less on tradition (sense of place) than on coordinates. Lines may become partitions that separate and divide. Place names may become inscriptions, granting them new identities. Counter-maps could seek to return (or redo) places, names and lines, practicing forms of topological, toponymic and topographical politics. Such would be one general recipe for counter-mapping.

Crampton, however, nuances the duality of the opposition posed by mapping and counter-mapping, employing such terms as reworking, repurposing, and reorganizing maps, referring especially to the information that backs them and the effects they have when applied. One example (which Crampton chose as the cover art to his book) is a map from the project, *The Atlas of the Real World*, where the sizes of the countries are proportional to their populations (Dorling et al., 2008). In the *Atlas* the world's geography is resized, recoloured, and stretched by different data sets, such as the number of Internet users or unemployment rates per country. These cartograms (geographical forms injected and reshaped with data) present an estranged version, as they evoke the once normal world map now turned into states of affairs. Through the contrast between normal and the new, the cartogram may be defined as a counter-map, 'offer[ing] a radical reinterpretation of the familiar world' (Crampton, 2010, p. i).

4.3   Neo-cartography and digital methods: The mash-up and the layer

'Map mashups, map hacking, the geospatial web or geoweb, neo-geography, locative media, volunteered geographic information, DigiPlace, and new spatial media' are all terms for the production of maps by non-cartographers using online mapping platforms and services (Crampton, 2010, p. 26). Neo-cartography, the umbrella term we use, makes available, actionable, and programmable a series of place-making activities for a set of users, turned map annotators, and map-makers, who are outside the field of cartography, but are enabled. There has been a proliferation of a new type of maps, with particular visual languages, modes of operation and imputations of authority that are used as knowledge for decision-making, as we discuss in the well-known case of the disaster maps created to assist Hurricane Katrina rescue operations. Neo-cartographies, as accessible and inviting to new producers and users as they are, also have modes of distribution, of interest for communication; they may be hyperlinked, embedded, shared, attached, printed, and otherwise circulated.

Indeed, the relationship between counter-mapping and neo-cartography is especially relevant, and a point of continuation with the larger methodological discussions undertaken above. Neo-cartography has reinvigorated the ways in which we can theorize and critique maps by untethering them from so-called standard *disciplined* regime of cartographic production and official information cultures (maps as 'gov docs'). It also has allowed for the application of the framework of critical cartography, operationalizing Crampton's rationales for counter-mapping (rework, reorganize, and repurpose), which are also well-known calls made by such advocates of copyright reform in the digital age as Lawrence Lessig (2008).

The main means of map augmentation, enhancement, and annotation are of two forms: the mash-up and the layer. Crampton: 'A mashup is a website or web-based program that combines two or more sources of content into one tailor-made experience' (2010, p. 27). It is the incorporation of (real-time or regularly refreshed) data or media onto a map, such as Paul Rademacher's famous HousingMaps (from September 2005), which harvested real estate listings from Craigslist and populated them as placemarkers on Google Maps, including thumbnail pictures and listing information. The aptness of the term mash-up lies in the fact that the data sources and the platform were not necessarily intended to be one in the first place, but rather are blended or even mangled together. The Programmable Web, the website that provides a how-to guide as well as a directory of projects, calls true mash-ups those having at least two data sources. A mash-up is thus somewhat similar to a GIS (geographical information system), where often official statistics (such as demographics) are displayed as layers on geographical maps (such as neighbourhoods or districts of a city). Mash-ups, however, often enliven the map, with data that may be fed or retrieved from other sources, relying, for example, on a *spreadsheet with a heartbeat.* Here the map would regularly poll data sources, in order to check whether they have been updated so as to keep it fresh.

Google Maps (formerly Google Local) was released in February 2005 as a web-based application intended for users to search for locations, navigate maps, plan trips, and browse other geographical information, including the location of businesses and places of interest. As Crampton remarks, however, users quickly re-engineered the platform in order to display their own data on the maps instead of Google's. Embracing the trend of user-generated data creating value for new media platforms, in the same year Google released an API (application programming interface) that encouraged developers to create map mash-ups and integrate Google maps into their own websites. In 2007 they launched MyMaps (later called MyPlaces),

a do-it-yourself mash-up maker. Crampton deems it 'people-powered mapping', and potentially counter-mapping tools, for map-makers are not only acting outside the discipline of cartography and government offices (both traditional map-makers and holders), but also capturing data streams and populating maps with information not necessarily intended or expected to be on maps (2010, p. 28).

According to the tutorial offered by Google MyMaps (MyPlaces), the user can perform the following tasks: (a) select a map and give it a title and a description; (b) create place marks and annotate them with information about a location, description with text, images, and links; (c) highlight a route or an area by using lines and shapes, basically drawing over the map; and (d) save the map and decide if he/she wants to share it with others users or invite them to collaborate by giving them authorization to modify the map. Also, the user can decide if the map is made public and visible to search engines, or unlisted and invisible. These series of actions evoke certain of the activities that cartography performs: locating, categorizing, and inscribing. Practitioners (outside the discipline of cartography) are making known to others, and circulating these augmented maps. They also may invite users to annotate it, as was the case with one of the most successful mash-ups, the Katrina Information Map.

One of the earliest mash-ups that is at once neo-cartography and counter-mapping is the (Hurricane) Katrina Information Map by Jonathan Mendez and Greg Stoll (2005). In August 2005 Hurricane Katrina moved along the Gulf Coast of the United States, leaving a path of damage from central Florida to Texas and had devastating effects in New Orleans, Louisiana. The Katrina Information Map offered users the opportunity to put placemarkers on a Google Map of the damaged areas, with New Orleans and its environs being a heavily marked area, reporting the conditions there, or asking about them, during the storm and its aftermath. At the time of writing it is still online, functioning as an extraordinary record of events and the responses. (It also was the source of great interest in the press, but the same map-makers' projects providing place-based, user-generated status updates for Hurricanes Rita and Wilma were less successful in terms of usage.) Not only was the Katrina Information Map a people-powered map (for its data came from eyewitnesses and individuals interested in specific locations), but it provided a platform to critique the official response, both on the ground as well as online. It is annotated with comments about where help should arrive. As one blogger phrased it, referring to the Federal Emergency Management Agency, in dialogue with the map-makers: 'Doesn't it seem funny that you spent an hour or two of working and now you are serving up

better information than FEMA?' (raccaldin36, n. pag.). To put the mapping into perspective, for the authorities it was a time of decision-making: it was necessary to perform rescue operations, to locate people that were trapped in their homes, control the flood, and coordinate the efforts of all parties involved. The disaster, however, quickly turned into a political crisis, too, since the authorities were unable to respond quickly and effectively; absorbing the blame, the director of the FEMA resigned some two weeks after the storm hit.

In the immediate aftermath of the hurricane, Google Earth put on its platform flyover images of the damaged areas made by the National Oceanic and Atmospheric Administration (NOAA). They overlaid the aerial photographs onto existing satellite images, so one could view the situation before and after the storm as a layer. The Google team later received an award for the project, where it was cited that 'rescue workers and the U.S. Air Force were using Google Earth to find people who were stranded' (Hanke, 2006, n. pag.). After Katrina Google standardized the role of neo-cartography in crisis management by releasing Google Crisis Response, a project of the Google Foundation, Google.org.[8] The project summarizes new media mapping and database achievements, in times of crisis, with off-the-shelf initiatives: 'Creating a resource page with emergency information and tools; launching Google Person Finder to connect people with friends and loved ones; and hosting a Crisis Map with authoritative and crowd-sourced geographic information' (Google Crisis Response, 2012, n. pag.). In a sense Google.org is professionalizing and taking over the online activities of the small-scale initiators, such as Mendez and Stoll, whose crowd-sourced Katrina crisis map served as the pioneering mash-up. Katrina saw a host of online innovation, and a proliferation of database tools, informing Google.org's other initiatives. The Person Finder builds upon websites such as im-ok.org and katrinapeoplesearch.com, which together with a variety of message boards, forums as well as damage (photo and video) blogs sourced and outputted news of personal relevance. The U.S. government also made its own people finder, the Next of Kin Registry, to compliment the ones that have been put into service over the years by the Red Cross, among other organizations. Google's resource page is more than a collection of links (as was prevalent after Katrina). It embeds services such as donation collection, layered maps showing grocery stores and medical facilities, satellite imagery with before and after shots, as well as official alerts and status updates, in an alternative to Twitter. To gain a sense of the scope of Google Crisis Response tool use, in 2011 alone the project saw its services implemented after the Turkey earthquake, the Thailand floods, Hurricane

Irene, the Japan earthquake and tsunami, the Christchurch earthquake, and the Australia floods. In a sense Katrina was to Google Maps and Google Earth what the September 11, 2001, attacks were to Google Web Search and Google News, where in the latter case the algorithms and search services would change so as to provide more timely information (Wiggins, 2001). In the former case, Katrina ushered in not only the integrated crisis response toolkit but also what one could call the *crisis layer* on maps, which has been the subject of critical cartography.

A layer in Google Earth marks up the map, and also embeds it with media. The markups are such elements as borders and place names, and the media are photos and information panels that introduce a layer. The layers may be turned on and off. For our purposes, the critique by Lisa Parks of Google Earth's 'Crisis in Darfur' layer is of interest, for it provides a series of admonitions for layer creation and presentation as well as counter-mapping more generally. To briefly summarize, the 'Crisis in Darfur' layer, one of the defaults in the set of Global Awareness layers in Google Earth, is a project advanced by the United States Holocaust Memorial Museum; it is the first part of the Museum's Genocide Prevention Mapping Initiative, which also includes Holocaust layers. The objectives of the 'Crisis in Darfur' layer are to offer a means for citizens to bear witness to the tragic events in Darfur, Sudan, through flyover images (with before and after pictures), markers of villages damaged or destroyed, as well as pictures and videos that tell stories from the ground. The media serve as testimonies to what occurred, so the user can witness the events, as mentioned above, and also take action, as the information panel urges, with a link to resources for educators as well to a pledge wall, which is a form to tell one's own story about one's promise to take action. In the initial press conference with Google, the Holocaust Museum's project partner, the spokespeople described the layer as an information intervention, which Lisa Parks, in her critique, discusses at some length, questioning the effectiveness of the very notion, and pointing out a difference between an information and a humanitarian intervention. Such a point reminds us of Crampton's proposal to evaluate counter-mapping projects in terms of how they affect decision-making, and in turn could be viewed as a political intervention.

Parks's discussion of the 'Crisis in Darfur' layer is detailed, and like the Genocide Prevention Mapping Initiative's participating scholars, inquires into what the map layer adds. 'The capacity to situate testimony and evidence within geographic space is one of the distinguishing characteristics of Google Earth' (Parks, 2009, p. 537). She terms the media contents of the layer (the pictures, videos, and village information panels) an archive: 'That

is, the archive represents the *potential* to articulate testimony not only within a temporal logic of the historic, but in relation to the spatial logic of the geopolitical as well' (Parks, 2009, p. 537). Parks describes the 'Crisis in Darfur' layer, however, as privileging the spatial over the temporal to such a degree that it becomes a space of documentation instead of one where intervention is needed now. In the first version of the layer, up to 2007, images had a date by year (2004 or 2007), and some were without a date. To Parks it did not call for intervention so much as to invite a view of a region 'perpetually in strife' (Parks, 2009, p. 540). The Katrina mash-ups and their offsprings, contrariwise, appear to provide annotations in their layers that could be translated into action – find people, locate services, report conditions, and provide an update on the response. This is perhaps why Parks calls the 'Crisis in Darfur' layer more a documentation or archival space, questioning not only the phrasing but also the timing of the so-called information intervention: 'it is an accumulation of information, a database of documents and images being used to represent and produce knowledge about a conflict site/sight that *could have been* intervened in' (Parks, 2009, p. 540). The layer's tense is past. Parks asks about the traceability of the sources themselves, and the absence of references.

In learning from critical cartography for counter-mapping, we must take care in employing the term intervention (and especially information intervention), and remind ourselves how to evaluate its effectiveness. We are also instructed by Parks, especially when dealing with web materials and data, to pay attention to the effects of multiple temporalities. Is the aim to document historically or to monitor the present? Being able to reverse engineer the map is also important. As Venturini pointed out, one must be able to trace the information on the map back to its original source.

A final critique put forward by Parks concerns the narrative, or the story that is told with the findings. Attention is given to the personal story of individual suffering. The images and the videos bring the crisis home, so to speak, in a particular form of witness-bearing: a girl collecting firewood, the temporary house made out of whatever materials could be found, and a girl with a traumatized baby sister (to recount a few picture descriptions), with conventions from the *National Geographic* magazine. Indeed, Parks raises the question of the literary convention. One of the larger points is the issue of the complexity of the Darfur conflict itself, and how to visualize *that*. Here again it may be relevant to compare the 'Crisis in Darfur' layer's sense of the personal with that of the Katrina mash-ups, and the crowd-sourced stories from the ground, whose accounts were in a message board (or Twitter) short-form style, with a multiplicity and diversity that

was perhaps closer to the complexity and urgency of the situation than the manner of the 'Crisis in Darfur' layer.

Up until now, we have explored critical cartography as theory and as practical map-making. When focusing on the latter, we have been provided with a series of clues on how to counter-map, which starts by repurposing, reworking, and reorganizing, with a focus on places, lines, and names. Neo-cartography (the online mapping platforms), as we have noted, makes available (to non-cartographers) tools for the multiplication of maps and the means to distribute them. In particular, we identified formats or modes of expression in neo-cartography: the mash-up and the layer. They may aid in decision-making processes in times of crisis. We were able to identify, through the examples as well as Lisa Parks's layer critique a series of good practices in neo-cartography (within layers and mash-ups) in times of crisis. Additionally, we introduced the idea of using search engines for cross-cultural analysis and placed-based research, as well as a series of recommendations to make the findings as accurate as possible. Now we would like to take this set of concepts and methodologies from critical cartography (and its operationalizations with online tools and map applications) to issue mapping.

4.4   Issue layer I: The Polish care worker migration layer

An ageing Europe has needs. As described in the previous chapter, ageing needs (and other considerations) brought care workers from other places to countries that lack care workers such as the U.K. By following these displacements we are able to map the recognition of imbalanced exchanges, asking the question of whether non-governmental organizations, government, academia and industry (among others) are considering certain countries as potential victim states in the coming ageing crisis. Now, in a similar fashion we would like to further examine care worker migration inside the EU, among the member states of the European Year of Active Ageing. We are interested in actual job offers for care workers, comparing the ones inside an EU country with those that would attract care workers to leave it.

We begin our mapping by focusing on the migrations of care workers that are potentially taking place from Poland to other EU countries. The first step is to find an entry point to the traces left by these displacements. Here we repurpose search engines for our research needs. We use the Polish local domain Google (google.pl), and query broadly the term 'job offers' (["oferty pracy"]). From the websites outputted by the search engine, the

most highly ranked are job portals in the Polish language: gazetapraca.pl, praca.pl, pracuj.pl, pracamoney.pl and kariera.pl. The five platforms each have a similar structure. The user can search a database with job offers that are categorized by occupational fields, including 'healthcare' ([*"służba zdrowia"*]) and 'home care' ([*"opieka domowa"*]). On 8 April 2012 (in the Spring of the European Year of Active Ageing) there were 27 job offers for Polish nationals to work in Poland, while in Germany there were a total of 266 openings, United Kingdom 56, Belgium 19, the Netherlands 17, Switzerland 17 and Austria 4. The demand for Polish care workers was greater outside of the country than within, with a medley of destinations in the offing. Subsequently, we collected the names of the employment agencies (in the jobs portals) acting as brokers, together with their locations (see Figure 17a). Twelve employment agencies were active during the time of the job search: Promedica Care and Pro Senior based in Poland and Germany; the Caring Crew and Pro Care based in the Netherlands; Private Care 24, Pflegeengel 24h, Senior Care, Germanicus Pflegeldienst, and Europa Care International based in Germany; Global Service M&A and Senior Invest based in Poland; and Pflege mit Herz in Austria. Many of the agencies included on their websites statements about Eastern European workers, describing them as the 'solution' to the problem of an ageing Western Europe in terms of balancing the shortage of personnel, cultural familiarity and affordability. Poland was over and again an explicit place and source of care workers; in fact, Caring Crew, the Dutch agency, describes their employees as hailing for the most part from Poland.[9] Private Care 24, the German agency, sources its employees from Eastern Europe, as long as they speak German (or can be trained to do so), employing tandems of care workers per assignment, so if one falls ill the other can step in, and is familiar with the situation.

After collecting the information from the job portals (job offerings and the country acting as employer) we visualized the results in the form of a vector map. It shows which countries call upon Polish care workers (according to the offers posted on job portals) to meet their ageing needs, and displays the direction of migration as well as the quantity of job offers (see Figure 17b). The information displayed on the mapping can be understood in terms of flightlines or routes to ageing places, starting in Poland and extending to the six most mentioned countries, Germany, U.K., Belgium, the Netherlands, Switzerland, and Austria. Additionally, as we have included the links to the job portals, which allow the user to retrace the source of information and update the number of displacements, countries, and employment agencies. Here the map becomes reversible and the sources traceable in the senses discussed by Venturini and Parks, respectively.

Fig. 17a: *Vacancies for Polish care workers.* Mediator map depicted as a flow chart. The map depicts a series of job portals, or mediators, that facilitate the migration of Polish care workers into other EU countries. It includes the source country (Poland), the websites for the five most popular job portals according to the search engine (Google.pl), the job offerings posted in these job portals, and the job agencies that manage the care workers once hired. Query google.pl for ["*oferty pracy*"] ["job offers"] and the job portals for ["*służba zdrowia*"] ["healthcare"] and ["*opieka domowa*"] ["home care"] on 8 April 2012. Sources: http://www.gazetapraca.pl, http://www.praca.pl, http://www.pracuj.pl, http://www.praca.money.pl, and http://www.kariera.pl.

Finally, it is worth clarifying that since we are working on the basis of offers our maps display potential displacements, rather than actual ones. Thus we are showing a *potential* victim state, in Beck's sense, though (as we learned in the case of the migration of care workers to the U.K.), there are measures in place that show sensitivity to the situation. There is a points system to prevent scaled-up immigration, and thus care worker drain. Here a transnational policy, or EU policy, may be worthwhile, or at least a debate facilitated by the occasion of the European Year of Active Ageing. Such would be the action item prompted by the mapping.

Finally, there is a point to be made about mapping as applied theory and the contribution of critical cartography. By following the migration of Polish care workers, job portals and private care facilities become the relevant actors and mediators that provoke movement and displacements, thus at the same time furnishing a means to trace associations, and put the issue on display (on the map). Here we take advantage of the insistence on identifying mediators and tracing movement (made in social cartography), together with an outlook that sees risks and crises as producing possible victim states (risk cartography). Critical cartography calls for counter-maps
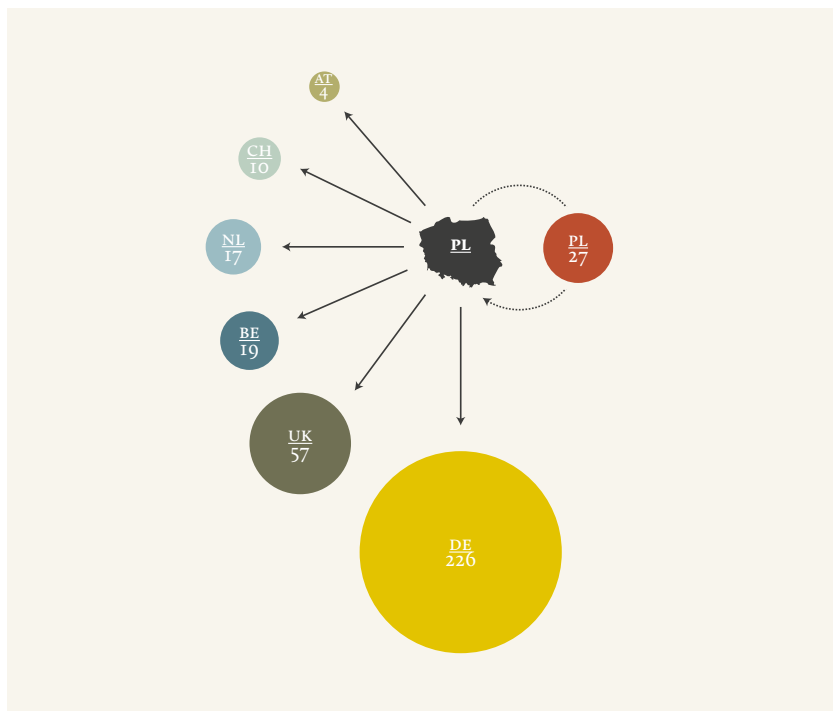
Fig. 17b: *Potential Polish care worker placements by country*, vector map. The graph has as its centre Poland, and two types of vectors are projected from it. First, those that cross the Polish border to go to Austria, Belgium, Germany, the Netherlands, Switzerland, and the U.K., each accompanied with a bubble that contains the search engine domain used for the query and resized according to the number of job offerings. Second, a circular vector that returns to Poland represents the national vacancies for care workers. Query google.pl for ["*oferty pracy*"] ["job offers"] and the job portals for ["*służba zdrowia*"] ["healthcare"] and ["*opieka domowa*"] ["home care"] on 8 April 2012. Sources: http://www.gazetapraca.pl, http://www.praca.pl, http://www.pracuj.pl, http://www. praca.money.pl, and http://www.kariera.pl.

and multiple mappings. The Polish care worker migration layer is an alternative cartography to those presented on the AGE Platform Europe as well as on the official EY2012 webpages, but it brings them all into dialogue. Should care worker migration be on the agenda? On its face it appears to be an issue that could be treated by a transnational assemblage of non-governmental organizations dedicated to the ageing issue, together with the policymakers, all of whom rely on the European issue year as an impetus for action. Is the issue year, the platform, and the activities the proper format for achieving the identification and treatment of such issues? In the following we again undertake a counter-mapping, reworking the map of Europe and repurposing the events database (on AGE Platform Europe), where we have found

centres and peripheries in the attention paid to the European issue year, and the sources referenced about the year's issues. It is not so much an effort to map which European countries perform well (so to speak) given such a constellation of formats (issue year, NGO platform and events database). Rather we are interested in which places engage in the ageing issues (and how they engage them), and which had nary an activity planned or initiative referenced. Thus we are interested in place contributions to the issue. Are there dominant ageing places, and dormant ones, in the formation of the issues as the agendas move forward?

4.5   Issue layer II: Ageing issue centres and peripheries – NGOs, events, and sources of authority

Capturing (potential) care worker migration and putting it as a layer onto a map help us to display tensions of issue and place, showing how ageing issues are transnational, with the capacity to produce victim states. While there is a shared concern (and a platform to share activity announcements), it does not necessarily imply a balanced distribution of resources. In the previous chapters we made similar findings, where for example, we mapped how certain issues have more visibility than others and how the idea of ageing as a transnational concern is often overshadowed by national ideas (the pension reform debates). Now we would like to distil it further: To what extent is the ageing debate in Europe directed towards specific country issues? Put differently, which issues are being under- or overrepresented in Europe on account of national interests? Which issue-centred transnational relationships are being forged, and which of those are being amplified, or unaccounted for?

To begin the mapping of our second issue layer we use as an entry point (as we have done before) the AGE Platform Europe (age-platform.eu). To briefly recapitulate, AGE Platform Europe is a 'European network of around 165 organizations of and for people aged 50+ representing directly over 30 million older people in Europe', and was created in 2001 to 'improve and strengthen cooperation between older people's organizations at EU level' (AGE Platform Europe, 2012a). In 2010 AGE Platform Europe redirected its URL from age-platform.org to age-platform.eu presumably to position itself as part of the European Year project.

AGE Platform Europe also became a partner and a member of the EY2012 Coalition for the European Year of Active Ageing, which organizes member states' engagement with the issue of an ageing Europe, providing specific

modes of engagement, participation, and connection for members involved. AGE Platform Europe, participating in the Year, is also an online database and map project in the sense that it organizes and stores initiatives, and provides an interface where the user can select them by clicking on a map of Europe. Countries are producers of events, hosts of conferences and developers of better conditions for the elderly; ideally the members are in the process of becoming better ageing places.

Our objective here is to produce multiple neo-cartographies (that will take the shape of issue layers) by repurposing, reorganizing and reworking AGE Platform Europe's online database. The goal is to unflatten the European map and show issue engagement, ultimately producing maps that display the centres and peripheries of the ageing issue network.

The AGE Platform Europe is organized around geopolitical and hierarchical categories that locate a series of member states in relation to each other; they are connected by the fact that they have agreed to share as a common issue the ageing of Europe. For example, the section labelled as 'Information on AGE members' leads to a directory where the user can access the list of all member organizations per country, as well as learn how to become a member. Secondly, the section labelled 'AGE Press Room' allows the user to browse through news reports, divided into the categories, 'AGE in the news', 'Press releases' and 'EY2012 in the news'. Finally, under the title of 'Upcoming Events' and 'View the Year' the user can access a complete calendar of all events organized by all country members for the duration of the year 2012 (AGE Platform Europe, 2012c). These are formats in which ageing has been made into an issue, shared, grasped, and communicated. In all of these categories more visibility is granted to the topics and issue keywords than to location. For example, news reports are presented as lists with titles, without emphasizing the country of origin. As it has been a point of critique earlier (by the Slovenian newspaper article), the European project unifies the issue of ageing; place is broadened to Europe, and countries join the European issue space, rather than display place-based issues. For example, on the left side of the AGE Platform Europe the user encounters a word cloud with the main concerns of the platform resized according to most read. It is of interest to whom they are concerns, and whence they came.

Having revisited the concrete formats in which ageing has been issuefied via the AGE Platform (events, news reports, institutional membership and intervention), we are interested in the spatial distribution of the non-governmental organizations and the activities. We identified 164 NGOs and their corresponding addresses using the AGE Platform directory (AGE Platform Europe, 2012b). Once the NGOs are located on the map it becomes

possible to appreciate the larger number of NGOs based in Western Europe over those in the Southeastern and Eastern Europe as well as Scandinavia. France has a representation of 29 members, Italy 26, the United Kingdom 25, Belgium 15, Spain 10, Ireland and the Netherlands 9 each, and Germany 7. We compile the list in a Google spreadsheet and use the function heat map to output a map of Europe in which the intensity of colour for each country is directly related to the amount of NGOs that are located in it (see Figure 18). All other EU nations have 3 or fewer members, and some countries have no organizations registered at all. The imbalance becomes clear; there are regional distributions, with Western member states outnumbering the Southeastern, Eastern as well as Scandinavian countries.

The second type of information or format that is relevant on the AGE Platform Europe are the events organized and promoted by all organizations involved in the initiative. Using the information available in AGE Platform Europe's calendar, we created an event-based map by plotting the addresses of all the ageing-related events on the 2012 calendar, as indexed by both the website of the European Year for Active Ageing and the AGE Platform Europe. We collect the names and locations of 77 events, and following a similar process as the previous mapping we visualize the compiled list of events as a heat map (see Figure 19). Again there is a concentration of events in Western Europe with an under-representation of them in Eastern European, Southeastern European and Scandinavian member states. There is particularly strong representation from Belgium, with 15 events, the United Kingdom with 8, France 6 and Germany 5. The concentration of events in Brussels is perhaps typical for the output of a European Year (headquartered there). While there is one Eastern European nation with more than 2 events (the Czech Republic is hosting 3), the vast majority of them show only a single event in the calendar. Iceland, Cyprus, Estonia, Hungary, Slovenia, Sweden, Greece, Lithuania, Latvia, Romania, and Norway have the launch event of the 2012 European Year for Active Ageing as their only registered event. The general character of most of the events taking place outside Western Europe points again towards a sort of EUropeanization, where the events are less local or national contributions to the ageing issue than contributions to the European Year.

Finally, a third sub-layer (in addition to those containing the geolocations of the ageing NGOs and their events) deals with the geographical origin of authoritative sources in the ageing debate. In other words, when portraying ageing, which actors are referenced (often) and where are they located? In order to trace these sources, we return to the list of NGOs gathered previously from the AGE Platform Europe, visit each of their websites, choose
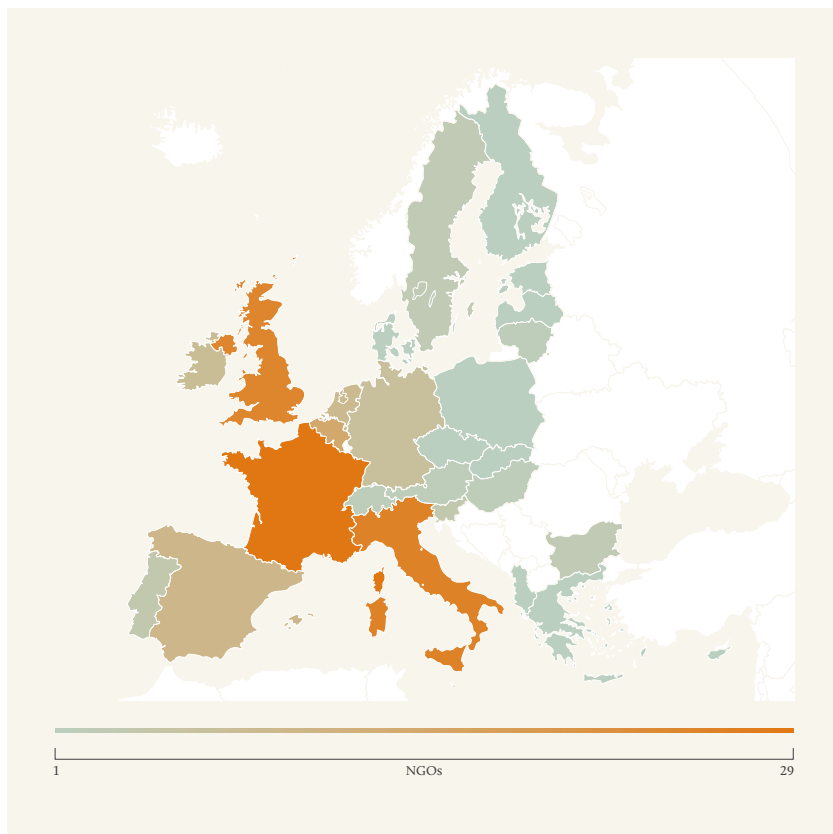
Fig. 18: *Distribution of NGO members of the AGE Platform Europe per country*, 16 March 2012, depicted as a heat map. In the AGE Platform Europe (http://www.age-platform.eu), the location of all the NGOs registered as members are identified. On the bar on the lower part of the graphic, the darker the colour the more NGOs a country has registered in the initiative. It begins with the number 1, indicating the minimum number of NGOs registered, and ends with 29, indicating the largest number of NGOs registered, in this case by France. Source: http://www.age-platform.eu/about-age/age-members.

the most active NGO per country, and collect from each one of them the news reports from the year 2011. We read the news sections, and make a sub-collection with the specific news entries in which a source of expertise is referenced. From each entry collected we extract the actors mentioned and capture their location. For example, if a news entry contains a quotation from an expert, we capture the name of the expert or institution and where she is based (e.g., if a news article by the Greek NGO makes reference to the Age U.K. website, then we characterize the source as U.K.-based). We are particularly interested in identifying when a certain source cited an actor from a EU country other than its own, asking, in other words, which
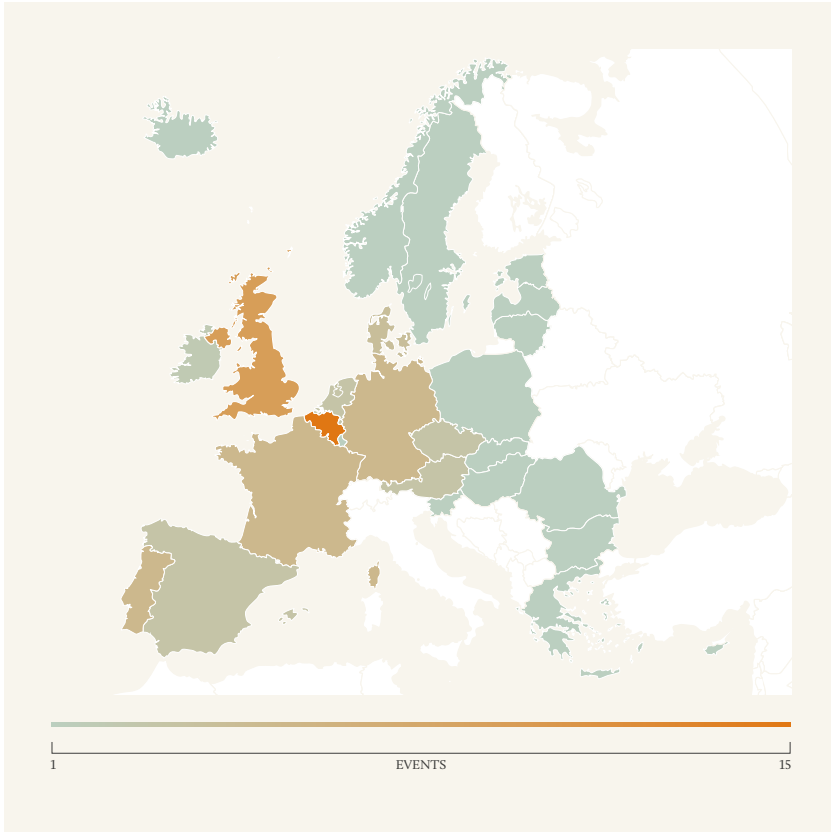
Fig. 19: *Distribution of events included in the AGE Platform Europe's calendar*, 16 March 2012, depicted as a heat map. Using the AGE Platform Europe (http://www.age-platform.eu), the location of all the events scheduled to take place during the European Year of Active Ageing and Solidarity Between Generations at the moment of the query are located. The bar on the lower part of the graphic indicates that the darker the colour the more NGOs a country has registered in the initiative. It begins with the number 1, indicating the minimum number of events registered, and ends with 15, indicating the greatest number of events planned, in this case to take place in Belgium. Source: http://www.ageplatform.eu/en/component/jevents/year.listevents/2012/03/.

countries have influence in the network and appear to be decision-makers and which do not.

Of the total of 1,007 actors referenced in the news entries only 62 are non-domestic, meaning that the large majority of actors referenced in the news entry belong to the same country as the NGO that produced them. We visualize the data regarding the 62 non-domestic actors using an alluvial diagram, where the starting point represents the country where the NGO that authored the news entry is located. The lines, or streams, move towards the places (countries) that are referenced in the news entry. The
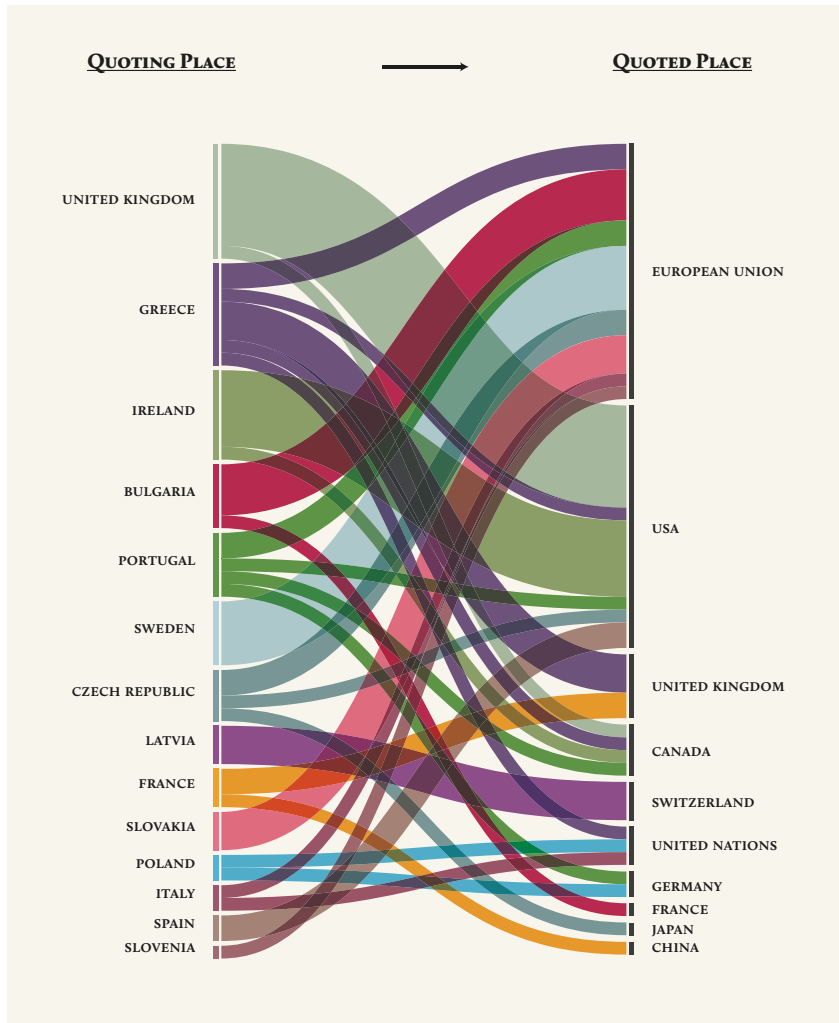
Fig. 20a: *Quoted places by NGOs in the AGE Platform news*, January to December 2011, bipartite network, depicted as an alluvial diagram, March 2012. Countries where the NGOs that authored the news entries are located comprise a first set of nodes on the left side of the diagram, and the names of the places that are mentioned in the news entries are located on the right side. Streams run from the left to the right, connecting place of authorship with place of reference. The streams or edges between nodes are weighted according to the quantity of place mentions. The European Union is by far the most referenced source, followed by the United States and the United Kingdom. Sources: http://www.fng.fr, http://www.50plus.gr, http://www.adanazionale.it, http://projectotio.net, http://www.ceoma.org, http://www.baltamaja.lv, http://www.forum50.org, http://www.zivot90.cz, http://www.forumseniorov.sk, http://www.zdus-zveza.si, http://www.tulipfoundation.net, http://www.ageuk.org.uk, http://www.ageaction.ie, and http://www.spfpension.se.
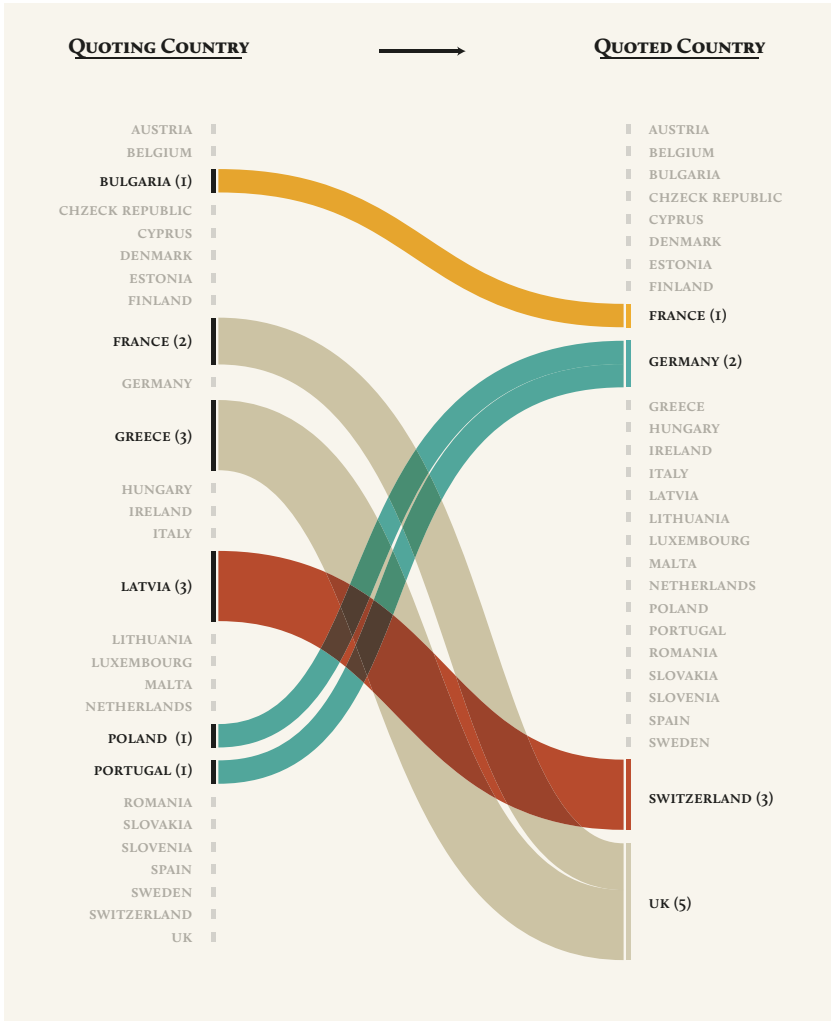
Fig. 20b: *Quoted European places by NGOs in the AGE Platform news*, January to December 2011, bipartite network, represented as an alluvial diagram, March 2012. The starting points of the diagram are the countries where the NGOs that authored the news entries are located. The streams move towards the places (European countries) that are referenced in the news entries. The number of references determines the width of the stream. There are no actors referenced in relation to ageing issues from any place in eastern or southern Europe. Sources: http://www.fng.fr, http://www.50plus.gr, http://www.adanazionale.it, http://projectotio.net, http://www.ceoma.org, www.baltamaja.lv, http://www.forum50.org, http://www.zivot90.cz, http://www.forumseniorov. sk, http://www.zdus-zveza.si, http://www.tulipfoundation.net, http://www.ageuk.org.uk, http://www.ageaction.ie, and http://www.spfpension.se.

number of references determines the width of the stream. On top of the countries we also included the European Union and the United Nations as transnational actors. We determined that the European Union is by far the most referenced source, followed by the United States and the United Kingdom. There is also regional source authority clustering. For example, the U.K. and Ireland reference mainly U.S. sources, whilst Bulgaria (for example) the European Union and France. Finally certain countries deliver no sources, so to speak. More specifically, the diagrams display a cluster of actors and their sources' locations in Western (and Northern) Europe. The United Kingdom, Switzerland, Germany, and France are referenced (so to speak), and the United Kingdom also draws on sources from Sweden and Denmark. There are no actors referenced in relation to ageing issues from any place in Eastern or Southern Europe. The finding concerning the distribution of authority follows the situations in the other sub-layers, concerning the geolocations of the NGOs and their ageing events in Europe. There is a core and a periphery, where swaths of European places and their issues are underrepresented. Indeed, all sub-layers match the trend of issues and activities based in Western (and Northern) Europe, particularly the U.K., Germany, France, the Netherlands, and Belgium and less overtly Spain, Switzerland and Italy (see Figures 20a and 20b).

4.6   Issue layer III: Cross-cultural analysis of ageing issues

In the previous two issue layers (Polish care worker migration as well as ageing issue centres and peripheries) we mapped (potential) care worker flows and place-marked institutional presence, events and authority of sources in connection with the European Year, respectively. With these mappings we have come to view ageing as an issue with stronger and weaker places in Europe, or at least places with greater issue presence. The dominance of certain places with respect to the issue of ageing may not come as a surprise. Yet by mapping (and describing), we have learned more about influence in the larger issue space, and its contours. We also note certain effects of the issue being done most readily in Western (and Northern) Europe. Apart from the clue we have from the Slovenian newspaper article about the supposed lack of local issue attention by the EU, and apart from the palpable differences we found between the EU ageing issue list and the Polish one (particularly older women's issues and active ageing without rejoining the workforce), we still do not know much about the peripheries. In order to learn more, we performed a cross-cultural comparison of ageing issues in

Europe using local domain Google search engines. In March 2012 we queried 27 local domain Google search engines for [ageing problems], with the term translated into the specific languages of each country.[10] We chose the term 'ageing problems' because it belongs to the language often employed in the official statements found on the website of the European Year for Active Ageing. In the exercise we are asking Google to tell us which are the most relevant sources per country for ageing problems.[11] A so-called research browser (a separate instance of Firefox) is installed, cleared of cookies and browser history, and logged out of Google. In doing so, we are mitigating the effects of Google's personalization of results.

From the totality of results outputted by the search engines we manually choose the top five results per country and collect the issues mentioned by them, visualizing the results as chord diagrams. We found a total of 18 issues distributed amongst the top five results of all 27 retrieved searches and grouped them (loosely) as follows: Immigrant Integration, Financial Issues, Mental Health Issues, Loneliness, Alcohol and Drug Abuse, Dietary Shortage, Local Issue Solutions, Elderly Rights and Equality, Transport and Mobility Issues, Physical Health Issues, Technology and Communication Issues, Government Welfare Provision Shortage, Longer and Changing Role in the Workplace, Nursing Home Provision Issues, Medication Issues, Elder Abuse and Discrimination, Active and Social Ageing and Disease Control in the Elderly.

In a sense it is a derived issue list from the member states, instead of one provided to them by the issue year. Ultimately, through Google's search results, we have sought to identify local concerns regarding ageing for the purposes of cross-cultural comparison and agenda-setting. Which issues are shared by European countries, and which are specific to particular locales? Generally, with this method, we find three types of issues. There are those popular amongst the totality of countries – a general agenda, at least according to search engines results (see Figure 21a). Second, we find the more relevant issues per country and also associations or alignments between countries according to shared priorities (see Figures 21b and 21c). Finally, we find issues that are unique to certain countries and that stand out as peripheral issues, which could be viewed (in Venturini's terms) as concerns of the so-called disagreeing minorities (see Figure 21d).

Apart from deriving ageing issue agendas, for the mapping we would like to trace the contours of regions or country clusters around issues. Where are which ageing issues? Mental health is the most prolific issue in the overall count, present in 17 of the 27 EU member states, and appears as the top result seven times.[12] At the same time it furnishes an already established
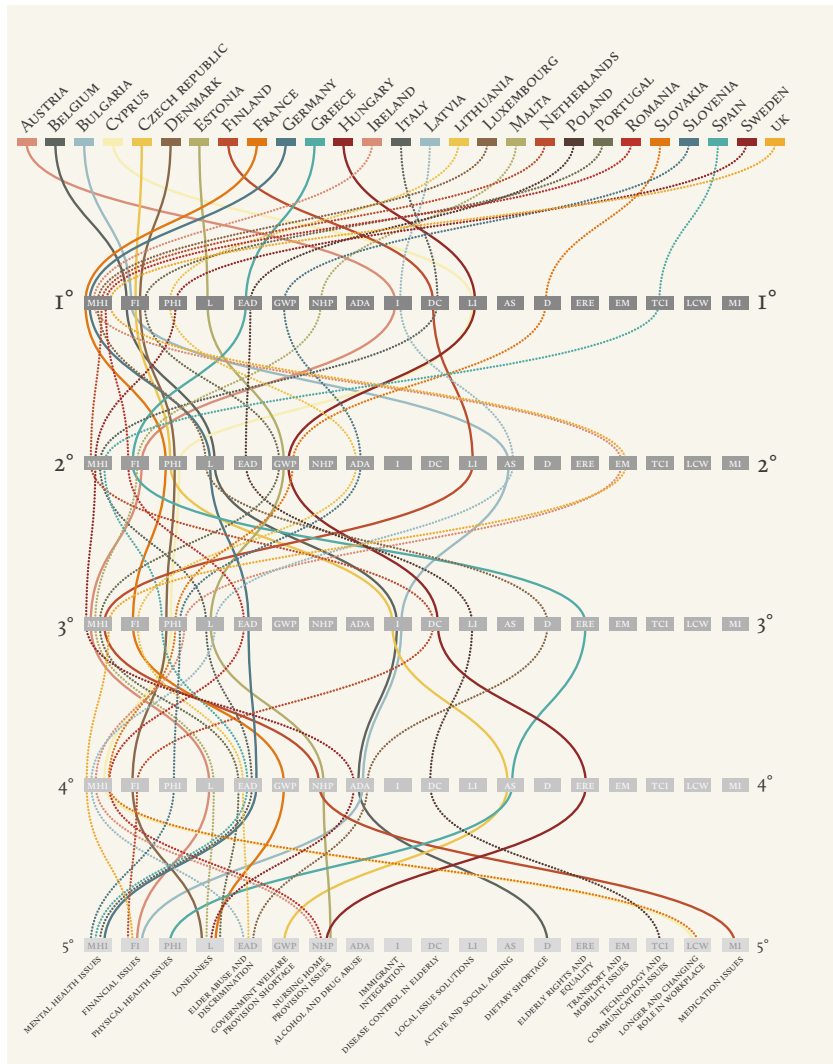
Fig. 21a
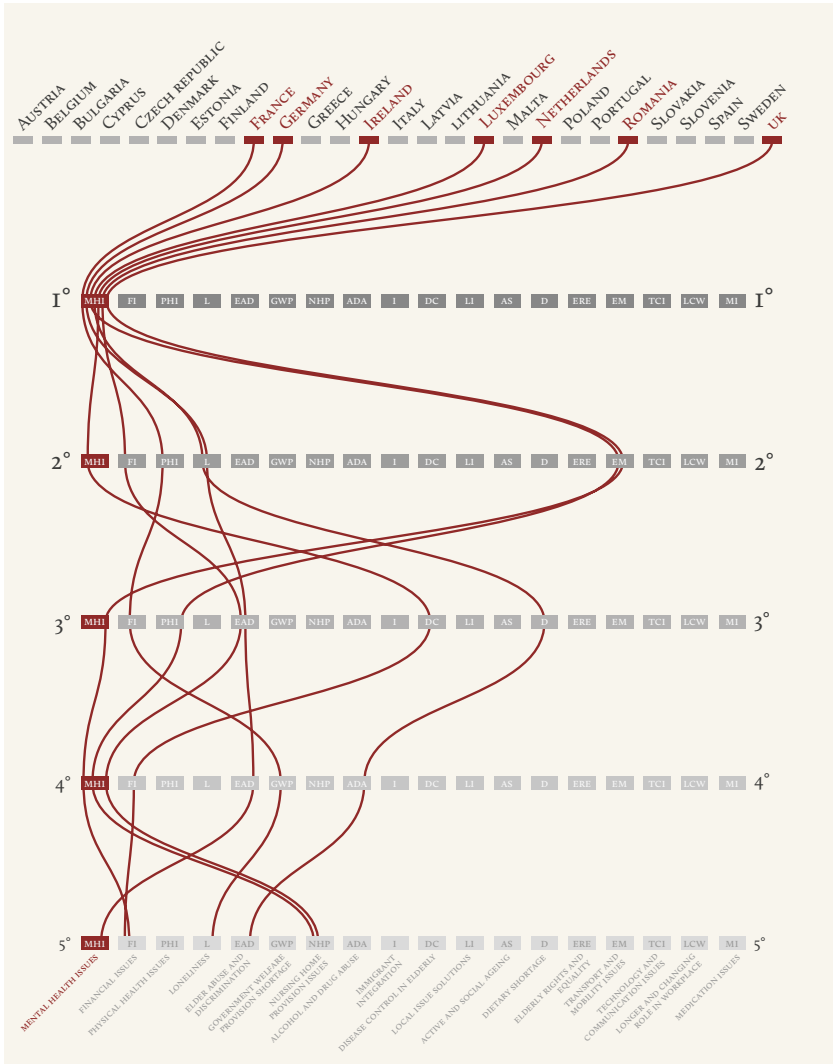
Fig. 21b
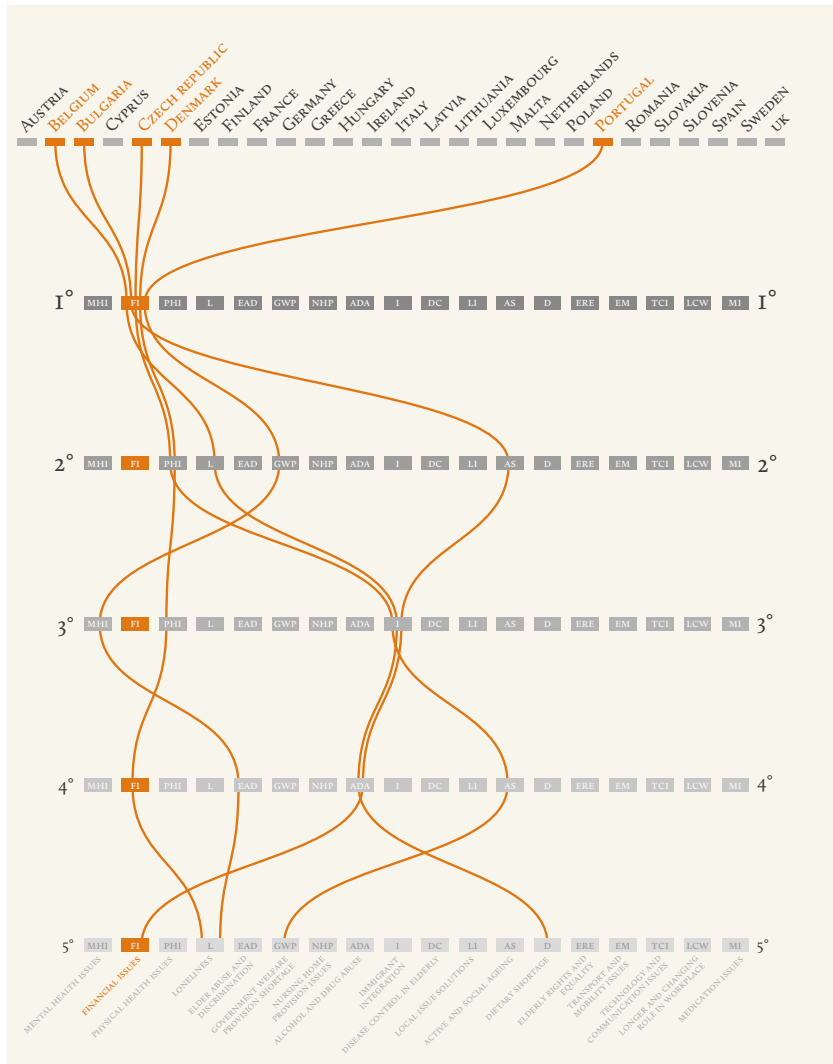
Fig. 21c
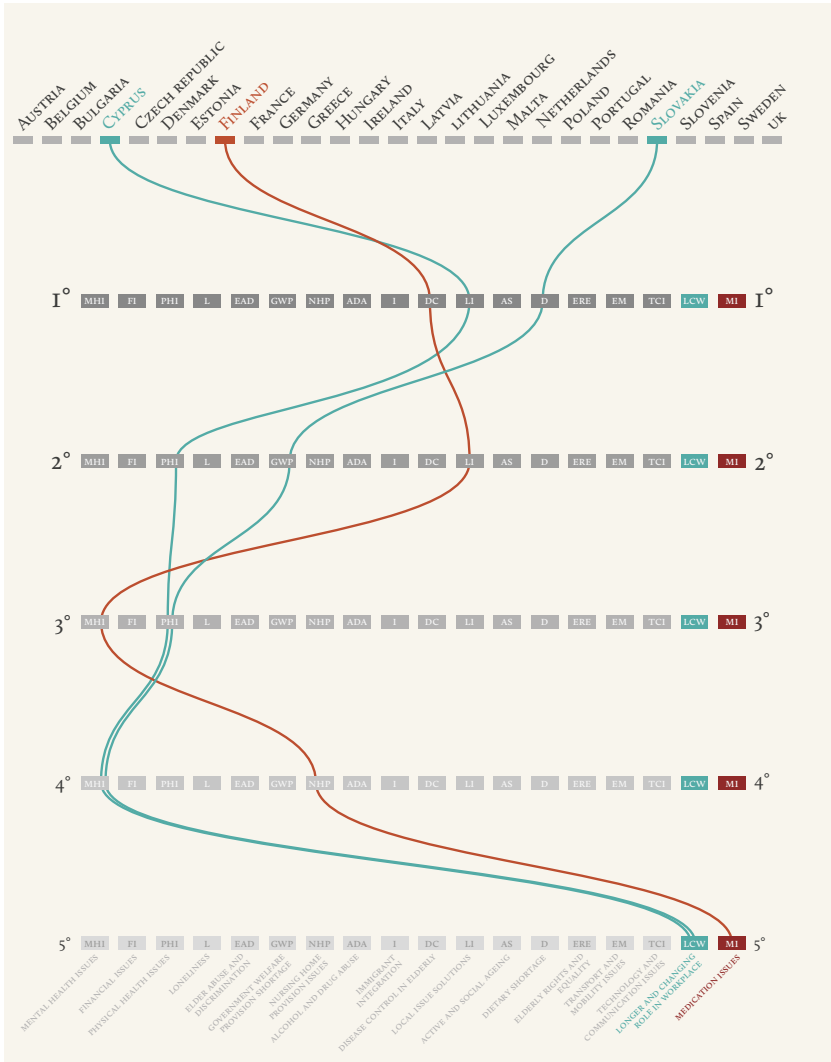
Fig. 21a-21d: *Top five ageing problems according to local domain search engine results from 27 European countries*, depicted as a parallel coordinates chart. The term [ageing problems] is queried in 27 local domain Google search engines (e.g., googe.nl, google.es, etc.) in the local language. The top five results are saved, manually read and grouped using an infra-language, meaning that the actor's own language is retained but occasionally blended with similar terms. The horizontal planes show the rankings for each search result, from one to five, and running vertically are the issues per country captured from the search results. A stream of colour represents each of the local Google domains. The occupying points in the chart determine the combination of ranking and category; these have been visualized with a grey box for clarity. The most frequently mentioned is 'mental health issues' and therefore is located in the first position, followed by financial issues. Queries carried out on 15 March 2012.

cluster or affinity among the Western European states such as Germany, Ireland, the Netherlands, and United Kingdom, returning mental health repeatedly within the top five results (see Figure 21b).

Once the most popular issues have been established, the rest of the results appear as an assortment, shared by few member states or prominent in just one. Here it is of interest to consider this technique as a means of deriving a minority ageing issue agenda. Immigrant integration is attributed a high level of importance in Austria, Latvia, and Belgium. Quieter social trends, like the issues of loneliness, stand out in Austria, Belgium, Estonia (where it holds the most prominent place), Germany, Italy, and Luxembourg. The absence of local solutions in itself is acknowledged as a top issue in countries geographically placed at the fringe of the European Union: Cyprus, Hungary and Finland (see the annotated map, Figure 21e). Public transport concerns are important in Ireland and the U.K.; human rights issues appear in Greece and Hungary. There are issues surrounding the administration of medicine in Finland.

When we check these search engine findings against our work described above on ageing issue agenda derivation (using the news sections of major AGE Platform Europe NGOs), we are presented with certain consistencies (as well as a few anomalies). In both mappings mental health and to a lesser extent financial issues are top issues, widely shared and associated with the United Kingdom, France, Ireland, Spain, and Italy. In the NGO news mapping they are framed (more specifically) as Alzheimer's and pension concerns, respectively. In other words, the top of the agenda is to some extent made up of the issues that are from particular Western European countries. It suggests a match between agenda, national concern and the identified weight or influence of certain member states.

The clusters formed around the issue of elderly abuse, albeit not having high visibility on the activity grid of the European non-governmental platform, is present in the top five results for queries in a significant spread of European states: first and second result in Poland, first in Greece, but also present in the top five in Germany, Italy, Latvia, Lithuania, the Netherlands, Portugal, Romania, and Spain. This last element of our cartography has brought to light a set of issues that are part of the ageing debate (and highly ranked for specific EU members) that tend to be neglected by the AGE Platform Europe. Thus the mapping has identified the missing issues, so to speak.

Up to this point, the mappings have made visible dominant transnational issue ties, and they have suggested that certain nations hold greater
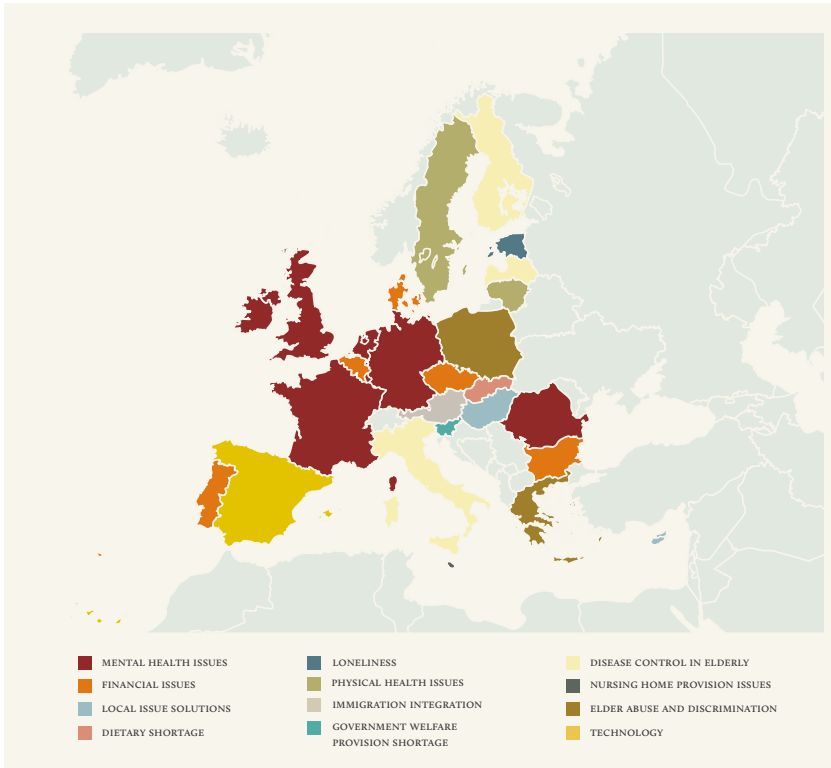
Fig. 21e: *Map of Europe coloured according to top ageing problems*, depicted as a choropleth map. The term [ageing problems] is queried in 27 local domain Google search engines (e.g., google.nl, google.es, etc.) in the local language. The top five results are saved, manually read and grouped using an infra-language, meaning that the actor's own language is retained but occasionally blended with similar terms. Each country is coloured according to its top issue from the engine results. The colour conventions are located in the legend below the map. This visualization invites the identification of both country clusters – when they share a colour – and unique cases. For example, the colour red representing mental health issues is most predominant in the map. Queries carried out on 15 March 2012.

influence within the network than others. They also have exposed disagreements, together with lesser issues and actors within the network. We believe that by addressing the underrepresented issues we might have made the local (or location) more insightful, in the sense of recognizing the contribution of the minorities (Venturini's point). While they may be marginal, they have the potential to unlock powerful perspectives, and in this particular case reveal emphasis (and de-emphasis) in the ageing debate. The mapping underlines a variety of absences of local issues in the broader debate, at least those less prevalent than the Western (and Northern) European ones.

4.7   European ageing resources map

We have arrived at the last stages of the work, the cartographic map and its accompanying annotations and layerings, which follow from the findings concerning the significance of particular dominant and marginal places for ageing issues. Here we are undertaking a further exploration of the general issue landscape of ageing across European countries with a series of ageing-related queries (ageing, ageing tips and anti-ageing food) in European local domain Googles. Each query builds on the original one; that is, ageing tips were in the results of queries for ageing, as were anti-ageing foods, and foods in the results of queries for tips. The issue landscape mappings, below, are thus layered.

First, the term [ageing] is queried in each of the dominant languages of local domain Google search engines of 23 member countries of the European Union – with research browsers, where each analyst is logged out of and otherwise decoupled from Google. The first hundred results outputted by the respective search engines, set to return only websites and documents from the countries in question, are used to identify and synthesize the top ten unique issues per country. For example, the website of a foundation dedicated to raising awareness for the rights of older women would become the issue, ageing and women's rights awareness. If the same issue appeared more than once (e.g., two consecutive websites addressing the rights of older women), the researcher is asked to continue to the following result until she/he would find a novel issue. Once the issue lists are in place the researchers compare and contrast country priorities. For example, issues such as active ageing (and references to the EU agenda on active ageing), health and ageing, and anti-ageing are the ones shared most amongst countries, pointing towards some resonance of the European agenda as well as interest in lifestyle tips and food. Taking up the invitation from the Slovenian newspaper article about the heterogeneity of ageing issues country-by-country, the research focused further on exploring the issues that appeared as unique cases (see Figures 22a-d). For example, the suggestion of pumpkin as an anti-ageing food is a topic unique to Bulgaria, while in the Czech Republic an anti-ageing cooking class is advertised. A foundation with the mission statement to help people decide what they want to be when they grow old appears as issue language unique to Spain. Finally, the outcome of the project is a European ageing resources map, where the novel issues are highlighted (see Figure 22e). (The map is also linked to a spreadsheet containing the totality of the lists.) The purpose of the resources map is to capture (and also unify for an ageing Europe) the rich differences by pinpointing sources that diversify and add to the issue of ageing. It also could potentially act as a counter-mapping to the discourse of a harmonized agenda for an ageing Europe.

UK

Improving outcomes research

Population ageing demography

Dementia research

Ageing revolution analysis

Halting health ageing effects

Gerontological research

Biological process of
ageing understood

Senior physical and mental
health, and emotional well-being

Social and cultural context
of ageing journal

Social policies of ageing

**+ Connectivity of older people
to rural civic society**

CZECH REPUBLIC

National programme of preparation
for ageing

Physiology of ageing and specific
training for older people

European year for active ageing
and solidarity between generations

Ageing is controlled by genes

Plan of active ageing in Brno

Effects of probiotics in elderly
persons' infections

Slowing down ageing

Ageing of population, demography
of ageing

+ Anti-ageing cooking course

ROMANIA

Biological ageing

Anti-ageing diet

**+ Top 10 places where people
live the longest**

Ageing differences between
men and women

Slowing the ageing process
and (talking about) mortality

Scientific news on ageing

EU ageing policies

Ageing of population

Ageing demographics in Romania
after 1950

Age related health issues

ESTONIA

Skin ageing

Signs of biological ageing

Ageing as a baseline inevitability

Ageing and how to understand it

Staying healthy and extending life

Diseases linked to ageing

Ageing and (the right) nutrition

Active ageing

Ageing of the population

Ageing of the population
as challenge to the society

+ Ageing as a basis for innovation

FINLAND

Physiological signs of ageing

Diseases linked to ageing

Reasons for and mechanisms
of ageing

+ Ageing as a resource

Ageing and the self

Gerontology

Ageing of the population

Happy ageing

Ageing and loneliness

Mental health in old age

GERMANY

Demographic change

**+ Ageing photo contest:
sexuality and joy in the body**

Healthy ageing

Ageing together - how to adapt to ageing
in a partnership (including sexuality)

biological foundations of ageing

Medical advice for healthy ageing;
geriatrics

Medical explanations
what is ageing?

The art of ageing and dying; thoughts
and advice from psychotherapy

Genetic foundations of healthy ageing

Services around ageing for
individuals and communities

Fig. 22a

FRANCE

Medical definitions of "normal" ageing

Tips for healthy ageing

Distinctions between normal
and pathological ageing

Cellular Ageing is reversible

Population ageing

Ageing and psychology

+ Is dying inevitable?

How to handle deficiency in ageing

Ageing and quality of life

Ageing of the population
as an opportunity

ITALY

Ageing well, physical and psychological
ageing, motivation, creativity

Programmed theory of ageing;
random theory of ageing

+ **"Grandmother hypothesis" provides older
people the specific task to preserve their
knowledge to pass it on to younger people**

Factors that slow ageing
and accelerate ageing

Ageing demographics in globaland
and italian context

Ageing is reversible: Rejuvenating
the cells of centenarians

Silver economy. Ageing opportunity
for the labour market

Skin ageing

Ageism

The week of the prevention
of mental ageing

PORTUGAL

Active ageing; healthy ageing

The social capital of seniors
in Lisbon

Ageing demographics situation
in Lisbon

The process of biological ageing;
deterioration of all living things

Ageing of the brain and dementia;
alzheimer's

Ageing and health: an emerging
social problem

Anti-ageing; biologic functional
rejuvination

+ **Facial ageing app; See yourself
as old**

Ageing, health and citizenship

Methods to improve the quality
of ageing

POLAND

Old age diseases

Seniors' community as means
to deal with old age

Biomedicine, gerontology

The demographic future at
the demographic congress

Psyche of older people and
the autumn of life

Wrinkles, anti-wrinkle creams
and "stop time"

+ **Ageing slows economic growth**

Healthy ageing

EU policy toward ageing

Alzheimer's disease and FLTD
(Frontotemporal Lobar
Degeneration)

SLOVAKIA

Ageing is not a disease

Old age is after 60 years of age. is it
possible to stop/delay a process of ageing?

EU ageing policy - population
projection for Slovakia until 2050

What impacts ageing: sports,
healhty food and positive thinking

Six tips how to halt ageing of skin

Cellular ageing

Ageing of population
as dmeographic crisis

German reforms of social insurance system

Ageing and old age: causes, symptoms,
problems

European year of active ageing
and solidarity between generations

+ **Anti-ageing diet: tomatoes and apples**

SLOVENIA

Population contains more
over 65s than under 15s

Active ageing

Healthy ageing focus

Survey of age

Indian traditional medicine
"ayurveda" prevents ageing

Anti-ageing wrinkle treatment

Involving the younger generation
with older (through competitions
and activities)

The art of ageing

+ **Issue of active ageing ignores
member state culture**

Mental health and acceptance
of ageing process in society

Fig. 22b

DENMARK

+ **OLDETOPIA**

AGEING INDIVIDUAL, AGEING BODY

AGEING SOCIETY, DEMOGRAPHIC AGEING

AGE-DEPENDENT (ENDOGENOUS) CHANGE
AND AGE-RELATED (EXOGENUS) CHANGE

AGEING DEFINITION

TECHNOLOGY IN THE FUTURE CARE SECTOR

GERONTOPSYCHOLOGY

AGEING SOCIETY

EUROPEAN YEAR OF ACTIVE AGEING

GENERATIONAL DIVIDES

LATE EMOTIONAL REVIVAL

SWEDEN

HUMAN AGEING

EXERCISE, EAT NUTRITIOUS FOOD
AND SOCIALIZE WITH OTHERS

+ **GOOD AGEING IN SKÅNE**

ACTIVE AGEING

HEALTHY AGEING

OLDER PEDAGOGY

COGNITIVE AGEING

PROVERBS ON YOUTH AND AGEING

8 TIPS ON AGEING

POSTPONE AGEING

AGEING WITH QUALITY OF LIFE -
VÄSTRA GÖTALAND

TURKEY

HALTING AGEING

AGEING ASSOCIATED DISEASES: DEMENTIA,
ALZHEIMER'S, STROKE, HYPERTENSION,
CATARACTS, ETC.

NATIONAL AGEING ACTION PLAN

THE ART OF AGEING

SKIN CARE

AGEING HAS BEEN SLOWED BY SCIENTISTS

MECHANISMS OF AGEING AND HEALTH

CELLULAR AGEING

+ **AGEING AND GOVERNANCE**

EARLY AGEING

BULGARIA

SLOW AGEING - GENES, HORMONES
OR FREE RADICALS
HEALTHY AGEING - THE KEY IS IN POWER
EXERCISES AND PROTEIN

+ **PUMPKIN PREVENTS AGEING**

ELEGANT AGEING

"SOME PEOPLE GROW OLD LIKE CATHEDARLS,
WHILE OTHERS LIKE SANDALS."

SUPERFOODS AND AGEING

ACTIVE AGEING

A SENSE OF AGEING SOMETIMES COMES
FROM HOW FAMILIAR THE ENVIRONMENT
IS IN WHICH WE FIND OURSELVES

PREMATURE AGEING

AGEING POPULATION AND LABOUR FORCE

COFFEE PROTECTS AGAINST AGEING

GREECE

HEALTH: EFFECTS OF AGEING
ON THE HUMAN BODY

WAYS TO DELAY AGEING

ACTIVE AGEING AND SOLIDARITY

POPULATION AGEING AND HEALTH SERVICES

SKIN AGEING

OXIDATIVE AGEING AND STRESS: ANTI-AGEING

SCIENTISTS HALTED AGEING IN MICE

DIET, CALORIES AND AGEING

+ **HISTORY OF AGEING**

FREE RADICALS AND AGEING

POMEGRANATE SLOWS DOWN
THE AGEING OF DNA

NETHERLANDS

TEN STEPS TO PREVENT AGEING:
FOOD, SLEEP, SUN, ...
GREYING POPULATION ACCORDING
TO NATIONAL BUREAU OF STATISTICS

EATING FISH MAY HELP THE FIGHT
AGAINST ALZHEIMER'S

AGEING OF SKIN IN RELATION
TO SUNLIGHT AND SMOKING

AGEING OF THE GUINEA PIG

PROGERINE POISONS CELLS

AGEING AND CARE FOR THE DISABLED

+ **THE ENGINEERED HUMAN**

GENETIC VARIANT MAY ACCELERATE
BIOLOGICAL AGEING

QUIZ - SLEEPING AND AGEING BY
U.S. NATIONAL INSTITUTE ON AGEING

Fig. 22c

IRELAND

Ageing research and development

Cognitive health (brain ageing)

Research: population projection, health, labour market

Improving opportunities for seniors

Government advisors on ageing

Global ageing awareness

Social policy ramifications of population ageing

+ Positive ageing: Branding Ireland the best place to grow old

Quality of life for seniors is positive

Business opportunities in older consumer market

Population ageing projection in Ireland

Clinical research and training

Women anti-ageing cosmetic treatment
Ageing related disease research

Irish over 50s quality of life is high

BELGIUM

Science, genetic interventions, life extension

Theories of ageing and life expectancy

Food that slows ageing (tomatoes, carrots, apples, bananas, green beans, potatoes and orange juice)

Slow down ageing; free radicals: enzymes: proteins; oxidative stress

What is ageing?

+ 'training the brain' exercises

Research on ageing and cancer; University Hospital; life expectancy

Reverse ageing through strength training

European funding opportunities for promoting active ageing

2012 European Year of active ageing and intergenerational solidarity

Poverty and income inequality among older people

Death, sex and ageing by Kris Verburgh, author, scientist and speaker

HUNGARY

Emotional well-being, lifestyle and mood

EU year of active ageing and solidarity

+ Ageing is globalizing

Geriatrics, increasing of lifespan

Prevention and anti-ageing

Kiss Gabor David: ageing, pension reform, regional comparisons

Healthy ageing

Economic consequences of ageing

Pathological ageing vs. healthy ageing

How European countries can adapt their services and city infrastructures to better accommodate the ageing population?

Happy ageing

Advantages of ageing: neural network plasticity, language learning

MALTA

Active Ageing

Program of Assisted Living

+ The senior of the year awards

Learning and active ageing among the disadvantaged elderly

Swiss working age

The value of old

The bigger the belly, the greater the chance to suffer from dementia in old age

Communication promotes ageing healthy

Abraham died in old age as good old man

Anti-ageing food?

SPAIN

Biological age versus chronological age; types of ageing

Functional ageing and everyday life

Working rights for seniors

Hopeful vision of ageing, positive ageing; brainwave technology to control domestic robotics

+ What do you want to be when you grow old?

Ageing and the brain; cognitive deterioration and dementia

Understanding the mechanism of ageing and frailty

Markets for active and healthy ageing; business opportunities and new markets

Reverting the ageing of stem cells

Sensitize society to the valuable contribution of seniors and encourage debate among EU countries

Fig. 22a-22d: *Top ten issues according to local domain Google search engines for the term [ageing]*, depicted as issue country lists. The term [ageing] is queried in 23 local domain Google search engines. The top ten results are saved and visualized as a top ten list. The most striking result from each of the lists is highlighted. Queries carried out on 26-29 March 2012.

Ageing as a resource for volunteering

Older people should be viewed as a driving force for innovation in the society, as opposed to being perceived as unproductive

Ageing slows down economic growth

Anti-ageing cooking course

Anti-ageing diet: tomatoes and apples

Ageing is globalizing beyond developed countries

Where people live the longest: Monaco, Macao, Japan, Singapore, San Marino, Andorra, Guernsey

Pumpkin prevents ageing

Ageing and governance: Older people have a voice in public debate

Exhibition portrays old age in antiquity and the Byzantine period

Good ageing in Skåne: A long-term study of people aged 60 to 93.

Ageing Photo Contest reflects on stereotypical behaviors of seniors and the new age-appropriateness of dancing in clubs, riding motorcycles with friends, becoming politically active, or playing the newest video games (Wii)

EU's active ageing project ignores the specificity of member state culture

Senior Citizen of the Year Award granted for role model and inspiration to other elderly people

Oldtopia: Women at 60 can become mothers, men of the same age rock stars.

The genetically engineered human: DNA and ageing

The brain behaves like a muscle. The more it's trained, the stronger it remains

The Grandmother Hypothesis postulates that the elderly have the task of caring and passing on knowledge to the young, allowing people to live longer and driving the evolution of longevity

Positive Ageing: Branding Ireland as the best place to grow old.

Rural Ageing: An exploration of the connectivity of older people in terms of leisure patterns

The history of the quest for immortality and the expectation that in the year 3000, our descendants will live twice as long as we do now

What do you want to be when you grow old?

Facial ageing app: See yourself as old.

Fig. 22e: *Ageing resource map*. The term [ageing] is queried in 22 local Google search engines and the top ten results are saved. A map of Europe is annotated using the most striking result for each country in the manner of a country's or region's map of natural resources or products for export. An organization in Spain asks, What do you want to be when you grow old? While in Italy the Grandmother Hypothesis suggests that the number of grandmothers is proportional to the wellbeing of a nation. Queries carried out on 26-29 March 2012.

4.8   Ageing well according to European local domain Googles: Ageing tips and an anti-ageing shopping list

Throughout our inquiries we have come upon places putting themselves forward as good ageing places, and in the European ageing resource map we have encountered ageing tips, including recipes as well as cooking courses for anti-ageing cuisine. Seeking to develop further the notion of ageing well in Europe, we query the term [ageing tips] (and its equivalents in different languages) in the local domain Googles, outputting the results from a diverse set of so-called old and new EU countries as well as an aspirant: google.es, google.nl, google.pl, google.co.uk, google.be, google.ee, google.fi, google.hu, and google.com.tr. For each set of results the top five collections of tips (often formatted as lists of numbered suggestions) are collected and inspected for dominant themes and more novel ideas; they are also loosely grouped as well as concatenated so as to provide an issue cloud (or map) of European anti-ageing tips.

When looking, initially, at the specific tips for ageing well per country (or local domain Google), one notices stark differences in the approaches, from adopting a positive outlook, to coping as well as to behaving well (see Figure 23). There are wellness-oriented versus more medical approaches; there are also ones that focus more on applying products and ingesting particular foods. Ageing well in Google Finland results appears to be about a more active approach to managing one's life and lifestyle choices, even a mental makeover, as seen in tips such as 'positive life management', 'take health into your own hands', 'lifestyle renovation', and 'become stress free'. Ageing well in Google Poland is about coping and accepting, 'coming to terms with yourself and loved ones' and 'coming to terms with death'. While tips for ageing well in the Spanish local domain Google also reflect the need for active living, such as 'gardening', 'dancing', and 'sojourning in the countryside', the focus is darker, with an emphasis on elderly behaviour: 'Avoid loneliness', 'avoid resentment towards younger people', 'avoid mental illness', 'avoid sour humour', 'avoid keeping your head down', and 'avoid old age gestures'. Similarly, albeit more productively (so to speak), the Google United Kingdom results provide tips related to keeping up one's appearance such as 'stand tall', 'wear perfume', 'whiten teeth', 'use eye shadow', 'pluck eyebrows', and 'wear bright colours'.

Hungary and Turkey (from the local domain Google results) put forward wellness and medical approaches to ageing well, respectively. Avoiding substances or environmental impacts that could harm your health is important in Hungary, as reflected in such tips as 'avoid preservatives', 'avoid cosmetics

SPAIN

THINK OPTIMISTICALLY

BE CURIOUS

FEEL GOOD ABOUT
YOURSELF

HAVE DREAMS

BELIEVE YOU HAVE
REACHED YOUR GOALS

THINK THAT LIFE HAS
MEANING

DON'T CURSE OLD AGE

AVOID OLD AGE GESTURES

AVOID HAVING YOUR
HEAD DOWN

DON'T DRAG YOUR FEET

DON'T COMPLAIN

ESTONIA

HAVE A PURPOSEFUL
OLDER LIFE

KNOW WHERE YOU ARE
FROM

MAKE PEACE WITH YOUR
PAST

KNOW WHO YOU ARE

KNOW WHAT YOU WANT
FROM LIFE - BE WHOLE

STOP WANTING TO BE
PERFECT

KNOW YOUR STRENGTHS

THINK DIFFERENTLY
ABOUT AGEING

AGEING IS LIKE GOING UP
THE STAIRS

LOOKS CORRESPOND TO
FEELING

TURKEY

DON'T GET LOST IN
DETAILS

EMBRACE LIFE

GET TO KNOW YOUR FACE

DON'T DO MORE THAN
ONE THING AT A TIME

FINANCIAL PLANNING

USE IT OR LOSE IT

GET READY FOR YOUR
RETIREMENT YEARS

DON'T HURRY

ALWAYS START A NEW DAY
WITH ENTHUSIASM

HAVE A CALM LIFE

UNITED KINGDOM

BE CONSCIENTIOUS

BECOME SPIRITUAL

MAINTAIN A SENSE OF
PURPOSE

BE POSITIVE

BE AWARE OF FALLS

DO INTERESTING
ACTIVITIES

REMOVE DEAD PLANTS

FINANCIAL PLANNING

BE AWARE OF SCAMS

NETHERLANDS

EAT INTUITIVELY

LISTEN TO YOUR BODY

HAVE A SUNNY SPIRIT

ENJOY LIFE

BE AWARE OF YOUR
BREATHING

POLAND

ENJOY THE TRANQUILITY

ENJOY YOUR GRAND-
CHILDREN

COME TO TERMS WITH
YOURSELF AND LOVED
ONES

FINLAND

TAKE RESPONSIBILITY

IMPROVE YOUR HEALTH

IMPROVE YOUR HABITS

BE ENERGETIC

TAKE HEALTH INTO YOUR
OWN HANDS

CARE FOR YOURSELF

HUNGARY

CHANGE YOUR ATTITUDE

ELIMINATE FEAR OF
AGEING

Fig. 23: *Ageing tips*, depicted as country issue lists. The term [ageing tips] is queried in 8 local domain Google search engines in the local language. In an editorial process the unique issues are retained from the ten top results and visualized as list. Queries carried out on 29 March 2012.

activity don't smoke careful sunbathing brain work drink water no stress eat healthy limit alcohol be positive antioxidants eat fruits and vegetables balanced diet fish sleep enough consume less sugar skin care products fruits healthy weight relax vitamin A vitamin C vitamin E friends green tea hydrate your skin read sport vegetables walk avoid obesity drink water family laugh social activity tomatoes vitamin B blueberries enjoy life help others social life yoga active training active memory avoid dieting be happy breathing broccoli crossword puzzle dance meditation moisturise move orange back posture prevent skin ageing salmon selenium skincare spinach spirituality travel vitamins active hobbies alpha lipoic acid apple avoid having your head down avoid humped back be kind beauty sleep blood pressure control breathe clean air calcium caring about the self carrots chicken don't complain drink red wine dried goods eat slowly financial planning food garlic have sex regularly get enough sleep healthy lifestyle hair volume go out grains get a colonoscopy human relationships hygiene honey learn kiwi legumes Mediterranean diet pomegranates tooth brushing sunflower oil low fat milk swimming less meat red fruits sardines lipstick olive oil sudoku pilates nut oil study trout pets listen to music whiten teeth vitamin D tuna zinc use moisturising cream

Fig. 24: *Ageing tips*, cumulative, depicted as issue cloud. The term [ageing tips] is queried in 9 local domain Google search engines in the local language: Belgium, Estonia, Finland, Hungary, the Netherlands, Poland, Spain, Turkey, and the United Kingdom. In an editorial process the unique issues are retained from the ten top results and visualized as issue cloud. Queries carried out on 29 March 2012.

that contain alcohol', and 'avoid soft drinks'. Tips for ageing well from Google Turkey are focused more on medical check-ups such as 'have lymph node examinations', 'have your hearing checked', 'have your blood pressure checked', and even more specifically having a 'sigmoidoscopy', and a 'colonoscopy' are advised. Google Belgian tips for ageing well also concern the mitigation of environmental impacts, but have to do with the skin, and products to protect it, such as the constant application of at least 'sunscreen SPF 15'. In Google Netherlands, the focus is more on foods that help in the process of ageing well: 'berries' and 'fish'. Places thus tilt toward social, medical or physical ageing.

The complete collection of tips highlight an active lifestyle, non-smoking, suncare, mental activity, water, an upbeat demeanour, and specific foods, including (oily) fish (see Figure 24). But, when loosely grouped, and arranged, they also suggest routines as well as special activities to be scheduled: ingestion (including the intake of slow food, water, teas, vitamins, alcohol, tobacco and toxins), mental acumen (for advice regarding the importance of brain exercises, stress avoidance, and lifelong learning), physical regulation (referring to sleep, stretching, dancing, and yoga), treatment and product (facials, doctor's appointment, make-up, sunscreen, teeth whitener), human and social contact (answering the telephone, family, friends, and pets) and lifestyle and behaviour guidelines, including advice about good or bad attitudes towards ageing as well as ageing gestures where posture is important. Taken all together the collections of European resources have expanded from cultural philosophies over regional styles of ageing well and appropriately to everyday planning routines, suggesting ageing may be approached as a regime.

As we have seen, food is coupled with ageing across the local domain engines, and thereby prompts another set of queries in the engines for the term [anti-ageing food] and its equivalents, customizing the outputs to only show pages from the country in question.[13] The results are mainly listings of two kinds. On the one hand, they are websites (such as online magazines or health blogs) containing a list of foods recommended to the reader on the basis of their anti-ageing properties. For example, a list would contain products such as tomatoes, blueberries, salmon, and carrots. Usually, each recommended food would be accompanied by an explanation of its beneficial qualities, for example, about the anti-oxidant properties of tomatoes. On the other hand, it was also common to find reductive listings focused on the nutrients and compounds credited with slowing down or preventing ageing without a focus on the food itself, such as vitamin E and iron. Here we focus on the foods (as opposed to their compounds) so as to create a shopping list.

From each set of results we selected the top five food listings in which anti-ageing foods are recommended by reading each of the listings and transcribing the products or food recommended. As may be expected, countries recommend different foods for their anti-ageing properties – Sweden has 'red tea' among the listings. For the European anti-ageing shopping list, however, we seek matches. Tomatoes are the only food recommended by all local domain Google engines; hence the tomato recipes that follow. Broccoli, eggs, spinach, strawberries, blueberries, garlic, and kiwi round out what is referred to as the anti-ageing shopping list for most countries (see Figure 25). The final step becomes the actual menus, as the earlier results (anti-ageing foods, cooking courses, and shopping lists) also point towards the preparation of anti-ageing cuisine. We subsequently queried the engines for [anti-ageing recipes] in the local language, together with the items on the shopping list. From the results outputted we extracted the top result per country describing the preparation of an anti-ageing dish (in the format of a recipe which included ingredients and instructions). We compiled these results as snippets of what could become a European anti-ageing cookbook, co-authored by the engines together, of course, with the sources.

Recall the Sardinian province, the Japanese and Greek islands as well as the peninsula in Costa Rica where people grow the oldest, and the study of the properties of these places, including diet, lifestyle, and home ownership (versus living in a care facility). Much about ageing well is being learned from these places where the exceptionally longevous share common roots, lifestyle and environment. An ageing Europe, however, likely neither will be able to live in such homogeneous cohorts, nor adopt the specific lifestyles of these exceptional environments. So our mapping seeks to make more normal ageing in Europe and the places where it occurs, where there are fewer 'secrets' for growing older and more resources and recipes (sometimes literally) for ageing well wherever the place.

Apricot compote

Ingredients: apricots, sugar and water; preserve jars. Preparation: Begin by washing the fruit and fill the jars with them three-quarters high (for 780 ml). Add two tablespoons of sugar to each jar. Fill the jars with water (leaving about a centimeter, for the fruit juice to have space to boil). Close the jars tightly and place them in the oven for 10 to 15 minutes until the water begins to boil. Remove from the oven, place with the lid facing down and cover them with a blanket until they have cooled completely. (Source: Mimi in bucatarie, 2013 via google.ro)

tomatoes

strawberries

cabbage

watermelon

milk

broccoli

apricots

carrots

apples

oysters

cherries

spinach

blueberries

eggs

green tea

grapes

sweet potatoes

avocado

brown rice

herring

red wine

garlic

kiwi

dark chocolate

lentils

oranges

turmeric

raspberries

pumpkin

yoghurt

olive oil

onions

soya

almonds

beans

salmon

papaya

watercress

prunes

soya beans

parsley

blackberries

walnuts

cinnamon

pomegranate

mackerel

blackcurrants

sardines

wheat

lemons

pumpkin seeds

quinoa

raisins

currants

lettuce

brazil nuts

chili peppers

shallots

chives

oats

ginger

sprouts

grapefruit

sunflower oil

cauliflower

tofu

corn

tuna

crab

turnips

kidney beans

peaches

cranberries

leeks

white tea

mushrooms

Quantities of mentions of the foods in the 11 lists.

- 11 (*times*)
- 10
- 9
- 8
- 7
- 6
- 5
- 4
- 3

Fig. 25: *Anti-ageing food shopping list*. Foods are ordered by frequency of mentions in 11 European local domain Google search engines and visualized as tree map. The term [anti-ageing food] is queried in a selection of local domain Google search engines in the local language. The top five food listings per country (or local domain Google) are merged and ordered by frequency, with a threshold of 3 mentions to make the shopping list. The local domain Googles from France, Germany, Greece, Ireland, Italy, the Netherlands, Poland, Romania, Sweden, the United Kingdom, and Spain are queried on 19 July 2012.

Sautéed cabbage

Ingredients: One medium-sized cabbage (1.5 kg), one red pepper, one white onion, tomatoes or a few tablespoons of canned diced tomatoes in their own juice. Two tablespoons of tomato paste, red pepper paste or paprika powder (sweet or spicy if desired), three tablespoons of sunflower oil, one tablespoon of salt and pepper, and other spices to taste. Preparation: Chop the onion and peppers, and sauté them in a deep pan with a little bit of oil. In order for the recipe to remain healthy and to avoid having the cabbage be covered in oil, also add water (around half a cup). After the onions and peppers are cooked add the diced tomatoes. Mix and allow the mixture to cook for 2-3 minutes. Add the tomato paste, add pepper and paprika, if available. Mix and allow the mixture to cook 2-3 minutes. Chop the cabbage finely, add to the pan and stir. These can be done in batches if the entire cabbage does not fit. After you add all the cabbage, mix well and with the lid on cook at low temperature. This will allow the cabbage to steam and adding additional water during cooking will not be necessary. After 10 minutes lift the lid and stir; avoid doing this too often as the cabbage will not cook evenly. After 25-30 minutes the cabbage should be ready, season with salt and pepper, and other spices such as dill or thyme, if you like. Turn off heat, remove the lid and allow it to rest for 10 minutes. This will help the flavors penetrate better. This is how you achieve a perfectly prepared sautéed cabbage, suitable to accompany any food, including meat, fish, potatoes and vegetarian meals. (Source: Andreescu, 2014 via google.ro)

Lecho

Ingredients: Four kilos of paprika, two kilos of tomatoes, one tablespoon of salt and salicinum preserve; preserve jars. (Optional: sweet or spicy paprika.) Preparation: In order to easily peel the tomatoes immerse them in boiling water for half a minute. Cut the peeled tomatoes into large pieces. Slice the peppers. Cook the tomatoes in a pot and when the juices are flowing, add the sliced peppers and salt. (Here is when to add the paprika, if desired.) Cook for 10 minutes. Then mix one tablespoon of the preserve. Store the mixture in tightly sealed jars. They will cool down completely after one or two days. (Source: Cossack, 2010 via google.hu)

Grandmother's Dutch tomato soup

Ingredients: Two kilos of tomatoes, one small onion (or half of a large), water, 200 grams of stewing beef, 200 grams of minced meat (beef or half beef, half

pork), 50-100 grams vermicelli and five beef bouillon cubes. Preparation: This is a simple recipe for four litres of delicious, traditional tomato soup. Wash the tomatoes and remove the vine stems. Cut the onion in slices. Prepare small balls of minced meat. Put the stewing beef, the onion and the five bouillon cubes in a pan. Divide the tomatoes into two more or less equal quantities. Place the tomatoes in a serving bowl with water in the microwave. Set the microwave for a few minutes (5-8 minutes) on the highest setting. (If you do not have a microwave oven boil the tomatoes in a pan for a few minutes with some water.) Sieve the hot tomatoes, pressing with a spoon to extract all the juice. The seeds and the skin should be discarded. Repeat the previous two steps with the 2nd half of the tomatoes. Fill the pan with water to an inch (3-4 cm) below the rim. Cook on the highest setting until the soup starts to boil, then add the meatballs, and let the soup simmer for an hour. Put the noodles in the soup and let the soup cook for another 25 minutes. Add seasoning and stir well. (Source: Dulce, 2013 via google.nl)

Gazpacho Andaluz

Ingredients: One kilo of ripened tomatoes (deep red colour), one Italian green pepper (60 grams), one slice of cucumber (four fingers wide), onion (100 grams), slice of bread (50 grams), one clove of garlic, three teaspoons of olive oil, three teaspoons of white vinegar, one small teaspoon of salt. (Optional: Half of a green apple and cold water.) Preparation: Wash the tomatoes, cucumber and pepper, and allow to dry. Place the vegetables, together with the bread, cut into pieces, and the tomatoes, chopped in fours, in a blender. It is possible to remove the skin from the tomatoes, however I personally leave them on. Also, remove the lower part of the pepper and the seeds, and cut it into four or five pieces. Peel the garlic, cut the onion in three or four pieces, and peel and chop the cucumber before adding to the blender. Now that all the vegetables of the gazpacho are ready, make sure the lid is well adjusted and blend until all vegetable pieces are pureed. The time this will take depends on the power of the blender. Now add salt, olive oil and vinegar. We advise to start with the vinegar and to slowly add it, then blend again and taste. Adjust salt and vinegar also to taste. When the gazpacho has achieved the right consistency follow to the next step. If not, add cold water until achieving the desire consistency. Take into account that the amount of water needed depends on the amount of bread that you add and on the water that the vegetables contain. Also, keep in mind that if you add too much water the gazpacho will lose its flavour and adding more

vinegar and salt might become necessary. (Optional: Lastly add the apple, chopped into small squares.) Refrigerate and serve cold! (Source: Cabanas, 2009 via google.es)

Estonian fish soup with vegetables

Ingredients: One kilo fresh fish, three litres water, one onion, five decilitres potatoes cut in pieces, five decilitres carrots, Swedish turnips, turnips, or other vegetables you wish (cubed), and seasoning greens (parsley). Preparation: Boil fish. While it boils, cube the vegetables. Remove the fish, and strain the fish stock. Return fish stock to stove, and add onions and carrots (or turnips). Debone the fish. When onions and carrots are semi-tender, add the potatoes. In a frying pan, melt butter and add flour, stirring, and then add it to the soup, together with chopped parsley. Place the fish pieces in the soup, stir and serve. (Source: Kivisalu, 2010 via google.ee)

Borscht

Ingredients: Two large beets, four large potatoes, four hundred grams cabbage, one carrot, one celery stock, leek (white part), parsley root, one can of white beans, three litres of water, one or two cloves of garlic, two bay leaves, fresh dill, two dried allspice berries, two peppercorns, herbal pepper, one tablespoon vinegar, and salt and sugar to taste. Preparation: Boil the beets in a separate pot until tender. In the soup pot, to cooking oil add garlic, bay leaves and allspice. Add the water and cover. Peel the parsnips and carrots. Grate parsnips, carrots and celery with a large mesh. Finely chop leek and parsley root and add to the soup along with the vegetables. Grate the cabbage as well, or chop finely, and add to soup. Peel the potatoes, wash and cut into small cubes. When the vegetables are almost tender, add the potatoes. Boil until the potatoes are soft. At the end, add a tablespoon of vinegar and season to taste with pepper and sugar. Add salt if necessary. Flush the beans through a strainer under running water and add to soup. When the beets have cooled slightly, peel them and cut into small cubes and rub on a grater. Once the soup has cooked, add chopped fresh dill. (Source: Jola, 2013 via google.pl)

Cod fish cakes and tartar sauce

Ingredients: Three tablespoons of olive oil, one large onion (peeled and finely chopped), one and a half teaspoons of salt, a quarter of a teaspoon of

freshly ground black pepper, one and a quarter pounds of fresh cod (skin and bones removed), two tablespoons of finely chopped fresh tarragon leaves, one medium-sized egg (lightly beaten), three dashes of Tabasco sauce, fine dry bread crumbs and tartar sauce to serve. Preparation: Heat the oven to 100C/225F. Heat one tablespoon of olive oil in a skillet over medium heat. Add the onion, half a teaspoon of salt and one-eighth of a teaspoon of pepper. Cook, stirring, until the onions are soft and translucent. Set aside. Cut the fish into large chunks. Pulse in a food processor to coarsely chop. Transfer to a medium bowl. Add the onion, tarragon, egg and Tabasco sauce, combining well. Add remaining salt and pepper. Form into eight three-inch patties. Dredge them in the dry bread crumbs, coating well and shaking off any excess. Heat one tablespoon of oil in a large skillet over medium-low heat. Cook four patties until browned, about five minutes on each side. Remove to a baking sheet, cover with aluminium foil, and keep warm in the oven while the other four are cooked, using the remaining tablespoon of oil. Serve hot with tartar sauce. // Horseradish Tartar Sauce. Ingredients: one stalk of celery, finely chopped, two tablespoons of finely chopped cornichons, one tablespoon of prepared horseradish, two tablespoons of coarsely chopped flat leaf parsley, half of a teaspoon of dry mustard powder, six tablespoons of quality mayonnaise (I use Hellmann's or French mayonnaise), one teaspoon of lemon juice, salt and freshly ground black pepper to taste. Preparation: In a small bowl, combine all of the ingredients, seasoning to taste with salt and pepper. (Source: Rayner, 2010 via google.co.uk)

5.   Conclusion: Mapping for an ageing Europe

We began with a series of statements about the coming times in Europe when the older outnumber the younger. The demographic prediction has placed urgent challenges on institutions and together with changes to retirement laws and pension schemes has transformed ageing from a matter of fact (biological process) into a matter of concern (issue). Questions that to some extent were already settled are now open to debate. For instance, when (and where) are people considered to be old, according to both the gender as well as the country? How should individual and state responsibilities be weighed? Also, new questions arise: Will privileged nations drain care workers from less privileged ones? Which places will become good ageing places and where will there be less care and other ageing resources?

In response to these anxieties, organizations across Europe are placing ageing items on their agendas. These include the European Commission which declared 2012 the Year of Active Ageing, an initiative aimed at working on the uncertainties, but also setting an agenda (2010). Seven sub-issues were put forward (accessibility, anti-discrimination, employment and active ageing, health, social inclusion, social protection, and solidarity between generations), and they brought together a network of national NGOs, represented in the AGE Platform Europe. The efforts inaugurated what we describe as a period where activity and interest around ageing were intensified and where its issuefication (or its becoming an issue) became even more perceptible, thereby prompting a mapping.

We have approached ageing with a layered methodology that allows us to describe the state of affairs around it, the actors involved in it, and their associations with it and each other. The choice of the theories and techniques was influenced by the development of the issue itself, and specifically, by the European Year. The terming of the year provides some footing for our choice to map ageing. First, the pairing of 'ageing' and 'active' gives a sense the processes of issuefication taking place around ageing. The otherwise too large and abstract idea of ageing was made public, relevant and graspable by assigning it liveliness. Second, by framing the initiative as a transgenerational concern and therefore extending the effects of ageing across ages, it was framed as a coming crisis and as a risk, in Ulrich Beck's terms. Finally, the issue of ageing was presented as a regional concern and specifically a European matter. As a result, we aimed to chart ageing's

locations, and ultimately how those across Europe were made into ageing places.

In order to meet the needs of mapping an issue in the making, one that transcends generations and is cartographically situated in Europe, we selected three leading authors who have shaped the field in each of those sub-areas of issue mapping, namely, Bruno Latour (social cartography of lively issues), Ulrich Beck (risk cartography of intergenerational issues), and most recently, Jeremy Crampton (critical cartography with counter-mapping using online data and tools). We also include complementary work that provides further practical elaborations on each theoretical framework: Tommaso Venturini's controversy mapping techniques, Gerald Beck and Cordula Kropp's risk infrastructure mapping and Lisa Parks's layer critique. Parks in particular provides a series of ringing critiques of mapping (as information interventions) that our practice would have to stand up to.

With ageing as a case study, and sets of mapping approaches, we sought operationalizations using digital methods and tools, mapping associations of actors using the digital traces they left behind, in the manner of Latour, and mining their data, seeking connections, and visualizing findings. We multiplied the maps, and also made sure to leave threads back to the original document or statement. The digital methods we used repurposed existing digital devices, such as search engines, so as to show which issues resonate with which actors (as the Lippmannian device is used), or which actors link to other actors, perhaps outside of one's own country, as the Navicrawler (together with the GeoIP tool) provided. The work culminated in a series of case studies, where the purpose was to provide maps both for exploration as well as (for the most part) for description and storytelling. Who's making ageing into which kind of matter of concern, and where?

5.1   Producing social cartographies of ageing: The EUropeanization of ageing?

For the social cartography of ageing, we concentrated on three key concepts from Latour's work: First, the redefinition of the social and its study as a controversy for mapping. According to Latour, the social is a trail of con-nections and a particular movement of re-association and re-assembling, always changing and moving. Second, the job of the social researcher is that of tracing the associations created by the actions of the actors involved in a controversy. And third, the inclusion of non-human actors is necessary, for anything that changes the state of affairs (that acts) is on the map (as a

mediator), even if it's an object, such as Nordic walking sticks in Poland as well as tea and pens in the U.K. When applied to ageing, we are interested in tracing how the issue comes into being precisely by the interaction of the actors who find themselves concerned with it, together with their positions, and opinions. We are interested in the vocabularies, channels, formats, and the sources of authority through which ageing is currently being defined. In practical terms, we use the controversy mapping model proposed by Venturini, occasionally adapting it by changing the order of the pathways, or choosing only a few instead of the entire set of steps for each mapping. The analyst starts by identifying the variety of competing statements that animate a controversy, and subsequently deploys the associations between these statements so as to capture and visualize the interwoven literatures. As extant literatures are surrounded by institutions, human beings and technologies that animate them, they will lead the analyst towards actors of various stripes. Hereupon she can visualize how these actors associate with other actors and form networks, inquiring into the ideologies or common beliefs that hold them together. Venturini, following Latour, calls these cosmoses. Finally, the analyst can attempt to consider the development of cosmopolitics, or how a common world is built, given the disagreements.

In order to render the notions of associations and traces, and Venturini's pathway technique, into more concrete formats we employ digital methods, both as a conceptual framework and methodology. Our data become the traces gathered by digital devices, including linking, key word usage as well as news archives on NGO websites. To mine the content and render visible traces we combine manual analysis and software tools; an especially relevant tool is the Lippmannian Device, with which we query actors' websites for issue resonance. What follows are the main questions that social cartography helped us formulate and digital methods allowed us to answer.

How does the agenda proposed by the EU relate to the agendas of the national NGOs involved in the European Year of Active Ageing? Through our mappings we were able to visualize how the agenda put forward by the European Year of Active Ageing differs from the local agendas of the national NGOs involved in the initiative. We consulted the news reports archived during the year 2011 on the websites of the NGOs involved in the initiative and manually extracted the issues mentioned in each report. The result was a collection of about 163 unique issues or statements. Next, we ran the lists through a word cloud generator, which allowed us to visualize the distribution and importance of each issue amongst the members of the group. We interpreted these results as an organized set of statements (in the controversy mapping sense) or matters of concern. The top ten

most visible issues on the group agenda, or the issues that received most media attention, are pensions, Alzheimer's, active ageing, IT skills, health, care homes, healthcare, dementia, NHS Reform, and technology. When comparing them with the seven sub-issues proposed by the EU we identified similarities and differences. And when inquiring into the drivers behind these top issues, we were able to describe country groupings (actors and actor-networks) around shared concerns. Countries not new to the EU (non-newcomers) tend to be more active in the issue space, thus influencing the distribution of issue visibility inside the group agenda and had greater affinity with other main issues of the EU. Western European countries, such as the U.K., Spain, France, or Portugal, were the drivers behind the issues of Alzheimer's and dementia. And it was only newcomer countries (the Czech Republic, Slovenia, Poland, and Latvia) that seemed to be adopting the EU issue language of active ageing. Issues that were unpopular and perhaps only important to individual actors but not often reported on, provided insight into the local character of the debate, and a sense of ageing place. For example, the Nordic countries supported creativity, writing, elderly emotion, table tennis, and recreation, while Southern and Eastern regions addressed violence, World Day to Combat Violence Against the Elderly, emergency care and assistance. Here we note there is a variety of local sub-issues regarding ageing and an alternative set of actors organized around them that are not necessarily being addressed by the EU initiative. This leaves as an open question the fate of the smaller and more local issues in the debate, such as Polish ageing issues.

Is the Polish agenda on ageing becoming Europeanized? The language used by the newcomer country, Poland, suggested a process of adaptation (or Europeanization) to the AGE Platform Europe's EU Year agenda, however one that appears less in sync with the concerns that are explicitly held as relevant by the local Polish network working with ageing. While only two Polish NGOs are included in the AGE Platform Europe, we were able to locate through engine queries a larger umbrella association of Polish NGOs working locally on ageing. Among the Polish NGOs, only one appears to engage with the issue of Alzheimer's. The marginality of the issue in Poland supports findings made earlier with respect to the lack of resonance of Alzheimer's as well as dementia in Eastern and Southern Europe. We also found little cohesion among the Polish NGOs working on ageing. Polish ageing NGOs do not interlink, and no two link to the same international NGO or association, indicating a lack of shared partnerships and collaborations, and perhaps a fragmented local issue space. They also rarely mention each other, and if the NGOs are mentioned together it is largely through their

sitting on the same panel at an ageing event, including those of the European Year. The question is the extent to which European ageing initiatives unify (if only temporarily) the Polish NGOs.

We subsequently mapped the issue agenda of the local Polish NGO network, so as to compare it to the European one. We searched for the issues (or 'statements' as they are termed in controversy-mapping language) that according to their websites (or literatures) were relevant to them; we grouped them using a word cloud generator and ordered them by frequency (moving from literatures to actor-networks in terms of shared substance). We revisualized the cloud as a heat list so as to be able to put the agendas side by side, comparing the seven-issue agenda put forward by the AGE Platform Europe (in the EU Year) with the Polish NGOs'. We arrived at two main conclusions. On the one hand, the similarity of certain language suggests a degree of agreement and adoption. For instance, activation, agreement between generations, and the prevention of discrimination are terms used by Polish NGOs that resonate with those employed by the AGE Platform Europe. On the other hand, ageing framed as a women's issue, the one most frequently emphasized by Polish NGOs, appears to be unique to the Polish actors. The finding becomes more poignant when one takes into account that one of the two Polish NGOs participating in the AGE Platform Europe is dedicated to women's rights. The other Polish issue absent from the AGE Platform Europe is education for older people, which found expression in the Polish support for the University of the Third Age, a name which is not only absent from the agenda but which appears infrequently on the AGE Platform Europe website.[14] The Polish NGOs, finally, also reformulated 'active ageing' as one not necessarily implying working longer.

Which issue formats lend themselves to domestic debates on pension reform? We tested how the debate around pension was framed and animated in the national political debates in the U.K. At the time of the mapping there was increasing activity in the U.K. political scene around the proposed public sector pension reform. A number of actors opposed the idea that future pensions would be calculated on the basis of a career-average scheme rather than on final salaries and an increment of the retirement age. A strike was organized as a response to the changes and it involved labour unions and political parties. A set of names of those involved in the strike led us towards the websites (literatures) of the actors, where we identified a common vocabulary associated with the debate, including terms such as 'wheelchairs', 'bills', 'tea', 'pens', and 'walkers'. Some of these objects were employed ideologically in comments sections, on forums and in other digital spaces, where users vocalized (ideological) disagreement, thereby making

them into cosmos-objects. For example, the word 'tea' acted as a class indicator, of those that do well in public service, and it was also associated with lack of willingness to fight against the reform. On the other hand, 'pens' were used to refer to the power and perhaps fiat of those wielding them, including high-ranked government officials, and bureaucrats. Furthermore, when viewing keyword output per set of actors, instead of collectively, two other terms stood out specifically for Labour parties: 'pay more' and 'women's pensions'. 'Public sector strike' only returned results from smaller parties such as the Scottish National Party, Social Democratic and Labour Party (Northern Ireland), and the Green Party. In this sense, unions are tied to fringe party issues with their use of strike language such as 'picket line', 'public sector strike' and 'pension strike'. The mapping of cosmos-objects allowed us to describe the U.K. pension reform debate in terms of competing ideologies and as framed by actors in terms that resonate with a class struggle. When performing a similar mapping with the Polish pension debate as a case study, we again encountered an emphasis on ageing as a women's issue, as there is disagreement regarding the proposal to have the same retirement age for both men and women. The general importance of the pension debate and the differences in framing indicates that the issue of an ageing Europe is being addressed within the national borders, opening up questions regarding the relationship between the proud nations (and their 'methodologies', to use Beck's term) and the transnational assemblage of NGOs working in the EU Year format.

5.2   Producing risk cartographies of ageing: Winner and loser places

The second layer of our methodology is dedicated to a mapping of ageing as a risk. We use Ulrich Beck's ideas about contemporary world risks and cosmopolitics in order to formulate research questions to map our case study of ageing. World risks are a special type of risk that is resistant to the calculations, prediction, and compensation systems developed during modernity. They are global threats (climate change, terrorism, financial market meltdown, and to a degree ageing) not limited in space or time. Because of the uncertainty that inheres in world risks, they are subject to a constant struggle of definition (ontological insecurity) and regulation. Given competing definitions and speculation they exist often as contradictory versions of the future, staged in media. Furthermore, Beck proposes that a globally shared risk does not lead to the balanced distribution of

responsibility, but instead to inequality. Some of the actors involved will act as decision-makers, while others will experience the consequences of such decisions with little room to intervene. To this condition there is an exception: world risk, because it is unprecedented, also can be a catalyst for a 'cosmopolitan moment of enlightenment' if national interests melt away, in favour of a balanced distribution of responsibility and power. When applied to the case study of ageing, the concept of world risk allows thinking about the scenario unfolding around ageing as composed of inequalities, of winners (decision-making actors) and losers. Who will suffer the consequences of those decisions? Which voices are unheard in the debate? Where will one age poorly, and where will others age well?

In order to work practically with the notion of world risk and operationalize it into a mapping methodology, we engaged with risk cartography techniques and took up a methodology (by Beck and Kropp, with similarities to Venturini's) that invites researchers to identify a series of risk actors and elements together with the associations between them. They are the protagonists (Who is involved?), matters of concern (What is at stake?), statements (What are the knowledge claims, and what are they afraid of?), and things (What can be done?). Here we discuss the findings we have made using risk cartography techniques and the questions they help us to answer.

Which age-related concerns do European actors prioritize? Which ones remain isolated? Using the news reports produced and archived by the NGOs in the AGE Platform Europe we identified the different protagonists, matters of concern, statements as well as things in each news entry from 2011. They are linked, clustered and visualized in a mind map, showing that certain institutions are dominant, and ageing issues have hierarchies. The most prevalent sub-issue was the manner in which ageing is straining the welfare state and the difficulty for older people to gain employment. As a response to the dramatic change in the population there is the suggestion of extending working life, where there would be a loosening (or elimination) of a compulsory retirement age and extended training for the elderly to remain in the labour market. Supporting these ideas are protagonists such as the head of AGE Platform Europe and the representative from the European Parliament's Employment & Social Affairs Committee. On the other hand, there are isolated issues that received less attention, including elderly discrimination, and specifically of older women. Among the protagonists to give visibility to the issue is the European Alliance of Families. Also the issues concerning the need for healthy ageing, the impact of ageing on family policies, the difficulties of implementing local approaches to policies on ageing, and the absence of collective redress legislation within

the EU appear to be isolated. Generally, the map shows concerns for a lack of flexible EU legislation to tackle the shifting population demographics and for the culture of extreme budget cuts and their effects. Ultimately, however, the map indicates that the productivity of older people is privileged over all else.

Migration of care workers: Where are the winner and loser places as the European populations age? The U.K. government recognizes the need for a cosmopolitan approach to the ageing of its population by regulating the recruitment of international health personnel from specific regions, and thereby helping to prevent these areas from finding themselves with insufficient resources and care workers to attend to their own populations. By placing the focus beyond governmental affairs, however, our mappings provide a sense of how the issue of care drain remains a footnote in the debate around ageing and its consequences. Other (non-European) ageing places are not recognized. First we explored to which extent the U.K. network on ageing is 'cosmopolitan', employing link analysis as well as a GeoIP tool. Using as a starting point the website Age U.K. we visualized a network of 376 connected websites concerned with ageing, finding that the U.K. network remains bounded by national and language borders. The rest of the world, and the far-flung source places of care workers, were not connected. The second strategy implied testing if there was any degree of recognition of the issue of care drain in the 376 websites. We learned that it is an ancillary issue in the debate, touched upon only briefly in sub-sections of documents structured around larger topics and formatted in presentation slides and PDFs that circulate amongst very specific audiences. When mentioned it remains a placeless issue, not associated with specific regions or countries. Care drain is not a mainstream issue in the ageing debate.

5.3   Producing critical neo-cartographies of ageing issue layers and resource maps

The third layer of our analysis is dedicated to a critical cartographic mapping of the ageing issue, deploying Jeremy Crampton's call to 'map, or be mapped!' Crampton provides insights about how to consider place-making activities (the map as rhetoric, serving interests) and how to produce alternatives (counter-mapping). From a practical standpoint counter-mapping is a realization of critical cartography that appropriates the techniques of the cartographer in order to produce alternative cartographies that have the power to compete or contest others. The ideas of counter-mapping

and of appropriation become more concrete with neo-cartographic tools (the online mapping devices), especially the layer. Through platforms such as Google Maps and Google Earth (but also others) a user can annotate a map and create mash-ups and layers of information that can be shared and circulated. To further elaborate on this point, we refer to Lisa Parks who wrote a critical response to the 'Crisis in Darfur' layer, one of the Global Awareness layers available in Google Earth, especially taking aim at the notion of mapping as 'information intervention'. Parks's 'layer critique' is multilayered itself, pointing to issues such as the multi-temporality of the 'Crisis in Darfur' layer, whereby there is a lack of specificity of the dates accompanying the images. For Parks the *when* is as important as the *where*. By presenting a collection of past images a map can become a space of 'mourning' rather than a platform for action, or intervention. Additionally, Parks advises engagement with the modes of intervention suggested by digital satellite images, which are a part of the layer. The distance provided by the satellite image could allow for the events on the ground to unfold in the language of patterns, structures, movement, flows, recurrence, quantity as well as proximity of one act of violence to another that could work as an invitation for the user to interpret social situations in ways distinctive from the mournful gaze. We approached Parks's layer critique as both an admonition as well as a guide. Will our maps withstand Parks-like critique, and how may we add to maps with the use of layers? The results of our work are a series of critical mappings on ageing that take the form of cartographic issue layers, placed atop maps to visualize the different manners in which locations across Europe are being crafted into places with ageing issues.

How is ageing creating care worker abundant and care worker deficient places? The private employment sector, through job agencies and job portals, are actively recruiting Polish care workers to work in Western European countries. These actors actively define Poland as a source and provider of care workers, opening up questions regarding consideration for the local ageing population as well as the winner and loser states in an ageing Europe and amongst the participants of the Year of Active Ageing. For the mapping we used the Polish care worker migration issue, and its places. We searched the Polish local domain Google search engine (google.pl) for job portals and the respective openings for care workers. On the day of the query there were 27 job offers for Polish nationals to work in Poland, while in Germany there were a total of 266 openings, United Kingdom 56, Belgium 19, the Netherlands 17, Switzerland 17 and Austria 4. We also collected the names of employment agencies (in the jobs portals) that were acting as brokers, together with their locations, adding them to the care worker mediator map.

Needless to say the demand for Polish care workers was greater outside of the country than inside, and there are what one could call recipient countries, especially Germany and the U.K. Here we raise the question of the map issuefying EU care worker migration, one which could encourage EU policy, facilitated by the occasion of the Year of Active Ageing and the AGE Platform Europe. We sought to put the issue on the European map.

How are locations across Europe defining themselves as resourced, ageing places? We repurposed search engine results in order to provide an exploratory description of how places across Europe are defining themselves as ageing places. Here we consider Europe as a resource for ageing and its issues, and in doing so ask about a place's contributions or offerings to the scenarios of an ageing Europe. We queried the terms [ageing] using the local search engines of 22 European countries, retained the first set of results for all countries, and selected and visualized striking ones on an annotated resource map of an ageing Europe, in the manner of a country's or region's map of natural resources or products for export. For example, an organization working in Spain asks, what do you want to be when you grow old? In Italy we found the Grandmother Hypothesis, which suggests that the number of grandmothers is proportional to the well-being of a nation (for they care for the young), while in the Czech Republic there are cooking courses on anti-ageing cuisine. Finally, taking into account that food has been a recurrent theme, we performed more queries, where we again treat European places as resources, providing us with clippings for what could become an anti-ageing cookbook. The food mapping could be seen as a contemporary means of filling in the notion of ageing place. Where ageing places, in name, once concerned the secrets of diet and social life in locations where people grow the oldest, now they are everywhere, or at least all over Europe, with issues as well as diets.

That is, we compared our approach to studying European ageing places to that of those exceptional locations where people grow unusually old – the Greek, Japanese and Italian islands as well as the Costa Rican peninsula. The tradition of portraying the longevous stems from the 1973 *National Geographic* article, 'Every Day Is a Gift When You Are over 100' (Leaf, 1973). In the article Alexander Leaf and the photographer, John Launois, made portraits of the longest-living people (at that time considered to be in Abkhazia in the Caucasus mountains, the Vilcabamba valley in Ecuador and the Hunza region of Pakistan), leading to further work into the places and secrets of old age. We contrasted our approach to studying ageing places by first pointing out a difference in emphasis between ageing as biological fact, being overcome in certain places, and as matter of concern, as witnessed

by the activity around the European Year of Active Ageing as well as the European national debates and legislation concerning the retirement age on the rise. Another difference in emphasis is that we are not highlighting the discovery of special ageing places and the extraordinary personal achievement of advanced lifespan in the style of the *National Geographic* article. Yet we have learned from the work into exceptional longevity. We took Europe and its ageing places as ones with resources, anti-ageing tips, shopping lists and cuisine. As we pointed out, people ageing across Europe are not necessarily the homogeneous cohorts with the shared environments of the respective mountains, islands, valleys and peninsulas studied to date. Rather, together with a diversity of ongoing concerns, there could be said to be a normalcy to ageing well in Europe that results from the issue mapping at hand.

Ultimately, the mappings produced using the three methods (social, risk and critical neo-cartography) offer descriptions of the state of affairs around the ageing of Europe, and raise issues, too. Does the European Year, and its related initiatives such as platforms, 'Europeanize' the ageing issue agenda, lending lesser urgency to national and local concerns such as women's issues and third age education in Poland? Are issue hierarchies, produced by a mapping of dominant actors, useful inputs in the debate opened by the Slovenian newspaper about the genuflection of newcomer states to a European project? Like the social cartography, the risk cartography also focused on the power of decision-makers and victim states (in Ulrich Beck's vocabulary). Should the European Year address care worker migration as a European ageing project, and such consequences as better and lesser ageing places? The critical cartography not only provides us with sensitivity towards describing any issue-mapping project as an information intervention, especially when producing an archive over a monitor, when they also could have as their goal a humanitarian intervention. The online mapping tools, or the neo-cartography discussed in tandem with critical cartography, offer means to annotate, mash-up, and remap, particularly with so-called layers. By creating layers, we experimented with resource maps, and gazetteers, showing the contributions of ageing places, at once embracing as well as redoing the European project of making ageing into an issue.

Glossary of tools used

'Clouding' tools. Clouding refers to counting occurrences of keywords, issues or sources, resizing them according to frequency of mentions and arraying them for particular reader effects. The clouded keywords may be arrayed alphabetically, where the reader would be expected already to be familiar with some of the terms and seek particular ones. The clouded keywords or sources may ordered by frequency, with the most frequent terms appearing in the center, for a core/periphery effect, or left to right, top to bottom, where in the Western writing system (broadly put) the most frequently occurring is where one begins reading. Other arrays, such as random or unordered ones, also may be of interest if there are no expectations on the part of the reader, or there are multiple audiences. For example, wordle.net, the 'toy for generating "word clouds"', has by default its layout as 'any which way', and also allows vertical, horizontal, mostly vertical or mostly horizontal, together with an alphabetical option. Among the clouding tools put to use are the Digital Methods Initiative's Raw Text to Tag Cloud Engine (which invites text dumps and then counts words) and the Tag Cloud Generator (for inputs of terms with numbered values). As the name indicates the Tag Cloud Combinator clouds multiple clouds, so to speak, meaning one enters more than one cloud and they are summed, and a single, mother cloud is outputted.

Gephi. Appropriately termed the 'Photoshop for networks', Gephi is an all-purpose network analysis software tool which we use in combination with data collection tools (such as the Googlescraper for search engine results, Navicrawler and Issuecrawler for website in- and outlinks, Netvizz for Facebook and TCAT for Twitter). Data in tabular form may be converted to a relational input format accepted by Gephi with the tool, Table 2 Net, developed by the Médialab at Sciences-Po, which is the base for the developers of Gephi as well as Navicrawler (and its successor). With Gephi, at a basic level, lists of nodes and edges are visualized as an interactive network. The layouts of the network graphs in this book were generated using its ForceAtlas 2, the default algorithm that produces spring maps or a so-called force-directed layout, meaning 'nodes repulse each other (like magnets) while edges attract the nodes they connect (like springs)' (Jacomy et al., 2014). One particular innovation in Gephi for network visualization users is that ForceAtlas 2 runs continuously, spatializing (or placing nodes and their edges) until it stops. Incorporating a learning by interaction (and exploration) ethic, Gephi invites one to view but also use the graphing

features (both interaction as well as settings) during and upon completion of the layout.

GeoIP and the Issuegeographer. The Digital Methods GeoIP tool sits atop the Geocity Lite database by Mindmax, and allows one to retrieve or resolve location coordinates from URLs or IP (Internet Protocol) addresses. It outputs a table with individual columns listing URL, host, IP address, city, country, country code, latitude and longitude. It is often employed for analysis of the places of issues, that is, where people or organizations are engaged with which issues. It is also useful for geolocating significant sets of organizations, where one would ask, for example, among the human rights organizations invited to the summit meeting, are there global south actors among them? Here the Geo IP tool looked up the locations of the ageing NGOs and other actors which were linked to by their U.K. counterparts. The question raised is the extent to which they are outward-looking and recognizing or referencing actors in places affected by the ageing issue in the U.K., such as countries experiencing a care drain. In a footnote to the project we note the use of the Issuegeographer by the Digital Methods Initiative, which employs aggregate WHOIS services and looks up the registration addresses of websites (their billing addresses, so to speak), not the locations of their hosting companies.

Googlescraper and Lippmannian Device. The Googlescraper (aka Lippmannian Device) runs on top of Google, making queries that enable one to learn how many times a website mentions a keyword, according to the leading search engine. One can query multiple sites and keywords, too, so as to show whether issues resonate among particular sets of sources. To what extent do leading Fukashima NGOs recognize the effects of the nuclear disaster on particular species? The tool outputs issue clouds as well as source clouds. Issue clouds are resized keywords, and source clouds are resized domain names, such as greenpeace.org or amnesty.org. The Googlescraper was originally developed for so-called source distance work. How far from the top of Google results is a particular issue or source? Thus if one queries Google for [9/11] at which ranking is the 911 Commission's website, the official source, and 911truth.org, the conspiracy theory site? (From 2009 to the present 911truth.org often has been ranked much higher.) Thus the Googlescraper performs research about how Google, and by extension, the web, furnish hierarchies of source credibility – in a form of web epistemological research. The Lippmannian Device, on the other hand, is named after Walter Lippmann, the American journalist and author, whose influential

books, *Public Opinion* (1922) and especially *The Phantom Public* (1925), called for a coarse means to detect source bias. With the Lippmannian Device one queries sources in order to find out whether they mention particular words, and not others, thereby indicating a leaning or commitment to particular issue language over other's. Thus it is more of a social research tool compared to the Googlescraper's web epistemological work. However named, the tool scrapes Google results, from [site:] queries, and outputs Google's estimated result count, number of keyword mentions on the inputted pages or sites, and the descriptor text associated with the result, together with data on date and time of query, the formulated query itself and Google results page URL. Results are displayed as issue or source clouds (where one is able to array the clouds as deemed appropriate for the expected reader), an html table and a text file. The Googlescraper (aka Lippmannian Device) is at https://tools.digitalmethods.net/beta/scrapeGoogle. It works in Firefox in tandem with the DMI toolbar add-on, https://wiki.digitalmethods.net/Dmi/FirefoxToolBar.

Link Ripper. The Link Ripper rips or extracts hyperlinks from a webpage. It is often used when links are not visible but rather embedded in the code of the page (/hrefs). One may enter multiple pages into the Link Ripper, and extract the links, forming a list. There is an option to capture outlinks only, thereby excluding internal links. The Link Ripper is at https://tools.digitalmethods.net/beta/linkRipper.

Mindomo. Mind mapping is a technique by which a thought and its associations are linked in a visualization. Mind mapping software, in this case Mindomo, has been put to use in the mapping of associations between protagonists, matters of concern, statements and things, in the risk cartography approach to mapping ageing. Our particular application of the tool organized the issue space, and also allowed us to show the most central protagonists and matters of concern (the AGE Platform Europe secretary general and ageing's effects on employment and the welfare state), as well as particular marginal and isolated ones, such as elder discrimination. Described by its creators as a tool that helps users 'see the big picture', Mindomo is at http://www.mindomo.com.

Navicrawler. Navicrawler is a website corpus building tool that captures links between websites, allowing one to map interlinking. Because the user manually confirms which linked websites to include in the corpus, Navicrawler also leaves out links deemed irrelevant by the researcher

(which is in contrast to the Issuecrawler, which retains the links no matter their perceived topicality). Whilst no longer maintained, owing to the development of its successor, it may still be used with a separate instance of Firefox (version 3.6) and the Navicrawler add-on installed. In the risk cartography exercise, Navicrawler was used to map the outlinks from U.K. ageing organizations ultimately so as to ascertain their location by running the sites through the Geo IP tool. Navicrawler is available at http://webatlas.fr/wp/navicrawler/.

Pallozio. Pallozio is a script for creating stream graphs using Adobe Illustrator CS5 with Scriptographer installed. Michelle Mauri from the Density Design Lab in Milan developed the script and it can be downloaded at https://github.com/mikima/pallozio. See also Density Design Lab's RAW tool, which is the successor, described at http://raw.densitydesign.org, as 'the missing link between spreadsheets and vector graphics'.

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Notes

1.   Another recommendation, 'favor controversies concerning scientific or technical issues', is (among other reasons) a consequence of the origins of actor-network theory in science studies.

2.   The final step, a move from cosmoses to cosmopolitics, should not be viewed as a specific methodological instruction, but rather as a philosophical repercussion of the work in focusing on the observation of the construction of a collective, even if it is temporary one.

3.   Cosmos-objects reference ideologies or *Weltanschauungen*, and may be contrasted with issue objects which embody and express issues. See Marres, 2012.

4.   We use Google's convention concerning how to write search engine queries. We place brackets around queries, and show whether quotation marks were employed (for exact match queries), e.g., ["climate change"]. See Cutts, 2005. The Polish language queries for retirement, pensions, retirement age, pension reform and ageing are respectively as follows: [*"emerytura"*], [*"emerytury"*], [*"wiek emerytalny"*], [*"reforma emerytalna"*] and [*"starzenie się"*].

5.   We used the Issuegeographer tool by the Digital Methods Initiative to look up the addresses where the websites are registered, too, so as to check whether the findings made about their host locations match with their registration locations, which they largely do. The seed actors link to mainly U.K.-based websites, and not to care worker source countries.

6.   The top-level and second-level domain names of these websites are taken as the sector in which they operate and as a way of grouping them. Six out of the 17 websites (globalaging.org, euro.centre.org, oecd.org, social-policy.org.uk, cpa.org.uk, ec.europa.eu, europarl.europa.eu, unesco.org, unesco.org.uk, york.ac.uk, ageing.ox.ac.uk, soton.ac.uk, open.ac.uk, era-age.group.shef.ac.uk, futurage.group.shef.ac.uk, nhs.uk, evidence.nhs.uk and telegraph.co.uk) in which care drain resonates use the domain name .org (non-governmental organizations), including Global Aging, an American NGO that reports on older people's needs and their potential within the global economy, the European Centre for Social Welfare Policy and Research, with a research area dedicated to ageing and generations, and operating at the European level the Organization for Economic Cooperation and Development, with an agenda that includes working towards the inclusion of people of all ages in the workforce. Non-governmental organizations with a British focus include the U.K. Social Policy Association, which has published a series of academic papers about ageing and policy, and the Centre for Policy on Ageing, an independent charity that works to promote the interests of older people through research. The last one from this group is the British section of UNESCO. Furthermore, two websites (those of the European Commission and the European Parliament) employ the .eu domain and identify as regional actors. The academic sector is grouped under the do-

main .ac.uk, and includes the University of York, Oxford Institute of Popula-
tion Ageing, University of Southampton, Open University, and two projects
funded by the European Union hosted at the University of Sheffield, Era Age
2 and Future Age. The U.K.'s National Health System, both the main site as
well as a sub-site make use of the term 'care drain'. Finally, the one media
organization from the sample is that of *The Telegraph*, with a .co.uk domain.

7. 'One of the stories I was taught as a student is that cartography became sci-
    entific only recently, say after World War II. It did so, the story went, largely
    for two reasons. First, it finally threw off art and subjectivity (here refer-
    ence was often made to the work of Arthur Robinson and his call for formal
    procedures of map design). Thus science was posed in opposition to art.
    Second, it became as it were "post-political" by throwing off the fatal attrac-
    tion to propaganda and ideological mapping evidenced prior to and during
    war [...]. Yet both these developments are myths' (Crampton, 2010, p. 3).

8. In August 2011 the official google.org blogger writes: 'We see two consistent
    trends in search behaviour and Internet use in the affected areas: a substan-
    tial (and often dominant) proportion of searches are directly related to the
    crises; and people continue to search and access information online even
    while traffic and search levels drop temporarily during and immediately
    following the crises' (Falor, 2011).

9. "Onze medewerkers zijn afkomstig uit landen uit Oost-Europa: voor het
    overgrote deel uit Polen [Our employees hail from countries in Eastern
    Europe, for the most part from Poland]," thecaringcrew.nl, 20 August 2012.
    Translation by the authors.

10. The countries where the local domain Googles were queried are as follows:
    Belgium, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland,
    France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxem-
    burg, Malta, the Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia,
    Spain, Sweden, and the United Kingdom.

11. Using Google web search to display societal concerns (as opposed to in-
    formation only) is a research perspective developed by one of the authors
    and was applied in ambiguous queries for [rights] in a series of countries
    worldwide, in order to display issue hierarchies or ranked rights types per
    country. See Rogers, 2013.

12. There were 27 EU member states at the time of the study. Croatia, the 28th
    member state, joined the EU on 1 July 2013.

13. Queries were made in the local domain engines for Google in Belgium,
    Bulgaria, the Czech Republic, Denmark, Estonia, Finland, France, Germany,
    Greece, Hungary, Ireland, Italy, Malta, the Netherlands, Poland, Portugal, Ro-
    mania, Slovakia, Slovenia, Spain, Sweden, Turkey, and the United Kingdom.

14. Using the Google site query on 8 August 2013, the [University of the Third
    Age] appeared on age-platform.eu on four occasions, all of which on PDFs,
    suggesting that the issue is not prominent.

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