



# Professional emergence on transnational issues: Linked ecologies on demographic change

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## ABSTRACT

Addressing complex transnational problems requires coordination from different professionals. The emergence of new actors and issues has been addressed by those interested in studies of organizations through concepts and methods that highlight the importance of communities, fields, and networks. These approaches are important in identifying the sources of what becomes established, but less geared to identifying interactions that are emergent. This article extends a linked ecologies approach to emergence, arguing that interaction on transnational issues should first be understood by how they are conceptually linked by actors and organizations. A linked ecologies approach asks us to displace locating known actors within structures and instead pays attention to professional interactions on how 'issue distinctions' are made, the relationship between issue distinctions and professional tasks, and who and what are included and excluded. A linked ecologies approach provides a fruitful way of identifying actors and distinctions on issues that are emergent. These conceptual and methodological points are demonstrated through a study of how medical experts, demographers, and economists forge issue distinctions in relation to low fertility in advanced industrialized countries.

**KEYWORDS:** linked ecologies; issue distinctions; professions; demographic change; fertility; gender; medicine; economics; demography.

## INTRODUCTION

Identifying emergent transnational phenomena is difficult because our thinking is commonly geared to locating known actors and organizations, and the likely connections between them. In research on transnational governance questions of emergence lead to searches for changes to the character of existing relationships, raising questions about what actors have greater authority (Avant, Finnemore, and Sell 2010), or how communities come together to create common identities (Djelic and Quack 2010). How can we understand transnational professional

relationships that are not stable but in flux, which are not so much about change or consolidation but about becoming? This raises a number of difficulties that are heightened when the interactions taking place are on complex transnational issues, and where professionals from different backgrounds seek to create an institutional response to a perceived problem. Work in international relations, organization studies, and sociology on transnational governance points us to a range of ways to address these difficulties, primarily through conceptions of communities, fields, and networks. This article suggests that such

approaches are very important for studying change in established entities but require a complementary analysis to study transnational interactions that are emergent or in flux. As a remedy, this article extends a linked ecologies approach (Abbott 2005) to study transnational professional interaction. The linked ecologies approach allows us to zoom in on professional interactions on emergent issues in the absence of clear organizational mandates or frameworks. The approach identifies how professionals can create issues that span across different professional groups and change how they treat their tasks and professional jurisdictions.

Our subject of study is transnational professional interaction on demographic change, in particular, low fertility in Organization for Economic Cooperation and Development (OECD) countries. Demographic change is acknowledged as a policy concern within many advanced industrialized countries, but discussions about low fertility are not explicitly expressed in terms of policy objectives. Governments, though alarmed about the effects of low birth rates on the tax base and economic productivity, and sensitive to the potential mismatch between desired and actual family size of their population, are timid in their approach to the topic. Wary of the authoritarian implications of prescriptive natalist policies, and concerned about the cost of policies, they focus on more or less well-defined programs that aim to enable choice about childbearing. In concrete terms, governments address low fertility with measures such as one-off payments, improving childcare availability, and addressing work–life balance concerns.<sup>1</sup> As an issue, low fertility is understood to be a particular problem for a number of European and East Asian advanced industrialized countries. Germany and Japan stand out in having experienced especially low fertility over a sustained period of time, whereas countries with an established and generous welfare state or long traditions of migration appear to buck these trends among members of the OECD, as seen in Table 1. We highlight the German and Japanese cases, in particular, because they have addressed issues of low fertility through a human capital and productivity discourse, as we clarify below.

The lowering of fertility levels in advanced industrialized countries has spurred professionals into

**Table 1. OECD total fertility rates, 1980–2010**

	1980	1990	2000	2010
World	3.7	3.23	2.68	2.45
OECD members	2.17	1.96	1.79	1.82
Israel	3.24	2.82	2.95	3.03
Mexico	4.7	3.4	2.58	2.32
Iceland	2.48	2.31	2.08	2.2
New Zealand	2.03	2.18	2	2.16
United States	1.84	2.08	2.05	2.1
Turkey	4.45	3.05	2.38	2.09
Ireland	3.23	2.12	1.89	2.07
France	1.85	1.77	1.89	2
Sweden	1.68	2.13	1.54	1.98
Norway	1.72	1.93	1.85	1.95
United Kingdom	1.89	1.83	1.64	1.94
Australia	1.89	1.9	1.76	1.92
Denmark	1.55	1.67	1.77	1.87
Finland	1.63	1.78	1.73	1.87
Chile	2.67	2.62	2.09	1.86
Belgium	1.67	1.62	1.67	1.84
The Netherlands	1.6	1.62	1.72	1.79
Canada	1.74	1.83	1.49	1.68
Estonia	2.02	2.04	1.38	1.63
Luxembourg	1.5	1.62	1.76	1.63
Slovenia	2.05	1.46	1.26	1.57
Switzerland	1.55	1.59	1.5	1.5
Czech Republic	2.07	1.89	1.14	1.49
Austria	1.62	1.45	1.36	1.44
Greece	2.23	1.4	1.26	1.44
Italy	1.64	1.26	1.26	1.4
Slovak Republic	2.32	2.09	1.3	1.4
Germany	1.44	1.45	1.38	1.39
Japan	1.75	1.54	1.36	1.39
Spain	2.22	1.33	1.23	1.39
Poland	2.28	2.04	1.35	1.38
Portugal	2.19	1.43	1.55	1.32
Hungary	1.91	1.84	1.32	1.25
Korea Republic	2.83	1.59	1.47	1.22

Source: Compiled by the World Bank, 2012, and drawn from: United Nations Population Division, World Population Prospects; United Nations Statistical Division, Population and Vital Statistics Report (various years); Census reports and other statistical publications from national statistical offices; Eurostat: Demographic Statistics; and US Census Bureau, International Database.

transnational coordination. At the national level, professionals dealing with questions of fertility, from medical, demographic, and socio-economic perspectives, operate mostly in isolation and in relation to the aforementioned sensitivities.<sup>2</sup> Medical experts, demographers, and economists engaged in transnational interactions recognize declining fertility as a general policy issue and seek to qualify it as a

policy objective to be spread among national governments, international organizations (IOs) and non-government organizations (NGOs). These professionals populate the ecologies studied here. Their motivations for pursuing transnational multi-professional interactions range from enabling women and men to realize their desired fertility, assisting potential parents to make informed reproductive choices, to preventing a shortage of productive skills. These motivations determine the formation of what we call ‘issue distinctions’ on low fertility. Issue distinctions permit interactions among and between professional groups as professionals seek to identify the key issue at hand, who should address it, and how it is best tackled.

Here, we provide a snapshot of issue distinctions being made during a 5-year period (2009–13) to identify multi-professional interactions that constitute transnational ‘institutional work’ on low fertility (Lawrence, Suddaby, and Leca 2011). Among the issue distinctions being made, we identify two main strategies from professionals that we describe as *targeting* and *informing*. Issue distinctions focused on targeting are dominated by economists, linked to demographers, and highlight how concerns about low fertility are connected to national fears about declining human capital and productive capacity. Issue distinctions that focus on informing draw mainly on medical expertise, and focus on making particular types of information available to policymakers and the public about fertility life cycles.

The article has six sections. The first section is on the linked ecologies framework and our suggestions on how it can be extended to transnational phenomena. Here we also discuss common approaches to studying transnational phenomena, such as work on communities, fields, and networks, and why the linked ecologies approach has an advantage for studying professional emergence. The second section is on methods. The third section discusses issue distinctions on policies to low fertility, in general, mapping the terrain of distinctions made. The fourth section identifies issue distinctions linked to ‘targeting’ strategies. The fifth section does the same for ‘informing’ strategies. We conclude by reflecting on emergent professional interaction and methods of discovery for understanding complex transnational phenomena.

## TRANSNATIONAL LINKED ECOLOGIES

The linked ecologies framework has been introduced by Andrew Abbott (2005), building on his earlier well known work on the system of professions (Abbott 1988). Abbott’s work on the system of professions identifies the structure of competition among professional groups and associations over the expert division of labor in a national context. Here Abbott (1988) introduced the notion of claims to ‘jurisdictions’ between an occupation and its work by professional groups, which, following a settlement between professions, clearly establish what issues should be treated with what tasks and by whom. His linked ecologies relax his earlier assumptions about jurisdictions being claimed primarily by professional associations and looks to interactions between a range of actors and organizations. In the linked ecologies framework the stress is locating how issues and tasks are defined. The approach is ecological in understanding the social world as composed of interactions between units that are not fully independent or completely constrained; a view that locates action somewhere between the two extreme visions of a fully integrated organism or an atomized world of rational actors. The linked ecologies approach stresses how professionals interact via a range of strategies to define tasks, where the ecologies include actors, locations of task definition, and types of ‘ligation’—types of relationships that connect actors and locations (Abbott 2005: 248–52).

A particularly important type of relationship occurs through the creation of what Abbott calls *hinges*, which are professional strategies that transform more than one profession at the same time (Abbott 2005; Fourcade and Khurana 2013: 124). Hinges are important in linking ecologies to facilitate professional cooperation, but also to reinforce professional boundaries on how issues are treated as they provide differentiated rewards to the ecologies involved. To take an example, a hinge such as the issue of ‘adequate care’ in nursing homes will be interpreted differently by care workers and by the managers of the institution. Both will jostle over what ‘adequate care’ means for the allocation of work tasks, the resources to be committed to them, and who is responsible for performing them. These battles will lead to different rewards for the care workers and the managers, with care workers most likely taking

on increased responsibility with little reward, whereas managers will seek to demonstrate economic performance through adequate care (Foster and Wilding 2002). Or to take an example with less obvious power asymmetries between the professional groups, bankers and wealth fund managers may cooperate in the creation of ‘expatriate’ banking services to minimize tax burdens for the transnationally mobile. As an issue and area of work, expatriate banking will have different rewards for the bankers and for the wealth managers, with tasks and modes of work that affirm differences among the professional groups (Seabrooke and Wigan 2014). One could think of a range of issues that act as hinges for strategic competition and cooperation between professionals, which affect more than one group. The case presented below demonstrates how actors create hinges by defining issues and developing strategies across professional groups.

Another type of relationship involves an existing profession expanding its work into other ecologies, creating what Abbott (2005: 265) calls *avatars*. For example, the economics profession has made great inroads in applying its methods and logics in other social science professional groups. In management studies, political science, and sociology those with economics training and quantitative analytical skills can command higher wages than their colleagues, as well as have greater influence over the assessment of professional work quality and quantity (Fine 1999). When well resourced, these avatars of the economics profession have also demonstrated a capacity to change the content of what is being taught in business schools and universities and what knowledge is viewed as valuable (Fourcade and Khurana 2013).

**Issue distinctions in transnational linked ecologies**  
The linked ecologies approach has been used by Abbott (2005) to study professional and university ecologies, but has been recently applied to tracing interaction among professional ecologies in transnational arenas, such as international financial reform (Seabrooke and Tsingou 2009; Baker 2013), the transformation of auditing practices in post-Soviet economies (Mennicken 2010), and competition within and among IOs (Stone 2013). Here we extend the linked ecologies literature by zooming in on moments of transnational professional emergence

where actors actively create an issue as a hinge across professional groups. We propose that professional emergence can be identified through the creation of issue distinctions, which take place prior to professional ecologies arriving at a clear position on who is tasked with the issue and how the issue is treated. Abbott has described such fluid social space as ‘zones of difference’ or ‘arenas’ from which entities can be created that can become identified as tasks to act upon or out (Abbott 1995: 877; Abbott 2005: 249). Issue distinctions emerge from these arenas as professionals articulate their positions on ‘what’ is important to address, even if the ‘how’ is not yet clear. Analytically, issue distinctions are separate from task definition and particularly important during periods of emergence. Although tasks set work content and jurisdictional control, issue distinctions place boundaries around what the problem is. Issue distinctions become points of independent focus for professionals, some choosing to immerse themselves in developing tasks for particular problems, whereas others use distinctions as platforms to create hinges. Such ‘yoking’ or issue linkage permits the creation of issues as new entities (Abbott 1995: 871–2). But first come the distinctions.

We place our understanding of issue distinctions alongside work that stresses how organizing is ontologically prior to organization, that organizing never really stops (Tsoukas and Chia 2002), and suggest that snapshots of how professionals organize provide an insight into emergence by pointing to the kind of institutional orders being invoked by actors (Czarniawska 2004). The linked ecologies framework is particularly useful in helping us to locate and understand professional interactions in the absence of organizations. Although it is common to identify how professional associations operate within organizational fields (Greenwood, Suddaby, and Hinings 2002), as well as how they use discursive strategies to legitimate change among established organizations (Suddaby and Greenwood 2005), in our case the organizational setting is transnational and thin. The professionals under examination often do not work within their organizations to develop strategies, nor do the organizations, with few exceptions, host or fund many of their activities. So while the professionals under study are engaged in ‘institutional work’ to solidify issue distinctions into what become

defined problems (Lawrence, Suddaby, and Leca 2011; Brock, Leblebici, and Muzio 2014), they largely do so without the shadow of organizations over them.

The linked ecologies framework also helps us to identify how those engaged in making issue distinctions can be understood as an emergent transnational community who is trying to feel the contours of its own multi-professional identity, and seeks to mark out its territory. Issue distinctions provide not only clarity for professionals as they develop tasks within and across ecologies, but also offer important elements for identity formation for transnational communities (Djelic and Quack 2010). Issue distinctions are important in permitting cohesion around epistemological positions and the articulation of social facts for both epistemic communities that operate closely as a well as organizing the 'chain of knowledge' in looser more 'imagined' transnational communities (Plehwe 2010: 306).

#### The transnationality of issues

Transnational professional emergence exists on low fertility and issue distinctions are being made, whereby professionals engage low fertility as an issue that is transnational in character and where the response requires a combination of knowledge and skills from different professional ecologies. The thickness or thinness of interactions provides opportunities and constraints for professionals seeking to coordinate. 'Thick' environments are more common in national or regional settings, where there is long-established activity, and where there are relationships among professionals reflecting dominant national jurisdictions that steer interactions (Abbott 1988). Jurisdictional battles in such 'mature fields' are intense because the stakes at play are well-known and orchestrated (Greenwood and Suddaby 2006). Conflicts within thick environments are enmeshed in established interests, closing off many avenues for change through robust jurisdictional defenses whereas also permitting particular pathways for powerful actors to diffuse their new theories across organizations (Greenwood, Suddaby, and Hinings 2002). We suggest that 'thin' transnational environments may offer opportunities for professionals to be more entrepreneurial but are also much more likely to be poorly resourced, with more sparse or event-based

activities (Seabrooke 2014; Seabrooke and Tsingou 2014).

Transnational professional interaction is common in a range of areas of political and economic life, as has been demonstrated, most forcefully, with legal communities that operate in what we have characterized as thick environments (Dezalay and Garth 2002; Quack 2007). Compared to lawyers, the transnational interaction among professional ecologies identified in this article is 'thin', with the clear financial and power rewards associated with transnational lawmaking absent in the case of interactions among medical experts, demographers, and economists. Coordination on low fertility has occurred in a multi-professional manner, with ongoing and *ad hoc* interactions between individuals and the groups concerned. The activity here is transnational in that while low fertility is often seen as a national concern, professional policy solutions to the problem are conceived as beyond the nation state. Low fertility concerns are discussed in IOs, such as the OECD and the World Health Organization (WHO), and transnational scientific networks, such as the International Federation of Fertility Societies (IFFS), the International Union for the Scientific Study of Population (IUSSP), and the European Society of Human Reproduction and Embryology (ESHRE). We rush to add, however, that these organizations act as occasional arenas for multi-professional interaction rather than as the drivers of low fertility as an issue.

Although there are clear transnational communities that have formed around a professional identity (Djelic and Quack 2010) within particular professional ecologies, such as medical experts working on assisted reproduction, the multi-professional environment is emergent rather than established. Transnationality offers greater space for professional projects to be launched but also increased fragility since identity coherence, task allocation, and resources to fund work are all on a more insecure footing (Suddaby and Viale 2011). As such, the professionals under study are active in pushing forward particular conceptions of what should emerge as tasks for professional work, but in a transnational context that is resource poor and lacks political salience (cf. Maguire, Hardy, and Lawrence 2004). Many of the professionals studied below are attempting to sustain interactions and collaborations to

develop practices, rules, and technologies to create a ‘proto-institution’ (Lawrence, Hardy, and Philips, 2002) that could then have an influence on IOs, NGOs, and firms, become encoded into their practices, and have an effect on national policy treatment of low fertility.

### Linked ecologies and thresholds of relevance

We recognize that a linked ecologies approach is one among many that help us to explain multi-professional transnational interaction and its characteristics. The communities, fields, and networks literature all contain views on how actors are placed in time and space and what this means for how they organize. Research on epistemic communities has been prominent, emphasizing how shared knowledge can improve the scientific basis of policy, especially during uncertain times, and influence authorities (Haas 1992). This approach covers established communities defined by shared norms and values. It has been criticized for failing to look at how knowledge is created (Sendin 2003), for being ‘faceless’, and unappreciative of diversity and heterogeneity (Djelic and Quack 2010: 20). Recent work on transnational governance has been concerned with how communities are formed around formal or informal identities, such as the ethnic Chinese business community, or private equity professionals (Djelic and Quack 2010). Here the conceptual stress is on the identification of a community and how it is imagined by those involved. Within this work there is a threshold for relevance as an object of study that is based around shared norms and values, shared standards, and shared identity. Questions of emergence over time take a backseat to locating formed communities in transnational space. As such, these approaches are relevant for studying rigorous and well-established connections between professionals but cope poorly with thin environments that are under the radar. They also tend to overstate coordination and underplay competition between transnational professionals. Resources support community formation. When professionals bond around an issue that is poorly resourced, competition will ensue between groups who seek attention from policymakers and funders for their approach to what should be treated, how, and by whom.

Bourdieu-inspired scholarship on transnational fields applies similar thresholds for relevance for the object of study. For Pierre Bourdieu (1992: 378–9) fields are a ‘network of objective relations’ studied from demarcated ‘positions’ from which one assesses different ‘position-takings’ as those involved fight for power and prestige based on endowments of various forms of capital (economic, cultural, and so on). In a state of equilibrium, the ‘*space of positions*’ tends to determine ‘*the space of position-taking*’. This understanding of fields as a strategic game is common for those working with fields as a concept, but there are differences in implementation. Some working on organizational fields can attain a spatial permanence, as they ‘become structured they adopt spatial boundaries’ (Suddaby, Cooper, and Greenwood 2007: 345). As with the study of communities, the fields and organizational fields approaches work very well in mature and thick environments (Greenwood and Suddaby 2006). But it is more difficult to identify interactions between actors if there is no established or agreed position among actors or organizations to support particular points of view.

On networks, Margaret Keck and Kathryn Sikkink’s work on transnational advocacy networks, prominent in international relations, describes how those ‘bound together by shared values, a common discourse, dense exchanges of information, and services’ create ‘political spaces’ for negotiation (Keck and Sikkink 1998: 2–3). They note that it is particularly difficult for issues to emerge within these spaces unless they are transcultural and involve bodily harm to vulnerable individuals or legal inequalities in opportunities (Keck and Sikkink 1998: 27). Building from this work, R. Charli Carpenter (2007) has argued that issue non-emergence is also important and that issue definition and adoption should be studied to understand why some issues are vetted from organizations. Still, when Carpenter states that ‘Only when both issue definition and adoption have occurred can an issue be said to have “emerged” in a network’s discursive space’, the adoption is by an organization as an actor (Carpenter 2007: 103). In general, this work on networks locates known entities within the network space and traces their behavior, providing explanations of issue dominance or capture rather than the actors central to issue

emergence. Again there is a question related to the threshold for relevance for the object of study, and if such approaches are able to investigate the emergence of transnational interaction on complex issues where there is no clear driver, as is the case with low fertility.

Our linked ecologies approach suggests that the threshold for relevance for who is included in a study is lower than in the work on communities, fields, and networks, and better suited to following interactions in a thin transnational environment. Our approach relaxes the concept of a profession as a coherent acting body and decouples the professional's interests and actions from those of his or her employing organization or professional association. Similarly, as the approach does not assume organizational coherence, we can see how professionals have limited organizational capacity but also more autonomy to engage selectively in making their own issue distinctions that are independent of formal mandates. The linked ecologies approach places emphasis on how particular individuals and groups generate issue distinctions, including processes of 'hypothesization' and the 'theorization' that locating issues in particular forms and that imagine adequate responses to commonly experienced problems (Emirbayer and Mische 1998: 984; Greenwood, Suddaby, and Hinings 2002; Maguire, Hardy, and Lawrence 2004: 660). We now turn to the professional issue distinctions made on low fertility in advanced industrialized countries.

## METHODS

This article examines transnational multi-professional interactions via issue distinctions on low fertility in OECD countries. We concentrated on a qualitative analysis, with interviews as the primary source of our data. Specifically, we conducted semi-structured interviews with 31 professionals. Interviewees were selected on the basis of a literature review, where demography, economics and medicine were identified as the key professional ecologies of interest. The next step in the selection was based on our preliminary research on interactions at multi-professional events (in professional association conferences). Our strategy placed emphasis on locating

professionals to interview not according to organizational type or prominence but from interactions at events concerned with low-fertility issues, as well as consequent referrals (Hoffman 1999: 364). This led us to interview researchers and practitioners in dedicated research institutes in Austria, France, Germany, Korea, and Japan; hospitals in Denmark and Japan; staff in several IOs including the OECD, the WHO, the International Labour Organization (ILO), and the United Nations; as well as professionals engaging with national policy in Denmark, France, Germany, and Japan. Twenty-nine of these interviews were conducted in person and all were typically 1–2 hours in duration. Initial interviews took place in September 2009 and July 2010 with the bulk of the interviews thereafter conducted between September 2011 and November 2013; interview locations were Berlin (Germany), Busan (Korea), Copenhagen (Denmark), Paris (France), Geneva (Switzerland), New York (USA), Tokyo (Japan), and Vienna (Austria). All interviewees were guaranteed confidentiality. The interviews began with questions about whether low demographic fertility is an issue of concern and, if so, why. Interviews proceeded with questions about definitions of low fertility, the relationship between issue distinctions being made and 'epistemic cultures' (Knorr Cetina 1999), and the main policies used to address it directly or indirectly. Interviewees were also asked about their own work content, the type, and the frequency of their professional and multi-professional interactions, and to discuss policies in a national, international, and transnational context. Questions of funding, both of their own work and of the policies in question, were also addressed to gain purchase on some of the material power dynamics at play.

Table 2 presents the characteristics of our interviewees. The table displays the professional characteristics of the interviews, including their work specialization (medicine, demography, or economics), what kind of organization they work for (IO, think tank, government, or a university/research center), and their role on low fertility issues, including whether they are engaged nationally and/or transnationally, and if they frequently take part in multi-professional initiatives and events. Three shades can be seen in Table 2. The light shade at the top

**Table 2. Characteristics of professionals interviewed**

Actor	Professional characteristics			Organizational characteristics				Role characteristics		
	Medicine	Demography	Economics	International Organization	Think Tank	Government	University/Research Center	National	Transnational	Multi-Professional
1		X					X		X	X
2		X					X	X		X
3			X	X					X	X
4			X				X		X	
5		X					X		X	X
6		X		X					X	X
7		X			X			X	X	X
8			X			X		X	X	
9			X	X					X	X
10		X		X					X	X
11		X	X		X			X	X	X
12		X	X				X	X	X	
13			X	X					X	X
14			X		X			X	X	X
15			X	X					X	X
16			X				X		X	X
17		X			X			X	X	X
18			X				X		X	X
19			X			X		X		X
20			X			X		X		X
21		X			X			X	X	
22		X					X	X	X	X
23	X					X	X	X	X	X
24		X					X		X	X
25	X			X					X	X
26	X						X	X	X	X
27			X	X					X	X
28	X	X		X					X	X
29	X					X		X	X	X
30	X						X	X	X	X
31	X						X	X	X	X
Total	7	13	14	9	5	5	13	16	28	27

represents interviewees who form the core of the ‘targeting’ strategies discussed below, and populated by demographers and economists. The darkest shade at the bottom contains the interviewees who

identified with the ‘informing’ strategies, which is dominated by medical experts. The mid-shade in the middle contains interviewees who identified both the ‘targeting’ and ‘informing’ strategies. Interviewees in



this section contain medical experts, demographers, and economists who are engaged in a range of debates over low fertility in national and transnational contexts. These actors show that the issue distinctions made below cross the professional ecologies studied here.

In addition to the interviews, we engaged in participant observation at specialist conferences of the Berlin Demography Forum (January 2013), ESHRE (July 2013), and the IUSSP (August 2013). The conferences were selected on the grounds that these are the sites where issue distinctions are most fervently articulated, as they involve both specific professional associations and include multi-professional panels and workshops. We also collected material and presentations of past meetings tackling similar issues.

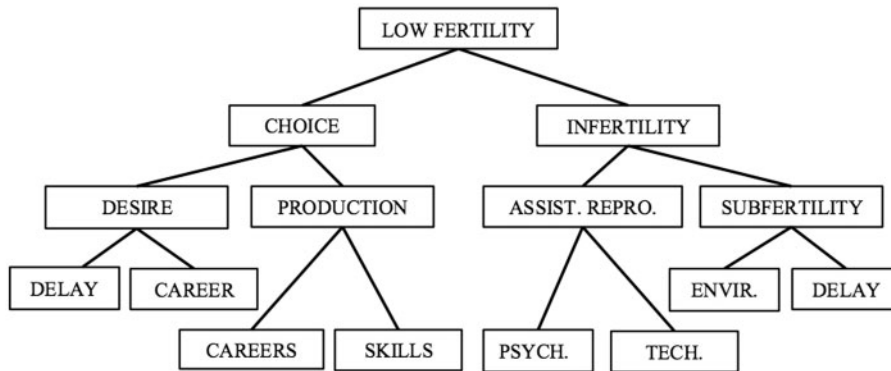
In this first stage of our analysis, aside from information from interviews, we gathered data from relevant documents on low fertility (working papers from research centers, national population statistics, reports from IOs, reports from taskforces, and articles in academic journals). Some of these documents were translated where our language skills were deficient (mainly Japanese). Following the first stage of data collection analysis, we organized what we refer to as a 'case study integrity forum' (CSIF). In short, we brought together different professionals and presented our research to them to comment on, as well as to detail working relationships among professionals and organizations. The purpose of the forum was to assess issue distinctions made by and between professionals on fertility. It also compared imagined communities, networks, and fields with ongoing or documented actions linked to professional interaction at the transnational level. The lack of formal organizational collaboration on low fertility issues was a prominent talking point, with professionals eager to stress that multi-professional interactions took place off their own backs. The issue distinctions made in the 'targeting' and 'informing' strategies emerged from the initial rounds of interviews. The issue distinctions were further refined following the CSIF interactions with professionals from demography, economics, and medicine. The issue distinctions were confirmed as appropriate in subsequent rounds of interviews.

## PROFESSIONAL ISSUE DISTINCTIONS ON LOW FERTILITY

We locate two basic issue distinctions in Fig. 1 below. The distinctions are drawn from how professionals locate their key issue for low fertility. The issue distinctions emerge from the 'zones of difference' around low fertility and are tied to the linked professional ecologies of medical experts, demographers, and economists.

The issue distinctions follow two general starting points, locating low fertility as an issue of personal will and desire or a fundamentally medical issue. The further one goes down the chain of logics in the illustration the more defined the issue distinction is, carrying with it hypotheses and theories on what the issue is, as well as ideas on how it may be treated. The left side of the diagram represents those who focused on *choice* as a key issue for low fertility, a perspective that is strongly associated with demographers and economists.

For example, demographers point to how post-materialist explanations detail how social values have evolved, affecting model family ideals. In this context, the timing, number, or even presence of children is no longer given in perceptions of one's life cycle (McDonald 2000). Once such a shift has taken place, it can be further consolidated by polarization dynamics in a given society. Rational choice considerations on the economic cost of having children, point to how a lack of direct and indirect state financial support, parental leave, or affordable housing would also cause delay (*choice > desire > delay*) (Goldstein, Lutz, and Testa 2003). Demographers also draw on gender equity explanations to stress the absence of equal opportunities and point to the continued higher burden placed upon women in the household during child-rearing years, as well as the challenges women with children face in the labor market. Explanations based on gender equity emphasize the importance of institutional factors, especially in relation to female labor force participation (Del Boca and Sauer 2006) and gender-focused family policies (*choice > desire > career*) (Thévenon 2011). Economists and demographers use rational choice frameworks to suggest that individuals can identify the costs and benefits of having children and how, given their information on constraints and opportunities, they may decide to reduce the number of



**Figure 1.** Basic issue distinctions on low fertility.

children, delay having children, or not have any (cf. Sobotka 2011).

Also within this set of issue distinctions are those who stress labor market uncertainty for both genders. Addressing this requires using resources to encourage highly educated women to have ‘quality’ children, who are also likely to be highly skilled (*choice > production > skills*). This is particularly pertinent as this is the group most likely to delay parenthood and be less likely to have more than one child. Economists also discuss how lower levels of desired fertility would lead to a demand for multiple careers over the life span (*choice > production > careers*). Our interviewees clearly suggest that expert advice puts the emphasis on an integrated system of childcare provision that works for parents and employers, as well as a full reproductive and child-rearing life-cycle approach (Sobotka 2011). States that assume the full financial cost of these policies exhibit no discernible differences in fertility patterns across educational and social status (Thévenon 2011). Countries with ‘good’ policies are also seen to score highest on gender equality;<sup>3</sup> countries where high-period fertility is observed also show high levels of female labor participation and less traditional family social roles (Castles 2003). In Norway, for instance, the relationship between female education and number of children born has disappeared, testament to reliable and high-quality childcare and perceived gender equity (Kravdal and Rindfuss 2008). Throughout these distinctions the logic at play is that ultimately individual choices are being made from personal, social, and employment contexts.

The data and analysis supporting many of these distinctions have been produced by demographers. With few exceptions, the data are gender-biased. For example, data for male demographic fertility (i.e. number of children per man and parenthood age) are only available in a few countries (the Nordic countries, Australia, UK, and France) (Schmidt et al. 2012: 32). This has long skewed discussions on fertility to overemphasize the role of women in reproduction. In addition to the above, the issue distinctions provided by demographers and economists are generally discussed with little attention to medical or environmental factors. This is a point of professional contestation over the ontological underpinnings of low fertility; contests that play out as professionals seek the attention of policymakers and funders. For example, medical experts complain that economists and demographers view fecundity as a constant—that one’s ability to have children during their child-bearing years is unaffected by anything other than age—when across advanced industrialized countries, recorded instances of young adult infertility are increasing.

This brings us to the right side of Fig. 1. Medical experts working on assisted reproduction technologies stress the importance of state subsidies (and thus equal access) for treatments, as well as funding for research (*infertility > assisted reproduction > technical*), whereas others emphasize the importance of understanding the psychological impact of treatments on women and couples, especially stress from repeated or failed treatments (*infertility > assisted reproduction > psychology*). Some medical experts we

spoke to also point to environmental factors affecting the reproductive health of young females and males, especially increasing male infertility (*infertility > subfertility > environment*) (Sharpe 2012; WHO and UNEP 2013), whereas others discuss how people exercising their reproductive rights when fecundity is highest may encounter difficulties later on (*infertility > subfertility > delay*). For these professionals, policies should be guided toward providing more public information on the risks associated with delay in having children, stressing that this is a matter for women *and* men (Schmidt *et al.* 2012). These medical experts have a strong interest in the types of childcare, parental, and affordable housing policies mentioned above, while providing no clear view on how they should be funded. This is another point of multi-professional friction. Demographers and economists suggest that for policies to work, they need to be integrated and with a long term horizon, and that such policies are expensive and should be targeted at distinct populations (such as the highly educated). These assessments rarely happen in the national arena, but are most likely to be comparative research exercises that are discussed transnationally.

Making issue distinctions can be costly for professionals because it not only requires intellectual energy to develop them but is also a risk to one's 'professional capital' in demarcating a position that may be at odds with peers and managers (Noordegraaf and Schinkel 2010). We also note that issue distinctions include particular vocabularies that permit 'jurisdictional jockeying' in multi-professional environments (Loewenstein 2014: 77). For example, among these professionals, there are some who are creating transnational linkages between the issue distinctions on *delay*.

The issue distinctions inform two clusters of strategies from professionals that we note as *targeting* and *informing*. They both provide opportunities for certain issue distinctions to be used as hinges between professional ecologies, which then have a differential impact on the ecologies involved, bringing forth new treatments of issues and, in some cases, reinforcing jurisdictional defenses around extant practices. The strategies discussed below also invoke narratives about what institutional work is to be done by professionals and, they often hope, eventually mandated by organizations. Some of these resonate more

strongly with policymakers and translate from transnational interactions to national policy thinking more than others. Table 2, above, gives an idea of the population in the targeting and informing strategies, as well as those who overlap. The targeting strategy is loosely based around economists and demographers and contains issue distinctions largely concerned with the relationship between low fertility and productivity and declining human capital. The informing strategy is more centered on medical professionals and concerned with informing policymakers and, distinctly, private individuals about key fertility parameters.

### TARGETING

The first strategy we detected in our examination of transnational professional interaction on low fertility includes professionals associating demographic change<sup>4</sup> alongside the 'problem' of low fertility, the economic demands of old age dependency, and employment needs. An important hinge here is the *Low Fertility Trap* hypothesis, a key concept in discussing long-term demographic trends in advanced industrialized economies, and which bridges across the demography and economics professions. The trap hypothesis takes as its point of departure existing explanations on low fertility and formulates 'plausible and self-reinforcing mechanisms that would result, if unchecked, in a continued decrease of the number of births in the countries affected' (Lutz, Skirbekk, and Testa 2006: 167). The hypothesis has three components. The first is a demographic component based on the 'negative population growth momentum', that is the expectation that fewer women of reproductive age in the future will in turn result in fewer births. The second is a sociological component that relates to family size ideals; smaller size families in previous cohorts will enhance decline in younger ones. Finally, an economic component is based on the relative income hypothesis that fertility is determined by a combination of aspirations and expected income. The trap hypothesis puts forward that all three factors contribute toward ever-lower birth rates. This concept has resonated especially well with economists we spoke to and has been used by economists working in the OECD, both in presentations at OECD ministerial meetings and in OECD studies

on the subject of low fertility, work–life continuum, and pensions (OECD 2007a, b).<sup>5</sup> Some demographers and economists we interviewed use each other’s work and target policymakers through their transnational interactions. Discussions in these multi-professional interactions use the trap hypothesis and have produced a narrative that is about how fertility has an impact on other aggregates, such as the productive population and labor markets. This produces specific narratives about declining human capital and productivity to countries where much of their global prestige is linked to possessing those attributes; the Japanese case was explicitly mentioned in interviews on numerous occasions, both in Japan and Europe. Both demographers and economists agree that economists have the ear of government from their perceived technical legitimacy and their ability to discuss questions of productivity and human capital.<sup>6</sup> The focus on productivity, therefore, is important in any transnational to national diffusion process and is an essential step into engaging professionals within IOs.<sup>7</sup> We also note that the trap hypothesis acts as a hinge that has a differential impact on demographers and economists, with the former treated as ‘data monkeys’ whereas the latter have increased their esteem from a perception about the desirability of identifying micro causes of macro outcomes. As argued by Ervik, Kildal, and Nilssen (2008: 10) ‘the legitimacy of social policy rests on its instrumentality in obtaining goals of economic growth and competitiveness’. Demographers ally with economists to make their attempt at professional emergence competitive on the low fertility issue, to secure policy relevance and greater resources.

Another example of a hinge can be seen through the yoking of low fertility with population aging in professional reviews to move the focus away from demographic change and instead onto the issue of how to maintain high levels of *human capital*. On low fertility, the narrative emerging from this hinge stresses skills, including the importance of targeting highly skilled women as a cost-efficient way of increasing fertility rates.<sup>8</sup> Given that human capital is generally understood as the ‘sum of the knowledge-potential embodied in the individuals of a society’ (Andersson 2010: 41), this hinge has differential effects for demographers and economists, again favoring the latter. For the former the jurisdictional

defense has been to challenge ideas that there is a standard human lifespan (Leeson 2011) pointing to uncertainty about what skills may actually be required. The manifestation of low fertility as a concern about human capital can be seen in initiatives such as the multi-stakeholder Berlin Demography Forum, an annual event sponsored by insurer Allianz, which first embarked on discussions on ‘Families-Children-Society’ in 2012 to refocus on ‘Generations-Learning-Prosperity’ and ‘Security-Trust-Solidarity’ in later programs.<sup>9</sup> This transition followed the interests of employers’ groups, as well as those groups at the national level who are involved in debates over pensions and, beyond the national level, insurance services. As such, an alliance between interest groups and professionals has transformed this hinge, stressing how maintaining and developing skills is the key policy tool, including through improving participation and employment rates among the young, investing in working conditions and lifelong skill development, and/or increasing the retirement age. Low fertility has been reframed as a problem of skills and productivity in the German context. To the extent that low fertility trends are taken into account, they are discussed in the context of breaking the tradition of a tripartite division of the working life in terms of schooling, work and retirement, and introducing more flexibility, including through career breaks at important points in the life of men and women (e.g. when children are young) (ILO 2010).

The treatment of low fertility as essentially a human capital issue plays well politically because the associated policies appear cost-effective. At the national level, officials in Japan are discussing ways to increase labor force participation, especially among women and those aged over 60 years (Clark *et al.* 2010). Similar discussions are taking place in Germany where there is growing consensus that investing in lifelong learning and longer labor force participation is cheaper and more tangibly cost-effective than focusing on fertility-boosting programs or addressing gender equality issues in the workplace. This is consistent with a changing attitude toward aging. Scholars associated with the World Bank have presented a number of ‘counterintuitive or simply nonintuitive’ facts, including the ‘positive impact of aging on capital intensity’ and the importance of

accounting for education as well as pension, health and care costs in intergenerational equity assessments (Lee, Mason, and Cotlear 2010: ix). Similarly, an analysis on the rapid graying of eastern European population stresses that aging need not be associated with slower growth if accompanied by policies aimed at strengthening productivity and ensuring effective labor force participation (Chawla *et al.* 2007).

Targeting strategies that have emerged primarily from professionals associated with demography and economics have enabled economists in organizations such as the OECD to engage not only with questions of human capital but also of gender equality,<sup>10</sup> whereas traditional thinking about the role of men and women in the workplace dominates in most national contexts (Verloo 2010).

### INFORMING

A second cluster of strategies focuses on informing about fecundity (medical fertility), including assisted reproduction technologies. As with the targeting strategies, there is no umbrella organization charged with this task and little interorganizational activity. The WHO might act as a host, with staff following their own particular agendas, but the organization does not act as a hub for low fertility issues. What we find is that informing strategies are promoted by professionals, many of whom are practicing doctors or health researchers, whose narratives center on increased awareness of the biological and environmental factors affecting fertility in different life stages, making reproductive health issues *less* medicalized, and staggering information about assisted reproduction to patients to avoid cognitive and emotional overload.<sup>11</sup>

One example of a hinge as an informing strategy is multi-professional coordination over the causes of *delay*, focusing specifically on the prevention of infertility. Professional activity on delay joins medical experts with those working on the psycho-sociological effects of infertility, as well as demographers working on fertility trends. Narratives from this hinge are most visible in the work of the Task Force on Reproduction and Society, which operated within ESHRE. It explicitly addresses low birth rates in Europe and issues related to fecundity, work–life balance in career development, and parenthood

delay (Mills *et al.* 2011). As the Task Force stated in its position statement, fecundity ‘is often related to life style. Moreover, many Europeans underestimate the age-related decline of fecundity and have too optimistic perceptions of IVF’. Narratives from these interactions include the promotion of ‘earlier onset of family building’ and making information more widely available on the social and economic challenges facing young couples wishing to have children. Professionals also point to how early onset is more economically efficient by freeing up resources used on older couples who require assisted reproductive technologies. This transnational interaction has been a ‘deliberate collaboration’ of professionals to inform policy as the ‘field is not driven by public health but personalities and clinicians’ (CSIF interventions by Task Force founding member and WHO official, September 2012).<sup>12</sup> The motivation is clear and twofold: increase awareness among the public, politicians, and other stakeholders, and raise funds for activities and research linked to infertility, as well as making child-bearing decisions less gender-biased.<sup>13</sup> This work has few independent resources and interactions often rely on professional entrepreneurial competition, such as muscling into specialist events with a different focus, taking time from other concerns to discuss low fertility issues and creating ‘field configuring’ events (Lampel and Meyer 2008).<sup>14</sup> These interactions have a differential impact on the professional ecologies involved, with medical experts actively seeking relevant public policy content from demographers, whereas for demographers interaction is mostly a source of personal and professional prestige that does not challenge their core hypotheses and theories. The Task Force provides an example of an attempt to link ecologies via hinges and create a ‘proto-institution’ that could then influence task allocations among professionals and issue treatment in clinical practice and public policy (Lawrence, Hardy, and Philips 2002).

Another hinge developed through an informing strategy is based on the idea of *periconception*, which has medical origins but is framed as a source of behavioral and attitudinal change. This hinge connects a multi-professional group within the medical experts on infertility and links to psychologists and patient care professionals, as well as professionals working for biopharmaceutical firms. Periconception is not

simply a medical term meaning around the time of conception, but a different way of thinking about getting pregnant, being pregnant, and postpregnancy life as part of a natural life cycle. Periconception is associated with less medicalized treatment of pregnancy and encouraging prospective parents to consider when they are most able, and have the most energy, to have children. The key narrative is derived through FertiQoL, an analytical tool developed to assess attitudes and behavior on fertility issues through a quality of life lens (Boivin, Takefman, and Braverman 2011). The multi-professional team working on FertiQoL brings together professionals with different specializations. It has a differential impact on the professional ecologies involved in providing esteem to psychologists in the treatment of infertility, while placing pressure on medical experts to consider patients' experiences as a form of expertise (cf. Eyal 2013).<sup>15</sup> This multi-professional initiative has attempted to piggyback on the WHO's Quality of Life indicators in its search for policy attention and salience (WHOQOL Group 1998). But the WHO is not in charge. In contrast, our interviews with fertility professionals in the WHO in 2010 and 2011 strongly suggest that their means of disseminating their interpretation of how low fertility issues should be treated is through 'upscaling', by deliberately acknowledging the stakeholders they are engaging as the source of the idea so that they may adopt it. Periconception is one of these 'upscaled' ideas. The informing strategy relies heavily on transnational professional interactions to discuss comparative public health research. This has led to significant policy inroads in the Japanese case, where comparisons of what European and Japanese women know about their fecundity, stunningly low in the latter case, led to public information campaigns,<sup>16</sup> but also public outcries about viewing women as 'baby vessels'.<sup>17</sup> These professionals are not only less concerned with the economics of fertility but often remain silent on the gender politics of the issue. Their stress in issue treatment is on informing in a policy context without 'scaring' the public, while leaving issues of cost to the economists.

### CONCLUSION

This article extends a linked ecologies approach to transnational professional interactions on low

fertility in advanced industrialized countries. We highlight the benefits of the linked ecologies approach in tracing processes of emergence via issue distinctions and how they are related to the creation of issues as hinges between professional ecologies. These hinges have a differential impact on professional ecologies, benefiting some more and others less in terms of professional esteem, access to resources, and the capacity to move ahead and transform issue distinctions into the formal treatment of issues by redefining professional tasks. We suggest that focusing on multi-professional relations provides an analysis more apt to studying emergence than the work on communities, fields, and networks. A focus on multi-professional interactions during periods of emergence is particularly important in identifying 'what' the issue is, even if professional activity has not yet resulted in jurisdictional demarcation on 'how' the issue is treated. As discussed above, studying professional emergence involves relaxing a number of assumptions about how actors organize themselves in terms of professional associations and organizations, as well as the importance of devising the means to observe becoming rather than presuming being.

This article also contributes to the recent literature that provides an institutionalist perspective on professional work and professional projects (Muzio, Brock, and Suddaby 2013), especially by using issue distinctions to how professionals seek to mobilize on issues without the shadow of organizations over them. We argue that transnational interactions demonstrate a strong capacity to turn issue distinctions into hinges that then produce narratives on issue treatment and professional tasks. This is the case because transnational interactions take place in a 'thin' space compared with 'thick' national and regional jurisdictions, where jurisdictional defenses of professional tasks and how issues should be treated are more enmeshed. Here, we join the call for a transnational sociology of professions (Faulconbridge and Muzio 2011).

Our case material examines how emergent transnational professional interaction among medical experts, demographers, and economists can be viewed through issue distinctions they make to hypothesize and theorize phenomena, as well as the hinges created that link ecologies and provide momentum for

institutional work and organizing (Suddaby and Viale 2011: 427). Strategies of targeting and informing have been highlighted, demonstrating how medical experts, demographers, and economists interact in the production of narratives on what low fertility means and how it should be treated.

Our approach can be applied to a range of cases where professionals are taking the lead as ‘lords of the dance’ (Scott 2008) and where organizations are not interested or are actively disinterested in adopting issues as their own. For example, Carpenter (2010) has examined how NGOs abandoned the issue of children born from wartime rape because it proved too difficult to campaign on. There are many transnational issues that organizations are unable to cope with and leave to professionals to address in what are commonly poorly resourced environments. These issues often ‘fall between two chairs’ in that they do not belong to certain organizations or within particular professional associations. As we highlight here, demographic issues often fall into this category, in part because the trends are long term whereas political cycles are short. We highlight low fertility but our approach could also be applied to aging and migration, where issues are being raised that act as hinges across professional ecologies, with differential rewards. Consider, for example, multi-professional discussions about the benefits and costs of highly skilled migration where the issue of ‘free circulation’, the capacity of migrants to move within a national employment regime once they have been screened prior to entry (as in Western Europe), acts as a hinge that affects different professional ecologies and provides a zero-sum game between national economies (Chaloff and Lemaitre 2009). Or to take another example, discussions on the issue of ‘grey gold’, how to extract economic potential from older citizens, act as a hinge between professional ecologies, exercised through proposals on the most effective and efficient way for the elderly to continue working, and how they should be housed and cared for.<sup>18</sup> Issue distinctions are being made over highly skilled migration and population aging that are reconfiguring professional jurisdictions and how professionals work.

Issue distinctions are important to study when professional consensus or settlement have not been achieved. We can think of a host of issues where this is the case, from discussions about aspects of

environmental change to the impact of technologies on public and transnational health.<sup>19</sup> In sum, issue distinctions provide an insight into professional emergence by highlighting how professionals deal with complexity, how they privilege different forms of knowledge, and how they link with other professionals within and beyond their ecologies.

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## ENDNOTES

1. A United Nations study shows that in developed economies, the proportion of governments that have enacted policies to increase fertility have risen from 21% in 1976 to 55% in 2009 (UN 2011).
2. The configuration of professionals addressing demographic change through a low fertility angle is important as it delimits the range of professionals studied. When we asked professionals working on low fertility about global population dynamics and related environmental concerns, most were agnostic on these issues. The same for migration, and many professionals find that available data show that migration cannot be relied upon to offer solutions to demographic change in countries already experiencing low fertility. As such, migration issues are seldom discussed in these debates. Interviews with UN Population Division staff, Berlin (January 2013) and New York (January 2013).
3. See in particular, results from the Quality in Gender and Equality Policies (QUING) project, which produced extensive reports on European countries, <http://www.quing.eu/>.
4. ‘Falling fertility rates pose threat to government revenues’ as a headline in the Financial Times observed (25 July 2013) - <<http://www.ft.com/intl/cms/s/0/a2088728-f544-11e2-b4f8-00144feabdc0.html#axzz3FGT4KeQQ>>.
5. Interviews with OECD staff, Social Policy division, Paris (September 2009).
6. Interviews with OECD staff, Social Policy division, Paris (September 2009), interviews with researchers in demography institutes in Vienna and Tokyo (July 2012 and November 2012) and corroborated at the CSIF event.
7. Successive Japanese governments have been especially interested in the topic but find it easier to review research and recommendations from the transnational arena than debate these matters at the national level. As a result, the OECD receives half of its funding in this area from the Japanese government (the other half comes from the European Commission).
8. Based on the logic of targeted welfare transfers to these women rather than raising the tax base to apply the policy to all women. This is a point made in several interviews with policy-involved demographers and acknowledged in the context of the CSIF meeting. These discussions are based on research linking educational levels of women, reproductive intentions, and gender equality.

9. The Berlin Demography Forum is a joint initiative of the German Federal Government and insurance company Allianz, <<https://www.berlinerdemografieforum.org/en/index.html>>.
10. Most notably through its *Babies and Bosses* studies, a text frequently mentioned in interviews, cf. Mahon 2009 and *Doing Better for Families*.
11. Interviews with WHO staff (September 2011), interviews with medical experts in Copenhagen (April 2012), CSIF (September 2012), participant observation at ESHRE conference (July 2013).
12. The Task Force was an instance of medical professionals engaging in multi and inter-disciplinary work but this is not a common phenomenon. CSIF participants estimated that about 2.5% of members of the professional reproductive health associations are engaged in such activities.
13. CSIF discussion, September 2012. There is extensive Nordic (especially Danish) professional participation in these activities.
14. For example, the ESHRE annual meeting of July 2013 included an andrology workshop where some of these professionals presented and interacted on these issues.
15. An example of the FertiQoL survey from 2008 can be found here: <<http://psych.cf.ac.uk/fertiqol/download/fertiqol%20English.pdf>>.
16. Interview with members of the low fertility Task Force in Tokyo (September 2013).
17. Interview with staff of the Cabinet Office, Tokyo (September 2013).
18. Our thanks to Sirpa Wrede for this point in reference to the Finnish case. See also the Advisory Panel on the Economic Potential of Senior Australians (2011) 'Realising the Economic Potential of Senior Australians: turning Grey into Gold', available at: [http://epsa.treasury.gov.au/content/publications/grey\\_gold/downloads/grey\\_gold.pdf](http://epsa.treasury.gov.au/content/publications/grey_gold/downloads/grey_gold.pdf).
19. The unknown impact yet massive commercial rise of e-smoking is one case currently being investigated. Our thanks to Jacob Hasselbalch for this point.

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