Global protest against nuclear power: transfer and transnational exchange in the 1970s and 1980s
Kirchhof, Astrid Mignon; Meyer, Jan-Henrik

Global Protest against Nuclear Power. Transfer and Transnational Exchange in the 1970s and 1980s

Astrid Mignon Kirchhof & Jan-Henrik Meyer [*]

Abstract: *»Globaler Protest gegen Atomkraft: Transfer und transnationaler Austausch in den 1970er und 1980er Jahren«*. Protest against nuclear power plants, uranium mining and nuclear testing played a pivotal role in the rise of a mass environmental movement around the globe in the 1970s and 1980s. Nevertheless, the history of anti-nuclear activism has largely been told from a strictly national perspective. This HSR Focus approaches the phenomenon from a transnational perspective for the first time. Against the backdrop of the debate on transnational history, this article develops a framework of analysis, and contextualizes anti-nuclear protest in a broader postwar perspective. The contributions show that anti-nuclear movements across the globe were transnationally connected. First, scientific expertise and protest practices were transferred between movements, and subsequently adapted to local requirements. Secondly, transnational cooperation and networks did indeed emerge, playing an important role in taking protest to the international and European level. However, as opposed to contemporary rhetoric of grass-roots transnational solidarity, such cooperation was limited to a small, highly skilled and committed group of mediators – often semi-professional activists – who managed to overcome the obstacles of distance and cultural differences and had access to the necessary resources.

Keywords: Anti-nuclear movement, transnational history, Europe, Australia, United States.

1. Introduction

Nuclear power seems to be a transnational issue *per se*. Harnessing the power of the atom for useful purposes has been the vision of a small but highly international group of scientists *across borders* since the early days of the 20th century. When it first became possible to split the atom, scientists, military men and policy makers around the globe quickly realized the uses it could be employed for. Initially, these uses were military ones, with teams of scientists work-

---

[*] Astrid Mignon Kirchhof, Lehrstuhl für Neueste und Zeitgeschichte, Humboldt Universität zu Berlin, Hausvogteiplatz 5-7, 10117 Berlin, Germany; astrid.m.kirchhof@hu-berlin.de.
Jan-Henrik Meyer, Department for Culture and Society, Aarhus University, Jens-Chr. Skous Vej 5.4, 8000 Aarhus C, Denmark; ihojhm@hum.au.dk; jhmeyer@gmx.de.

ing to develop a nuclear bomb on both sides during World War II (Walker 2002). While these efforts fortunately came to nothing in Nazi Germany (Schirach 2012), the United States' "Manhattan project" (Kelly 2007) resulted in the nuclear destruction of Hiroshima and Nagasaki in 1945. Notably since Eisenhower's famous "Atoms for Peace" speech of 1953 various kinds of peaceful purposes – such as sterilizing foods with radiation (Zachmann 2011) – were promoted on both sides of the Iron Curtain, and subsequently also in what was then called the developing world. Most important among these was the provision of electricity via nuclear power plants, which, however, only became available for commercial purposes in the late 1960s (Radkau 1983; Radkau and Hahn 2013).[1]

Nuclear power seems a transnational issue because it transcends and crosses national boundaries – in at least four respects: Firstly, in terms of expert knowledge and mediated forms of communication. This includes the transnational diffusion of knowledge and ideas communicated by experts; that is to say, the processes whereby scientific knowledge is generated and travels across borders through scientific exchange and cooperation (sometimes by espionage), and through different media forms, including specialist media like international scientific journals such as *Nuclear Physics* and alternative media like the exchange platform *World Information Service on Energy (WISE)*, or the *Bulletin of the Atomic Scientists* (Kirchhof forthcoming spring 2016).

Secondly, nuclear power transcends the nation state due to global trade, industry and banks. While the state held tight control over the arms sector, trying to prevent proliferation, once nuclear power started to be commercialized, large multinational or – as they were referred to in the 1970s[2] – "transnational" corporations such as Westinghouse, General Electric or Siemens produced and sold nuclear technology worldwide. Moreover, uranium ore, for the key raw material and for the nuclear industry and weapons production alike, was mined by large multinational mining companies like Rio Tinto Zinc, financed by internationally operating banks such as Bank of America – as contemporary critics highlighted (Roberts 1978) – and exported across the globe.

Thirdly, the splitting of the atom had undesirable consequences for the natural environment in terms of radiation, which was impossible to contain within

national borders. Even in the most remote corners of the planet, fallout from nuclear tests could be found. Radioactive isotopes spread in the atmosphere and rained down worldwide (McNeill and Engelke 2013, 501). This concern was an important argument for international political solutions and agreements, such as the (limited) Test Ban Treaty of 1963 (Fazzi forthcoming 2014). Nuclear accidents, such as Three Mile Island near Harrisburg in 1979, Chernobyl in 1986 (Brüggemeier 1998; Arndt 2010) and more recently Fukushima in 2011, (Pritchard 2012; Uekötter 2012a, b) demonstrated that nuclear fallout affected both air and water, and did not stop at borders (Iriye 2013a, 766f.) – even if pro-nuclear governments occasionally suggested otherwise (Kalmbach 2011). Even the "normal" day-to-day operation of nuclear power plants, let alone of repro-cessing plants, such as the notorious case of the British Windscale/Sellafield plant (Hamblin 2008; Mauchline and Templeton 1963; McDermott 2008; Nelson 2004) on the coast of the Irish Sea, produced (low-level) nuclear emissions that impacted on the air, rivers and the sea and on human health, regardless of polit-ical borders. In fact, many reactor sites were deliberately placed on the margins of nation states, facing the sea or neighboring countries. In Western Europe, such practices – and the cross-border resentment they created – led the Europe-an Commission to propose common European rules for the obligatory consulta-tion of the affected neighbors in 1976 and again after Harrisburg. These pro-posals predictably came to nothing.[3] Nuclear tests were undertaken far away from the home country, as in the case of French tests in the Pacific, which ultimately triggered off the Australian anti-nuclear movement in 1972/73 (Kirchhof 2014a)[4] and contributed to the rise of Greenpeace (Zelko 2013, 110ff).

Fourthly, and finally, protest against the risks of nuclear weapons and nucle-ar power also crossed borders. Curiously enough, however, the transnational nature of this protest has hardly been explored to date. To be sure, some re-searchers mentioned in passing the cooperation of anti-nuclear activists along the upper Rhine in the 1970s (e.g. Engels 2006, 352). However, most of the historical and social science research on anti-nuclear protest – against nuclear weapons, nuclear power and uranium mining – has remained confined to local and national cases (e.g. Engels 2006, 338-76; Hasenöhrl 2011, 405-71; Schüring 2012). Even the few existing – and very instructive – international comparative

---

[3] Europäische Kommission. Entwurf einer Entschließung des Ministerrates über die gemein-schaftliche Abstimmung über Fragen der Standortwahl beim Bau von Kraftwerken und Vor-schlag für eine Verordnung des Rates über die Einrichtung eines gemeinschaftlichen Konsul-tationsverfahrens für Kraftwerke, von denen Auswirkungen auf das Hoheitsgebiet eines anderen Mitgliedsstaates ausgehen können, KOM (76) 576 endg., 10. Dezember 1976. *His-torical Archives of the European Commission* BAC 35/1980 (2): 129-64.

[4] Kelly, Petra. Atomkolonialismus im Pazifik, *Abendzeitung* n. d. [1984 or later], AGG, PKA 480. Also: Caldicott, Helen. 1979. *At the Crossroads*. San Francisco: Abalone Alliance, AGG, PKA 139: 1-10, here: 2-3.

studies by sociologists (Joppke 1993) and historians (Nehring 2004, 2005) alike tended to highlight the differences and the separate national paths and tried to explain these specificities by the embedding of these movements in different national political systems. This is to some extent the result of the prevalent opportunity structures approach (Kitschelt 1986; Shawki 2010) as an analytical tool for the study of social movements. This approach highlighted the crucial relevance of national (or subnational) political structures for the success of such movements (Meyer 2004). Such an approach is a clear example of what Ulrich Beck has criticized as the "methodological nationalism" (Beck 2005, 3-11) of the social sciences, namely the default treatment of all social and political problems from a national perspective and within bounded national units. Beck argues that unquestioned methodological decisions to opt for national units of analysis merely reinforce the apparent importance and centrality of the nation state in social science analyses. By focusing on transfers and transnational exchange, this HSR Focus seeks to go beyond national politics as well as the mere focus on similarities and differences between nation states and instead to explore transnational exchange and the global diffusion of knowledge, ideas and concepts.

In environmental history – which includes the history of environmental and anti-nuclear protest – there is an emerging trend to internationalize and globalize perspectives and to include cross-border phenomena (Iriye 2008; Uekötter 2011). Actual empirical research in a transnational perspective has only just started, with case studies on the spread of national parks (Kupper 2012; Lekan 2011; Wakild 2012; Wöbse 2012), on migratory species (Cioc 2009) or transfers of ideas (Kirchhof forthcoming spring 2016). As part of this incipient trend, the ideological underpinnings and motivations of transnational environmental protest have also been addressed (Nehring 2009, 2012), including the role of the women's movement (Kirchhof 2013). However, with regard to anti-nuclear protest – arguably a central area of environmental and political conflict in Western societies in the 1970s and 1980s – research on its transnational aspects is still missing.

The goal of this HSR Focus is to address this apparent mismatch, and begin to chronicle the as yet untold story of transnational exchange and cooperation among those anti-nuclear activists in the 1970s and 1980 who opposed nuclear power and uranium mining. The guiding hypothesis is that the anti-nuclear movement that emerged during these two decades – roughly between the first protests against the nuclear power plant at Fessenheim in France in 1971 and Chernobyl 1986 – was engaged in substantial transnational exchange. Nevertheless, as opposed to what could be called the first generation of transnational history in the early 2000s, which devoted substantial attention to emphasizing the existence of transnational connections (Conrad and Osterhammel 2004; Conze et al. 2004), the shared goal of the contributions assembled in this HSR Focus is to gauge both the scope and relevance of transnational exchange. Moreover, the contributions seek to draw out the conditions facilitating or

hampering transnational interaction. By addressing factors that enabled but also put obstacles in the way of cooperation and the transfer of ideas across national boundaries, the contributions will tell a history of the transnational dimension of anti-nuclear protest without succumbing to what could be called "methodological transnationalism" (Meyer 2014a, 161), i.e. an analytical perspective that systematically exaggerates the importance of the transnational dimension.

The four articles assembled in this HSR Focus enquire into different aspects of the transnational dimension of anti-nuclear protest. In his article "Between Grassroots Activism and Transnational Aspirations: Anti-Nuclear Protest from the Rhine Valley to the Bundestag, 1974-1983", Stephen Milder (2014) (Duke University, USA) explores how the site occupation at Wyhl – involving the transnational cooperation of French, Swiss and German activists, and relying on an example from the French side – gained translocal and transnational relevance, and inspired transnationally-minded activists to engage in Green politics. In "'Where do we go from Wyhl?' Transnational Anti-Nuclear Protest targeting European and International Organizations in the 1970s", Jan-Henrik Meyer (2014b) (Aarhus University, Denmark) examines the emergence of a transnational network of actors – initially inspired by the events at Wyhl – that quickly left the local transnational context behind and started targeting those international organizations they perceived as the most ardent advocates of the rapid expansion of nuclear power.

Wyhl also inspired activists on the other side of the Atlantic to engage in site occupation, as outlined by Michael L. Hughes (2014) (Wake Forest University, USA) in his article "Civil Disobedience in Transnational Perspective. American and West German Anti-Nuclear-Power Protesters, 1975-1982". Hughes analyzes mutual transnational transfers of ideas and protest practices including site occupations as well as civil disobedience and the limitations of such transfers between the activists of the Clamshell Alliance fighting against the Seabrook Power Station in New Hampshire and the German protesters of the Bund Bürgerinitiativen Umweltschutz (BBU). He emphasizes the importance of reception and adaptation into local practices. Astrid Mignon Kirchhof's (2014) (Humboldt University Berlin, Germany) article "Spanning the Globe: Australian Protest against Uranium Mining and their West-German Supporters" looks at an extreme case of transnational exchange and explores the opportunities for and limitations of transnational cooperation with activists at the other side of the world in Australia in an age before e-mail, internet, or Twitter.

This introductory article seeks to situate the four contributions of the HSR Focus within the current state of research and to raise relevant questions. First, it will outline and explain the common conceptual framework, drawing on the wider debate on transnational history. Secondly, it will embed the history of the anti-nuclear protest of the 1970s and 1980s in the broader context of the rise of environmentalism since the 1960s, drawing on recent discussions in environmental history. A third and concluding part will present the main findings of

the four case studies and summarize what we can learn about the transnational dimension of anti-nuclear protest.

2. Approaching Anti-Nuclear Protest in a Transnational Perspective: Conceptual Clarifications

The contributions of this HSR Focus systematically approach the history of anti-nuclear protest in the 1970s and 1980s from a transnational perspective for the first time. The central questions addressed derive from the recent debate about transnational history. Transnational history can be described as the study of "border crossings" (Clavin 2005, 423). It enquires into the interaction and movement of people – both individuals and groups – across national boundaries. Moreover, it makes visible those (formal or informal) structures that they establish beyond the nation state and that are rarely covered in traditional historiography. Transnational history seeks to describe both "flows" – i.e. the movement of people, information, and concepts, of ideas, of money or goods, and "networks", i.e. (frequently emergent and informal) structures of recurrent interaction (Kaelble et al. 2002, 9). This routinely includes cooperation and conflict (Clavin 2005, 424; Kaelble et al. 2002, 9f.), but at times also the absence of interconnections.

As a relatively new branch of history writing, transnational history emerged against the backdrop of a rapidly globalizing world after the end of the cold war. The goal of its proponents was to overcome some important limitations of conventional social, national comparative and international history (Bayly et al. 2006; Clavin 2005; Gassert 2010; Gehler and Kaiser 2001; Haupt and Kocka 2009; Osterhammel 2001; Patel 2004).

Firstly, most history writing seemed characterized by *methodological nationalism* (Chernilo 2006). In most histories, the nation was the default unit of analysis, without any critical reflection about such a choice of object. Not least because the rise of history as a discipline had coincided with the emergence and promotion of the nation state in the 19th century, most historians were used to writing – and teaching – national histories (Berger 2007; Iriye 2013a, 761). Even the rise of social history as a new and increasingly dominant subdiscipline in the 1970s did not change this trend. The societies social historians studied were routinely defined as individual nation states (Raphael 1999). In an age where social science approaches promised innovation, such social science definitions were rarely questioned. Thus, as critics have argued, comparative social history tended to treat nation states as distinct and independent units of analysis and systematically overlooked the fact that national boundaries were never completely sealed, but porous in many ways, notably in respect of the exchange of ideas or the movement of people across borders (Conrad 2009, 52f.)

Secondly, nation states were also the primary units of analysis for classical international historians. Committed to traditions of diplomatic history, international historians (including historians of European integration) were interested in government action and records (Kaiser 2004, 2005; Kaiser and Starie 2005). This kind of approach systematically obscured an increasing number of actors beyond the nation state operating across borders, such as migrants, multinational businesses, or non-governmental organizations (NGOs), (Clavin 2010, 629; Saunier 2009). The contributions to this focus issue focus on such non-state (Kaiser and Meyer 2010), or societal actors (Kaiser and Meyer 2013) and the transnational exchange in which they are involved.

The term "transnational" that is at the heart of the transnational history approach is ambiguous. However, this ambiguity may actually have strengthened the attractiveness of the concept. The prefix "trans" may mean both "across" and "beyond". The main analytical focus of transnational history is clearly on the former, namely the study of actions, flows, networks and transfers that penetrate national borders. At the same time, the second meaning "beyond the nation" suggests a vision of overcoming the nation state.[5] This vision seemed quite appropriate to a globalizing world and the apparent obliteration of national borders (Meyer 2014a, 145f). To some extent, idea(l)s of this kind seemed to also have informed one of the most ambitious enterprises in the field, namely the *Palgrave Dictionary of Transnational History* (Gram-Skjoldager and Knudsen 2014; Iriye and Saunier 2009). Nevertheless, many transnational historians do tend to emphasize that the nation state remains a necessary and relevant category also in the enquiry of all things transnational (Osterhammel 2009, 47; Patel 2003, 629). One of the analytical goals of this focus issue is to assess the actual importance of transnational connections – while also reflecting on the structural conditions of national cultural and political frameworks.

Thus the label "transnational" as the contributors in this issue understand it is not an elaborate new way of describing what used to be called international. While transnational relations cut across nations, the more classical notion of international relations denotes the interaction "between" clearly bounded and institutionalized national units. This distinction between transnational and international relations was first introduced by "Neo-Liberal" theorists of International Relations like political scientists Robert Keohane and Joseph Nye in the 1970s (for a critical view: Graf and Priemel 2011). Just as transnational historians developed their research interests under the influence of the globalization debate of the 1990s, the theorists of the 1970s were impressed by what they described as "interdependence" (Keohane and Nye 1977). The postwar era had seen a growth of cross-border phenomena – such as the growth in trade and

---

[5] This vision is not at all new. Ideas of a Europe beyond the nation state and without borders notably motivated resistance against National Socialism, and contributed to the rise of postwar European federalism. E.g. Lipgens 1985; Pagden 2002.

tourism, or the spread of multinational businesses. Such phenomena did not feature prominently in International Relations theory at the time. Keohane and Nye emphasized that new kinds of actors were involved in action beyond borders, and distinguished between international and transnational relations. As opposed to *international* or "interstate" interaction, the conventional object of International Relations, "transnational interaction" describes cross-border activities carried out by non-governmental actors, such as businesses or NGOs. Accordingly, they introduced the notion of "transnational interaction" as "our term to describe the movement of tangible or intangible items across state boundaries when at least one actor is not an agent of government or an intergovernmental organization" (Nye and Keohane 1971, 332).

Against the backdrop of these conceptual distinctions, the contributions to this HSR Focus approach transnational aspects of anti-nuclear movements from three different analytical angles. Thus, they go beyond simply comparing two or more countries, but rather analyze transnational transfers of ideas, transnational cooperation and the emergence of networks and the idealistic motivations for transnational cooperation.

2.1 Transnational Transfers

The contributions to this focus issue enquire into what has variously been called *transnational transfers of ideas* (primarily, but not exclusively among historians (Cairney 2009; Lingelbach 2002; Middell 2007; Paulmann 1998; Werner and Zimmermann 2002)) or *transnational diffusion* (in the social sciences (Börzel and Risse 2009; Chabot and Duyvendak 2002; Rootes 1999)), namely the reception, borrowing and integration of ideas. In the specific context debated in this HSR Focus, this relates to ideas about and perceptions of nuclear power and its societal and political consequences and/or practices of protest across national boundaries. Transfers of ideas do not necessarily require direct contact, interaction or cooperation among individual members of the movements from the sending and the receiving side. Of course, "ideas do not float freely" (Risse-Kappen 1994), but require *media or mediators*, which transmit relevant information. In case of the anti-nuclear movement, books, pamphlets, and alternative, but also conventional news media helped to inform activists about what happened elsewhere. Activists or experts who actually travelled across borders and visited protesters in other countries, acted as *mediators* and often brought home new information about nuclear power and effective protest. Historical research on transnational networks has highlighted core characteristics of such mediators. In many cases they acted as "cultural brokers" (Kaiser 2009, 18), familiar not only with the language, but often also with cultural and political practices on the other side.

Transfers of ideas are not simply transpositions of the same idea into a different context, where they function the same way as before. Rather, such pro-

cesses of transfer require not only media and mediators: the eventual integration of an idea into the receiving group or society is also contingent upon the willingness of the recipients to actually accept the idea and take it on board. Research on cultural transfers has stressed the importance of the *contexte d'accueil* (the receiving context) for transfer processes to be effective (Espagne and Werner 1987; Kaelble 2009). What is crucial is that travelling ideas resonated and were compatible with prevalent ideas, structures and discourses in the receiving context (Espagne 2005; Meyer 2011).

Moreover, transfers of ideas may – indeed may have to – involve an *adaptation and transformation of the ideas received* to make them compatible in the new context. In extreme cases, when the ideas are thoroughly reinterpreted and changed, this may even render the transfer processes invisible (Kaelble 2009; Werner and Zimmermann 2006). Tracing transnational transfers thus requires both the study of the actual transfer and the processes of re-appropriation, in order to assess to what extent the idea in its new context actually fulfilled an equivalent – or substantively different – function.

The contributions to this HSR Focus will address relevant questions about transnational transfers: Where and how did transnational transfers take place? What conditions helped and hindered such transfers – in terms of mediators, the ideas themselves and the (compatibility with the) receiving context? How were the ideas adapted and transformed? What were the results and consequences of the transfers?

2.2   Transnational Cooperation and Networks

A number of contributions to this HSR Focus also study actual transnational cooperation and the (potential) formation of informal network type patterns of regular cooperation across borders. They enquire into factors that facilitated transnational cooperation and the formation of networks. Research on networks in political science (Marsh and Rhodes 1992; Richards and Heard 2005) suggests that networks are usually based on an exchange of crucial resources – such as money, information and expertise, or access to media or policy makers. A rationalist perspective of this kind can be distinguished from one that privileges the importance of shared ideas. It suggests that shared problem perceptions and views about possible solutions increasingly integrate actors into a tight-knit "epistemic community" (Haas 1989) that strengthens commitment and trust and intensifies cooperation and effectiveness.

Inspired by the evidence of cross-border cooperation on the upper Rhine at Wyhl (Mossmann 1975) and the incipient research (Meyer 2013; Milder 2010a, b) on its consequences, some of the contributions enquire into the actual transnational cooperation of anti-nuclear activists. While transfers of ideas do not necessarily require direct contact between individual members of the different anti-nuclear groups, transnational cooperation is usually based on the actual

interaction between (some) members of these groups. How comprehensive such interaction was and how many members of these groups it included, remain open question for empirical research.

In the past, transnational historical research has been highly interested in transnational interaction – particularly of societal groups – that has in turn led to the formation of informal network-type structures of cooperation across national borders – or transnational networks (Herren 2012). For instance, researchers have studied the transnational networks of Christian democrats advancing West European integration (Kaiser 2007) or of economists promoting a new international economic and monetary order (Schmelzer 2010). Eventually, if and where conditions are suitable, transnational cooperation may lead to the establishment of trans- or international NGOs (Saunier 2009). However, in most cases transnational cooperation and networks remain informal, not least since they cut across national borders and the conventional boundaries of decision-making arenas (Kirchhof 2014b).

Previous research on transnational networks among environmentalists also studied how actors contacted each other across borders. Findings suggest that sometimes groups did, indeed, venture out to find cooperation partners across borders. Events – conferences or protest events – were important meeting places. Pre-existing ties via international NGOs facilitated transnational cooperation on specific issues (Meyer 2010).

At the same time, the contributions to this HSR Focus do not take transnational cooperation for granted. They address questions such as: What are the obstacles to cooperation? These may include practical issues, such as physical distance, lack of effective communication channels – notably in the age before the internet – and meeting places, the forbiddingly high cost of travel, the lack of language skills and intercultural knowledge. As discussed above, even more than in the case of transnational transfers, transnational cooperation requires mediators that help to overcome such obstacles. However, drawing on the opportunity structures approach, we can conclude that the absence of shared institutions and relevant centers of decision-making is a disincentive and major obstacle to transnational cooperation. It seems in line with this logic, that transnational activists targeted international organizations.

The contributions to this HSR Focus thus enquire into transnational cooperation among anti-nuclear activists, groups and as well as individual experts and the potential formation of networks. They explore the emergence of transnational cooperation and try to explain why actors cooperated and potentially formed networks. They address central questions about the origins of networks, factors facilitating and obstacles to cooperation among anti-nuclear activists. What they do not look at, however, is the phenomenon of transnationally operating industries and the involvement of governments.

2.3   Actors' Motivations for Transnational Cooperation

Finally, the contributions to this HSR Focus address not only the actual cross-border exchange, but also the ideals and ideas motivating actors to cooperate across borders and work beyond the national level, on the assumption that such ideas were central to why activists actually looked and went abroad to interact and cooperate (Iriye 2013b, 14).

Such ideas have been described as "transnationalism" – i.e. the semantic construction of spaces beyond the nation and a positive identification with such spaces (Kaelble et al. 2002, 10; Schriewer et al. 1999, 111). These ideas are rooted in traditions of internationalism (Friedemann and Hölscher 1982; Nehring 2005) dating back at least to the 19th century – namely the view that international cooperation and the formation of a community beyond the nation state will be a stepping stone to a better world. In its socialist version, working class internationalism has been an important aspect of Communist and Social Democratic party politics. European federalism (Burgess 2003; Dedman 2010, 14-29) – the notion that only a united Europe could achieve peace and prosperity was an important idea in post-war Western Europe, and a relevant motivation for activists such as Petra Kelly (Milder 2010a).

Analytically, we can distinguish between two aspects of such transnationalism, namely, the perception of nuclear power as a *transnational* or global *problem* – which is in line with modern environmentalist thinking about the environment as a global phenomenon (Engels 2010) – and the self-perception of the actors as part of a *transnational community*. From a critical point of view we may also ask to what extent the rhetorical invocation of international solidarity mainly served to bolster the legitimacy of the supposedly common cause:

First, to what extent did actors consider nuclear power as a transnational problem – as a problem of cross-border or even global scope? And – consequently – to what extent did they assume that the problem of nuclear power needed to be addressed politically at a level beyond national borders?

Secondly, to what extent did actors consider themselves as part of a transnational – European or global – community, and thus prefer action beyond the national level to national action? Did they consider themselves weak and in need of external support, e.g. regarding expertise and know-how? Beyond the practical implications, such appeals for support and the invocation of international (or European) solidarity may also have served the purpose of trying to raise the legitimacy of their cause (see similarly: Requate and Schulze-Wessel 2002).

3.   The Concern about the Nuke

Our discussion of transnational aspects of anti-nuclear protests focuses on the 1970s and 1980s as the period of probably the most virulent conflicts over this

issue. Concerns about the consequences of humanity's newly acquired capacity to split the atom did begin to emerge immediately after the first nuclear bomb exploded. Nevertheless, it is important to be aware that perceptions of nuclear power varied considerably during the postwar period – from great fears about nuclear destruction to great hopes for a better future facilitated by the new and supposedly cheap energy resource (Weart 1988). This section seeks to sketch these developments and tries to describe and explain how and why the 1970s and 1980s became such a period of protest.

The first nuclear explosions in 1945 in Hiroshima and Nagasaki shocked the world and triggered fears and doomsday visions of humanity's capacity to destroy itself. Environmental historian Donald Worster even argued that the first nuclear explosion in New Mexico in 1945 marked the beginning of the "age of ecology" (Worster 1994, 342f). The newly acquired capacity to destroy life and materials at an unprecedented scale challenged Enlightenment assumptions about science and progress, and raised doubts about humanity's ability to wisely use the new and potentially highly pernicious weapons. The first nuclear explosions also encouraged a wave of scientific (mostly biological) research, as knowledge of the effects of radiation on humans and the living environment all around the world was still very limited (Hamblin 2013, 89-107). Governments and military authorities hired scientists to study these effects in various ways, but were secretive about these issues, as they continued to test nuclear devices. The "Lucky Dragon" incident, when a Japanese fishing vessel and its crew were contaminated by fallout during an American nuclear test in the Pacific in 1954, first brought this issue to international attention (Higuchi 2008; Hughes 2009, 210). Towards the end of the 1950s, in the context of the International Geophysical year 1957-58, American scientists started warning against the dangers of radioactive fallout. Triggered by controversial Japanese research – they discussed possible genetic effects of radiation for the first time (Hamblin 2013, 95-9; Radkau 2011, 117).

Apart from the fears that nuclear weapons might indeed be used in an all-out nuclear war that would mean the end of humanity, the concern about the fallout from nuclear weapons testing triggered the first anti-nuclear movements in the 1950s and 1960s. Well-educated citizens, intellectuals and notably scientists – and the transnational exchange of scientific knowledge, e.g. of radioactive Strontium-90 in the milk that children drank – played an important role within these movements (McNeill and Engelke 2013, 500f; Nehring 2004, 156). These movements made a clear distinction between nuclear weapons, which they rejected, and civil uses of nuclear power, which they accepted or supported. Since Eisenhower's Atoms for Peace speech of 1953, the vision of using the atom for apparently cheap, clean and almost limitless energy production led to a veritable euphoria over this new technology in a new era of mankind, "the atomic age" (Nehring 2004, 163-5; Radkau 1983, 78-89).

Visions of this kind flourished in particular because nuclear power remained an issue for the future for some time. Nuclear technology only reached commercial maturity by the second half of the 1960s, by which time euphoria had given way to a lack of public interest (Radkau and Hahn 2013, 277). Nevertheless, throughout Western Europe and the United States, utility providers started to order and build commercial power plants in great numbers. After the oil price shock of 1973, governments and international organizations such as the European Community encouraged and supported even more ambitious plans, in order to ensure energy security (Graf 2010) and make national economies less dependent on imported crude oil.

By the 1970s, however, nuclear power had become a highly controversial issue across the globe, leading to those protests and movements that the contributions to the HSR Focus take as their point of departure. What are the reasons for this development? Four factors may be considered particularly relevant:

Firstly, the *rise of environmentalism* by the early 1970s clearly contributed to a more critical view of nuclear power. The new environmentalism (Engels 2010) highlighted in particular humanity's destructive and polluting impact on the natural world on a global scale and the need to prevent such destruction. From this perspective, nuclear power, with its potential dangers and the nuclear waste it produced, was always likely to appear problematic. Initially, however, conservationists had on occasion welcomed nuclear power as an apparently clean source of energy that would make dam building superfluous (Hasenöhrl 2011, 231-4). They soon came to realize that nuclear power's need for cooling water had equally problematic consequences for wildlife in rivers and streams (Spiegel 1970). The mobilization and awareness-raising efforts of Earth Day in the United States in 1970 spread not only environmentalist views but also protest practices across the nation (Rome 2013). The mostly science-related events during the European Conservation Year 1970 achieved a similar effect by putting the issue on the agenda of the media and politics in Europe (Schulz 2006). New environmentalist debates about redefining societal aims, such as opting for quality of life rather than mere quantitative growth, and the warnings of the Club of Rome about "limits to growth" in 1972 (Meadows et al. 1972), led to an increasing skepticism about traditional growth-oriented economic policies. From an environmentalist perspective, anti-nuclear protesters challenged the projections of massively increasing energy needs that governments and utility companies routinely used to justify the construction of yet more nuclear power plants. These new environmentalist ideas also helped to reframe the nuclear issue from a largely technical problem into a societal, economic, political and environmental one that could be attractive to the young new left in the wake of 1968 (Hünemörder 2008, 152; Radkau 2011, 227).

Secondly, the heritage of the 1968 student movement thus influenced the anti-nuclear protest, notably in terms of its protagonists, forms of protest and ideology. 1968 and what contemporary social scientists described as value-

change towards post-materialist values in a more affluent society (Inglehart 1971) arguably led to a more politicized younger generation in the 1970s. Even if protests at Wyhl were supported by a broad alliance of frequently rather conservative local people, young left-wing activists from Freiburg were attracted to the new cause that seemed to them to represent the resistance of ordinary citizens to power (Mossmann 1975). 1968 also provided new models of protest – such as taking the streets and occupying public spaces. Even if, in ideological terms, anti-nuclear protest was not only a concern of the left, left-wing arguments that went beyond the new environmentalist ideas did play a definite role, such as the critique of nuclear industry and the alliance between big corporations, the state and elites that seemed unanimously and uncritically committed to nuclear technology (Radkau 2011, 227; Rootes 2008).

Thirdly, new and more controversial scientific evidence of the dangers of low-level radiation emerged around 1970, notably in the United States. Researchers John Gofman and Arthur Tamplin – both employed by the American Atomic Energy Commission (AEC) – went public with findings that implied that – contrary to previous assumptions – there was no safe threshold dosage below which there were no carcinogenic effects. Gofman and Tamplin did not hesitate to draw conclusions about what this implied for the plans for the construction of large numbers of nuclear power plants – plants that would unavoidably release small amounts of radiation (Gofman and Tamplin 1971; Semendeferi 2008, 262). While such findings were initially – and quite controversially – discussed in scientific circles, such warnings were eventually received and used by anti-nuclear activists. Gofman and Tamplin increasingly came to be seen as expert witnesses, and were invited to speak worldwide.

Fourthly, as commercial nuclear power plants were increasingly built from the 1970s onwards, an increasing number of citizens was actually confronted with the imminent – and lasting – presence of nuclear installations. Concrete construction sites – such as Fessenheim or Malville in France, Wyhl, Brokdorf or Gorleben in West Germany or Seabrook in the United States were not only the sites of anti-nuclear protest that hit the news. They were also the places where local protest and larger, national and sometimes even transnational protest came together. At Wyhl, famously, students and young activists from Freiburg, protesters from across the Rhine and local farmer and vintners joined in a common cause, when occupying the construction site. The emblematic appeal of such unprecedented alliances and insubordination did not go unnoticed – and Wyhl quickly became the symbolic birthplace of the anti-nuclear movement in Germany (Rusinek 2001), and a model for protest even in the United States, as Michael L. Hughes (2014) argues in his contribution to this focus issue. Clearly, construction sites remained important sites of protest – and media attention – well into the 1980s. Anti-nuclear and environmental protest were advanced mainly by informal citizens action groups (*Bürgerinitiativen*) – the new form of grassroots organization of citizens that emerged in the 1970s (Reichardt and

Siegfried 2010). These groups soon started organizing beyond the confines of local protest, e.g. via the Bundesverbund Bürgerinitiativen Umweltschutz (BBU) in Germany, and sought to represent their concerns more effectively. It is these attempts to organize and politicize, and the role that transnational connections played in this context that the contributions to this HSR issue focus on.[6]

4. Conclusions: Anti-Nuclear Protest in a Transnational Perspective

Anti-nuclear protest in the 1970s and 1980s was a global phenomenon. The contributions to this HSR Focus provide answers for the first time on how these movements were also transnationally connected. Of course, we have not been able to cover the entire world. All of the contributions are connected to actors from West Germany as one node of the transnational network. Linkages extend to actors from the United States (Hughes) and Australia (Kirchhof), and Europe (Milder, Meyer). Thus we were able to cover a broad array of transnational relations across long- and shorter distances. We have also managed to include countries and regions with the most active and powerful anti-nuclear movements of the period.

The contributions to this HSR Focus describe different *trajectories* in the anti-nuclear movements' attempt to organize and politicize after Wyhl. Milder's contribution analyzes the trajectory from anti-nuclear protest into the formation of a European and West German Green Party – and the tensions between European and national commitments – both ideological and practical. Thus, he highlights a transnational aspect of the Green Party's history that has been underplayed so far in the existing literature (e.g. Mende 2011).

Where to go from Wyhl to engage in effective anti-nuclear protest was also a central question for those who chose the NGO route. The trajectory of transnationally cooperating NGOs went from Wyhl to international organizations such as the International Atomic Energy Agency (IAEA) and the European Communities (EC). While the social science literature only covers the transnationalization of NGO protest from the 1990s (Rucht 1999), Meyer's contribution demonstrates that transnationally cooperating anti-nuclear activists already tried to challenge international organizations in the 1970s.

Kirchhof's analysis of transnational exchange, transfers and communication through experts, media and organizations – the obstacles they were facing and the possibilities they used to make the leap across the globe – covers a most

---

[6] This HSR Focus does not address the mass protests of the peace movement against the stationing of American nuclear missiles in Western Europe in the 1980s. On this movement and its connections to environmental and anti-nuclear protest see the contributions in: Becker-Schaum et al. 2012.

improbable case. The trajectory of European anti-nuclear activists to contact and interact with the Australian Aborigines fighting for their homeland and against mining companies in the 1970s and 1980s describes an as yet untold chapter of a truly global history (Sachsenmaier 2011).

Hughes' detailed analysis of transatlantic transfers of non-violent protest practices back and forth across the Atlantic and their re-integration into and adaptation to the needs of the movements at Seabrook and Brokdorf can be read as a fine example of an entangled history (Werner and Zimmermann 2006), including both the perspectives of the American and the German side. Moreover, it connects the history of anti-nuclear protest to a longer lineage of non-violent protest in the Deep South of the United States and Gandhian India (Chabot 2000).

What can we learn about transnational transfers of ideas, transnational cooperation and the role of idealistic motivations among anti-nuclear activists in 1970s and 1980?

Firstly, with a view to transnational transfers of ideas, there is ample evidence of transnational transfers of expertise and protest practices. The media – both in terms of the new attention that general news media devoted to anti-nuclear protest and the alternative media the protest groups produced themselves – played a crucial role in these transfers and also communicated important information across borders. Expertise on the dangers of low-level radiation in particular travelled from the United States to Europe by means of publications, but also via travelling experts. Experts from Europe communicated their knowledge across national borders in Europe, while German experts brought their expertise to Australia. Protest practices – such as site occupation, but also the practices of non-violent protest more generally – were transferred across the Atlantic in both directions. Mediators acted as cultural brokers with the respective language skills. A very limited number of such individual mediators from these movements who had the time and money to travel played an important role in the transfer. Protest practices, however, could not simply be transposed, but needed to be carefully adapted to local conditions, traditions of the movement, and differences in political culture – for instance with a view to violence and private property. These transfers meant a substantial strengthening of the anti-nuclear movements, as they were able to draw on important (counter-) expertise – unavailable or underrepresented in their home countries – and a broader array of protest practices.

Secondly, what do we find in terms of transnational cooperation and the formation of transnational networks? Within Europe, some anti-nuclear activists ventured out to cooperate with other activists in Europe and other continents, using pre-existing ties via Friends of the Earth and the emerging European Environmental Bureau. They built up informal network structures with groups from Europe and overseas for protest events they helped organize at the international level. In order to gain access to crucial scientific expertise, which

was the hard currency in the debates with the advocates of nuclear energy, they also got in touch with experts from abroad. Such network ties proved to be very long-lasting. In the wake of Chernobyl, they were frequently revitalized.[7] Co-operation with protesters overseas was more limited because of geographical distances and missing (technical) communication channels. Effectively, actual transnational cooperation among anti-nuclear activists was limited to an elite group within the anti-nuclear movement committed to and skilled in transnational exchange – which acted as mediators. Foreign language skills – which were much less common at that time than they are today – were a crucial precondition for interacting globally. These mediators played a very central role, as they were the ones who managed to overcome the massive obstacles of physical distance and forbiddingly high transportation and communication costs during this period, often through access to party and public funding. It was their willingness to invest enormous amounts of (frequently unpaid) time and energy into communication, which actually made such networking possible. As the anti-nuclear movement matured and developed stronger organizational structures – e.g. by setting up the BBU as a national organization in Germany – a group of semi-professional activists emerged. It is hardly surprising that activists with strong political ambitions and those who had the time to invest in these issues were important figures within transnational networks.

Thirdly, apart from potential career motivations, those anti-nuclear activists who were engaged in transnational cooperation clearly perceived the nuclear issue to be a global problem. Left-leaning activists tended to stress the role of global corporations and the government support they received. Anti-nuclear activists considered themselves part of a movement of transnational, if not even global reach, eager to learn from each other. An ideal of transnationalism – opting for political solutions beyond the nation at a European or global scale for what they perceived to be a European or global problem – was very important to many anti-nuclear activists. In the case of the fledgling Greens, ideals and practice quickly diverged. Despite the professed commitment to Europe and transnationalism, the necessities (and the opportunity structures) of the electoral system effectively provided extremely strong incentives to go down the national route. Anti-nuclear activists engaged in transnational exchange frequently advanced arguments about the weakness of the movement, the need for external expertise and transnational solidarity. However, support by experts from abroad tended to make a much greater impression on their adversaries than the imaginary of a global movement, thus raising the legitimacy of the anti-nuclear cause.

All in all, we can conclude that – as opposed to what we find in the academic literature to date – anti-nuclear protest in the 1970s and 1980s was strongly

---

[7] E.g. Gofman, John, Committee for Nuclear Responsibility, to Petra Kelly, San Francisco, 6 July 1986. *AGG*, PKA 2119.

interconnected through transnational exchange across the globe. Transfers of ideas – in terms of expertise and protest practices – were highly relevant, even if they required adaptation to local customs and expectations. Actual transnational cooperation and networks strengthened these movements not only in terms of expertise, but also with regard to their scope of action – allowing them to take the protest not only to the local and national, but also the international level. *Transnational exchange thus deserves an important place in the history of anti-nuclear protest in the 1970s and 1980s.* At the same time, these activities were carried out by a relatively small part of the movement – an elite capable of overcoming language, political and cultural borders. The commonly used contemporary rhetoric of international (Mausbach 2010) and transnational solidarity and the concomitant imagination of a global movement seems to mask a reality of transnational ties that were more limited and more fragile than the rhetoric suggests.

Special References

Contributions within this HSR Focus:
Global Protest against Nuclear Power. Transfer and
Transnational Exchange in the 1970s and 1980s

Hughes, Michael L. 2014. Civil disobedience in transnational perspective: American and West German anti-nuclear-power protesters, 1975-1982. *Historical Social Research* 39 (1): 236-253.

Kirchhof, Astrid Mignon. 2014. Spanning the globe: West-German support for the Australian anti-nuclear movement. *Historical Social Research* 39 (1): 254-273.

Kirchhof, Astrid Mignon, and Jan-Henrik Meyer. 2014. Global protest against nuclear power. Transfer and transnational exchange in the 1970s and 1980s. *Historical Social Research* 39 (1): 165-190.

Meyer, Jan-Henrik. 2014. "Where do we go from Wyhl?" Transnational anti-nuclear protest targeting European and international organizations in the 1970s. *Historical Social Research* 39 (1): 212-235.

Milder, Stephen. 2014. Between grassroots activism and transnational aspirations: Anti-nuclear protest from the Rhine Valley to the Bundestag, 1974-1983. *Historical Social Research* 39 (1): 191-211.

References

Arndt, Melanie. 2010. From Nuclear to Human Security? Prerequisites and Motives for the German Chernobyl Commitment in Belarus. Historical Social Research 35 (4): 289-308.

Bayly, Christopher Alan, et al. 2006. AHR Conversation: On Transnational History. *American Historical Review* 111 (5): 1440-64.

Beck, Ulrich. 2005. Europäisierung-Soziologie für das 21. Jahrhundert. *Aus Politik und Zeitgeschichte* 52 (34-35): 3-11.

Becker-Schaum, Christoph, et al. 2012. *"Entrüstet Euch!" Nuklearkrise, NATO-Doppelbeschluss und Friedensbewegung*. Paderborn: Schöningh.

Berger, Stefan. 2007. Introduction. Towards a Global History of National Historiographies. In *Writing the Nation. A Global Perspective*, ed. Stefan Berger, 1-29. London: Palgrave.

Börzel, Tanja A., and Thomas Risse. 2009. *The Transformative Power of Europe. The European Union and Ideas Diffusion. KFG-Working Paper No. 1*. Research College "The Transformative Power of Europe", Free University Berlin <http://www.polsoz.fu-berlin.de/en/v/transformeurope/publications/working_paper/index.html> (accessed January 2, 2014).

Brüggemeier, Franz-Josef. 1998. *Tschernobyl. 26. April 1986. Die ökologische Herausforderung*. München: dtv.

Burgess, Michael. 2003. Federalism and Federation. In *European Union Politics*, ed. Michelle Cini, 65-79. Oxford: Oxford UP.

Cairney, Paul. 2009. The Role of Ideas in Policy Transfer. The Case of UK Smoking Bans since Devolution. *Journal of European Public Policy* 16 (3): 471-88.

Chabot, Sean. 2000. Transnational Diffusion and the African-American Reinvention of the Gandhian Repertoire. *Mobilization* 5 (1): 201-16.

Chabot, Sean, and Jan Willem Duyvendak. 2002. Globalization and Transnational Diffusion between Social Movements: Reconceptualising Dissemination of the Gandhian Repertoire and the Coming Out Routine. *Theory and Society* 31 (6): 697-740.

Chernilo, Daniel. 2006. Methodological Nationalism and its Critique. In *The SAGE Handbook of Nations and Nationalism*, ed. Gerard Delanty and Krishan Kumar, 129-40. London: Sage.

Cioc, Mark. 2009. *The Game of Conservation. International Treaties to protect the World's Migratory Species*. Athens, Ohio: Ohio University Press.

Clavin, Patricia. 2005. Defining Transnationalism. *Contemporary European History* 14 (4): 421-39.

Clavin, Patricia. 2010. Time, Manner, Place. Writing Modern European History in Global, Transnational and International Contexts. *European History Quarterly* 40 (4): 624-40.

Conrad, Sebastian. 2009. Double Marginalisation. A Plea for a Transnational Perspective on German History. In *Comparative and Transnational History. Central European Approaches and New Perspectives*, ed. Heinz-Gerhard Haupt and Jürgen Kocka, 52-76. New York: Berghahn.

Conrad, Sebastian, and Jürgen Osterhammel, eds. 2004. *Das Kaiserreich transnational. Deutschland in der Welt 1871-1914*. Göttingen: Vandenhoeck & Ruprecht.

Conze, Eckart, et al., eds. 2004. *Geschichte der internationalen Beziehungen. Erneuerung und Erweiterung einer historischen Disziplin*. Köln: Böhlau.

Dedman, Martin J. 2010. *The Origins and Development of the European Union 1945-2008. A History of European Integration. Second Edition*. Abingdon: Routledge.

Engels, Jens Ivo. 2006. *Naturpolitik in der Bundesrepublik. Ideenwelt und politische Verhaltensstile in Naturschutz und Umweltbewegung 1950-1980*. Paderborn: Schöningh.

Engels, Jens Ivo. 2010. Modern Environmentalism. In *The Turning Points of Environmental History*, ed. Frank Uekötter, 119-31. Pittsburgh: University of Pittsburgh Press.

Espagne, Michel. 2005. Les transferts culturels. *geschichte.transnational* <http://geschichte-transnational.clio-online.net/transnat.asp?type=diskussionen&id=576&view=pdf&pn=forum> (accessed April 16, 2008).

Espagne, Michel, and Michael Werner. 1987. La construction d'une référence culturelle allemande en France. Genèse et histoire (1750-1914). *Annales HSS* 42 (4): 969-92.

Fazzi, Dario. 2014, forthcoming. The Blame and the Shame: Kennedy's Choice to Resume Nuclear Tests in 1962. *Peace & Change* 39 (4).

Friedemann, Peter, and Lucian Hölscher. 1982. Internationale, International, Internationalismus. In *Geschichtliche Grundbegriffe. Historisches Lexikon zur Geschichte der politisch-sozialen Sprache in Deutschland*, ed. Otto Brunner, Werner Conze and Reinhardt Koselleck, 367-97. Stuttgart: Klett-Cotta.

Gassert, Philipp. 2010. *Transnationale Geschichte* <http://docupedia.de/zg/Transnationale_Geschichte> (accessed January 2, 2014).

Gehler, Michael, and Wolfram Kaiser. 2001. Transnationalism and Early European Integration: The Nouvelles Equipes Internationales and the Geneva Circle 1947-1957. *The Historical Journal* 44 (3): 773-98.

Gofman, John, and Arthur Tamplin. 1971. *Poisoned Power. The Case against Nuclear Power Plants*. Emmaus: Rodale Press.

Graf, Rüdiger. 2010. Between National and Human Security: Energy Security in the United States and Western Europe in the 1970s. *Historical Social Research* 35 (4): 329-48.

Graf, Rüdiger, and Kim Christian Priemel. 2011. Zeitgeschichte in der Welt der Sozialwissenschaften. *Vierteljahreshefte für Zeitgeschichte* 59 (4): 479-508.

Gram-Skjoldager, Karen, and Ann-Christina L. Knudsen. 2014. Historiography and Narration in Transnational History. *Journal of Global History* 9 (1): 143-61.

Haas, Peter M. 1989. Do Regimes Matter? Epistemic Communities and Mediterranean Pollution Control. *International Organization* 43 (3): 377-403.

Hamblin, Jacob Darwin. 2008. *Poison in the Well. Radioactive Waste in the Oceans at the Dawn of the Nuclear Age*. New Brunswick, NJ: Rutgers University Press.

Hamblin, Jacob Darwin. 2013. *Arming Mother Nature. The Birth of Catastrophic Environmentalism*. Oxford: Oxford University Press.

Hasenöhrl, Ute. 2011. *Zivilgesellschaft und Protest. Eine Geschichte der Naturschutz- und Umweltbewegung in Bayern 1945-1980*. Göttingen: Vandenhoeck & Ruprecht.

Haupt, Heinz-Gerhard, and Jürgen Kocka, eds. 2009. *Comparative and Transnational History. Central European Approaches and New Perspectives*. New York: Berghahn.

Herren, Madeleine. 2012. Netzwerke. In *Dimensionen internationaler Geschichte*, ed. Jost Dülffer and Wilfried Loth, 107-128. München: Oldenbourg.

Higuchi, Toshihiro. 2008. An Environmental Origin of Antinuclear Activism in Japan, 1954-1963: The Government, the Grassroots Movement, and the Politics of Risk. *Peace & Change* 33 (3): 333-67.

Hünemörder, Kai F. 2008. Zwischen Bewegungsforschung und Historisierungsversuch. Anmerkungen zum Anti-Atomkraft-Protest aus umwelthistorischer Per-

spektive. In *1968 und die Anti-Atomkraft-Bewegung der 1970er-Jahre: Überlieferungsbildung und Forschung im Dialog*, ed. Robert Kretzschmar, Clemens Rehm, and Andreas Pilger, 151-67. Stuttgart: Kohlhammer.

Hughes, Johnson Donald. 2009. *An Environmental History of the World. Humankind's Changing Role in Community of Life.* 2nd ed. London: Routledge.

Hughes, Michael L. 2014. Civil Disobedience in Transnational Perspective. American and West German Anti-Nuclear-Power Protesters, 1975-1982. *Historical Social Research* 39 (1): 236-253.

Inglehart, Ronald. 1971. The Silent Revolution in Europe. Intergenerational Change in Post-Industrial Societies. *American Political Science Review* 65 (4): 991-1017.

Iriye, Akira. 2008. Environmental History and International History. *Diplomatic History* 32 (4): 643-46.

Iriye, Akira. 2013a. Die Entstehung einer transnationalen Welt. In *Geschichte der Welt 1945 bis heute: Die globalisierte Welt*, ed. Akira Iriye, Jürgen Osterhammel, Thomas Atzert and Andreas Wirthensohn, 671-825. München: Beck.

Iriye, Akira. 2013b. Einleitung. In *Geschichte der Welt 1945 bis heute: Die globalisierte Welt*, ed. Akira Iriye, Jürgen Osterhammel, Thomas Atzert and Andreas Wirthensohn, 9-14. München: Beck.

Iriye, Akira, and Pierre-Yves Saunier, eds. 2009. *The Palgrave Dictionary of Transnational History*. Basingstoke: Palgrave.

Joppke, Christian. 1993. *Mobilizing against Nuclear Energy. A Comparison of Germany and the United States*. Berkeley: University of California Press.

Kaelble, Hartmut. 2009. Between Comparison and Transfers. In *Comparative and Transnational History. Central European Approaches and New Perspectives*, ed. Heinz-Gerhard Haupt and Jürgen Kocka, 33-8. New York: Berghahn.

Kaelble, Hartmut, et al. 2002. Zur Entwicklung transnationaler Öffentlichkeiten und Identitäten im 20. Jahrhundert. Eine Einleitung. In *Transnationale Öffentlichkeiten und Identitäten im 20. Jahrhundert*, ed. Hartmut Kaelble, Martin Kirsch and Alexander Schmidt-Gernig, 7-33. Frankfurt: Campus.

Kaiser, Wolfram. 2004. Transnationale Weltgeschichte im Zeichen der Globalisierung. In *Geschichte der internationalen Beziehungen. Erneuerung und Erweiterung einer historischen Disziplin*, ed. Eckart Conze, Ulrich Lappenküper and Guido Müller, 65-92. Köln: Böhlau.

Kaiser, Wolfram. 2005. Transnational Western Europe since 1945. Integration as Political Society Formation. In *Transnational European Union. Towards a Common Political Space*, ed. Wolfram Kaiser and Peter Starie, 19-35. London: Routledge.

Kaiser, Wolfram. 2007. *Christian Democracy and the Origins of European Union*. Cambridge: CUP.

Kaiser, Wolfram. 2009. Transnational Networks in European Governance. The Informal Politics of Integration. In *The History of the European Union. Origins of a Trans- and Supranational Polity 1950-72*, ed. Wolfram Kaiser, Morten Rasmussen and Brigitte Leucht, 12-33. Abingdon: Routledge.

Kaiser, Wolfram, and Jan-Henrik Meyer. 2010. Non-State Actors in European Integration in the 1970s: Towards a Polity of Transnational Contestation. Comparativ 20 (3): 7-24.

Kaiser, Wolfram, and Jan-Henrik Meyer. 2013. Beyond Governments and Supranational Institutions. Societal Actors in European Integration. In *Societal Actors in*

European Integration. Polity-Building and Policy-Making 1958-1992, ed. Wolf-ram Kaiser and Jan-Henrik Meyer, 1-14. Basingstoke: Palgrave.

Kaiser, Wolfram, and Peter Starie. 2005. The European Union as a Transnational Political Space: Introduction. In *Transnational European Union. Towards a Common Political Space*, ed. Wolfram Kaiser and Peter Starie, 1-13. London: Routledge.

Kalmbach, Karena. 2011. *Tschernobyl und Frankreich. Die Debatte um die Aus-wirkungen des Reaktorunfalls im Kontext der französischen Atompolitik und Eli-tenkultur*. Frankfurt: Peter Lang.

Kelly, Cynthia C. 2007. *The Manhattan project: the birth of the atomic bomb in the words of its creators, eyewitnesses, and historians*. New York: Black Dog & Le-venthal.

Keohane, Robert O., and Joseph S. Jr. Nye. 1977. *Power and Interdependence. World Politics in Transition*. Boston: Little, Brown.

Kirchhof, Astrid Mignon. 2013. Frauen in der Antiatomkraftbewegung. Das Bei-spiel der Mütter gegen Atomkraft. *Ariadne* 64 (November): 48-57.

Kirchhof, Astrid Mignon. 2014a. Interactions between the Australian and German Environmental Movements. In *Beiträge zum Göttinger Umwelthistorischen Kol-loquium 2012-2013*, ed. Manfred Jakubowski-Tiessen. Göttingen: Universi-tätsverlag Göttingen.

Kirchhof, Astrid Mignon. 2014b. Spanning the Globe: West-German Support for the Australian Anti-nuclear Movement. *Historical Social Research* 39 (1): 254-273.

Kirchhof, Astrid Mignon. Spring 2016, forthcoming. Going Green? Expertise, Media and the Changing Politics of the Environment on Three Continents, 1920-2014. *Global Environment* 16.

Kitschelt, Herbert P. 1986. Political Opportunity Structures and Political Protest. Anti-Nuclear Movements in four Democracies. *British Journal of Political Sci-ence* 16 (1): 57-85.

Kupper, Patrick. 2012. Translating Yellowstone: Early European National Parks, Weltnaturschutz and the Swiss Model. In *Civilizing Nature. National Parks in Global Historical Perspective*, ed. Bernhard Gissibl, Sabine Höhler and Patrick Kupper, 123-39. New York: Berghahn.

Lekan, Thomas. 2011. Serengeti Shall Not Die: Bernhard Grzimek, Wildlife Film, and the Making of a Tourist Landscape in East Africa. *German History* 29 (2): 224-64.

Lingelbach, Gabriele. 2002. Erträge und Grenzen zweier Ansätze. Kulturtransfer und Vergleich am Beispiel der französischen und amerikanischen Geschichtswis-senschaft während des 19. Jahrhunderts. In *Die Nation schreiben. Geschichtswis-senschaft im internationalen Vergleich*, ed. Christoph Conrad and Sebastian Con-rad, 333-59. Göttingen: Vandenhoeck & Ruprecht.

Lipgens, Walter, ed. 1985. *Documents on the History of European Integration. Vol. 1. Continental Plans for European Union 1939-1945*. Berlin: de Gruyter.

Marsh, David, and Roderick A. W. Rhodes. 1992. Policy Communities and Issue Networks. Beyond Typology. In *Policy Networks in British Government*, ed. Da-vid Marsh and Roderick A. W. Rhodes, 249-68. Oxford: Oxford UP.

Mauchline, J., and W. L. Templeton. 1963. Dispersion in the Irish sea of the Radio-active Liquid Effluent from Windscale Works of the U.K. Atomic Energy Au-thority. *Nature* (198): 623-26.

Mausbach, Wilfried. 2010. Von der "zweiten Front" in die friedliche Etappe? Internationale Solidaritätsbewegungen in der Bundesrepublik 1968-1983. In *Das Alternative Milieu. Antibürgerlicher Lebensstil und linke Politik in der Bundesrepublik und Europa 1968-1983*, ed. Sven Reichardt and Detlef Siegfried, 423-44. Göttingen: Wallstein.

McDermott, Veronica. 2008. *Going Nuclear. Ireland, Britain and the Campaign to Close Sellafield*. Dublin: Irish Academic Press.

McNeill, John R., and Peter Engelke. 2013. Mensch und Umwelt im Zeitalter des Anthropozän. In *Geschichte der Welt 1945 bis heute: Die globalisierte Welt,* ed. Akira Iriye, Jürgen Osterhammel, Thomas Atzert and Andreas Wirthensohn, 357-534. München: Beck.

Meadows, Dennis, et al. 1972. *The Limits to Growth*. New York: Universe Books.

Mende, Silke. 2011. *'Nicht links, nichts rechts, sondern vorn.' Eine Geschichte der Gründungsgrünen*. Oldenbourg: München.

Meyer, David S. 2004. Protest and Political Opportunities. *Annual Review of Sociology* 30: 125-45.

Meyer, Jan-Henrik. 2010. Saving Migrants. A Transnational Network supporting Supranational Bird Protection Policy in the 1970s. In *Transnational Networks in Regional Integration. Governing Europe 1945-83*, ed. Wolfram Kaiser, Brigitte Leucht and Michael Gehler, 176-98. Basingstoke: Palgrave.

Meyer, Jan-Henrik. 2011. *Appropriating the Environment. How the European Institutions Received the Novel Idea of the Environment and Made it Their Own.* Research College "The Transformative Power of Europe", Free University Berlin <http://www.polsoz.fu-berlin.de/en/v/transformeurope/publications/working_ paper/WP_31_Meyer_neu.pdf> (accessed January 2, 2014).

Meyer, Jan-Henrik. 2013. Challenging the Atomic Community. The European Environmental Bureau and the Europeanization of Anti-Nuclear Protest. In *Societal Actors in European Integration. Polity-Building and Policy-Making 1958-1992*, ed. Wolfram Kaiser and Jan-Henrik Meyer, 197-220. Basingstoke: Palgrave.

Meyer, Jan-Henrik. 2014a. Transnationale Geschichte. Eine Perspektive. *Historische Mitteilungen der Ranke-Gesellschaft HMRG* 26 (2013/14): 145-61.

Meyer, Jan-Henrik. 2014b. "Where do we go from Wyhl?" Transnational Anti-Nuclear Protest targeting European and International Organizations in the 1970s. *Historical Social Research* 39 (1): 212-235.

Middell, Matthias. 2007. Kulturtransfer und transnationale Geschichte. In *Dimensionen der Kultur- und Gesellschaftsgeschichte. Festschrift für Hannes Siegrist zum 60. Geburtstag*, ed. Matthias Middell, 49-69. Leipzig: Leipziger Universitätsverlag.

Milder, Stephen. 2010a. Harnessing the Energy of the Anti-Nuclear Activist: How Young European Federalists Built on Rhine Valley Protest. *Perspectives on Global Development and Technology* 9 (1): 119-33.

Milder, Stephen. 2010b. Thinking Globally, Acting (Trans-)Locally: Petra Kelly and the Transnational Roots of West German Green Politics. *Central European History* 43 (2): 301-26.

Milder, Stephen. 2014. Between Grassroots Activism and Transnational Aspirations: Anti-Nuclear Protest from the Rhine Valley to the Bundestag, 1974-1983. *Historical Social Research 3*9 (1): 191-211.

Mossmann, Walter. 1975. "Die Bevölkerung ist hellwach!" Erfahrungen aus dem Kampf der Badisch-Elsässischen Bevölkerung gegen ein Atomkraftwerk in Wyhl und ein Bleiwerk in Marckolsheim. *Kursbuch* 39: 129-53.

Nehring, Holger. 2004. Cold War, Apocalypse and Peaceful Atoms. Interpretations of Nuclear Energy in the British and West German anti-Nuclear Weapons Movements, 1955-1964. *Historical Social Research* 29 (3): 150-70.

Nehring, Holger. 2005. National Internationalists: British and West German Protests against Nuclear Weapons, the Politics of Transnational Communications and the Social History of the Cold War, 1957-1964. *Contemporary European History* 14 (4): 559-82.

Nehring, Holger. 2009. Genealogies of the Ecological Moment: Planning, Complexity and the Emergence of "the Environment" as Politics in West Germany, 1949-1982. In *Nature's End. History and the Environment*, ed. Sverker Sörlin and Paul Warde, 115-38. Basingstoke: Palgrave.

Nehring, Holger. 2012. Transnationale soziale Bewegungen. In *Dimensionen internationaler Geschichte*, ed. Jost Dülffer and Wilfried Loth, 129-50. München: Oldenbourg.

Nelson, Laura. 2004. Sellafield seeks solid foundation for cleaner wastewater. *Nature* 428 (6981): 357.

Nye, Joseph S. Jr., and Robert O. Keohane. 1971. Transnational Relations and World Politics: An Introduction. *International Organization* 25 (3): 329-49.

Osterhammel, Jürgen. 2001. Transnationale Gesellschaftsgeschichte: Erweiterung oder Alternative? *Geschichte und Gesellschaft* 27 (3): 464-79.

Osterhammel, Jürgen. 2009. A 'Transnational' History of Society. Continuity or New Departure? In *Comparative and Transnational History. Central European Approaches and New Perspectives*, ed. Heinz-Gerhard Haupt and Jürgen Kocka, 39-51. New York: Berghahn.

Pagden, Anthony, ed. 2002. *The Idea of Europe: From Antiquity to the European Union*. Cambridge: Cambridge University Press.

Patel, Kiran Klaus. 2003. Transatlantische Perspektiven transnationaler Geschichte. *Geschichte und Gesellschaft* 29 (4): 625-47.

Patel, Kiran Klaus. 2004. Überlegungen zu einer transnationalen Geschichte. *Zeitschrift für Geschichtswissenschaft* 52 (7): 626-45.

Paulmann, Johannes. 1998. Internationaler Vergleich und interkultureller Transfer. Zwei Forschungsansätze zur europäischen Geschichte des 18.-20. Jahrhunderts. *Historische Zeitschrift* 267: 649-85.

Pritchard, Sara B. 2012. An Envirotechnical Disaster: Nature, Technology, and Politics at Fukushima. *Environmental History* 17 (2): 219-43.

Radkau, Joachim. 1983. *Aufstieg und Krise der deutschen Atomwirtschaft 1945-1975. Verdrängte Alternativen in der Kerntechnik und der Ursprung der nuklearen Kontroverse*. Reinbek: Rowohlt.

Radkau, Joachim. 2011. *Die Ära der Ökologie. Eine Weltgeschichte*. München: Beck.

Radkau, Joachim, and Lothar Hahn. 2013. *Aufstieg und Fall der deutschen Atomwirtschaft*. Munich: Oekom.

Raphael, Lutz. 1999. Nationalzentrierte Sozialgeschichte in programmatischer Absicht. Die Zeitschrift 'Geschichte und Gesellschaft. Zeitschrift für historische

Sozialwissenschaft' in den ersten 25 Jahren ihres Bestehens. *Geschichte und Gesellschaft* 25 (1): 5-37.

Reichardt, Sven, and Detlef Siegfried, eds. 2010. *Das Alternative Milieu. Antibürgerlicher Lebensstil und linke Politik in der Bundesrepublik und Europa 1968-1983*. Göttingen: Wallstein.

Requate, Jörg, and Martin Schulze-Wessel. 2002. Europäische Öffentlichkeit. Realität und Imagination einer appellativen Instanz. In *Europäische Öffentlichkeit. Transnationale Kommunikation seit dem 18. Jahrhundert*, ed. Jörg Requate and Martin Schulze-Wessel, 11-39. Frankfurt: Campus.

Richards, J. P., and J. Heard. 2005. European Environmental NGOs: Issues, Resources and Strategies in Marine Campaigns. *Environmental Politics* 14 (1): 23-41.

Risse-Kappen, Thomas. 1994. Ideas do not float freely: Transnational Coalitions, Domestic Structures and the End of the Cold War. *International Organization* 48 (2): 185-214.

Roberts, Janine. 1978. *From Massacres to Mining – The Colonisation of Aboriginal Australia*. London: Impact Investigative Media Productions.

Rome, Adam. 2013. *The Genius of Earth Day: How a 1970 Teach-In Unexpectedly Made the First Green Generation*. New York: Hill & Wang.

Rootes, Christopher. 1999. *Environmental movements. Environmental politics local, national and global*. Abingdon: Routledge.

Rootes, Christopher. 2008. The Environmental Movement. In *1968 in Europe. A History of Protest and Activism, 1956-77*, ed. Martin Klimke and Joachim Scharloth, 295-305. London: Palgrave.

Rucht, Dieter. 1999. The Transnationalization of Social Movements: Trends, Causes, Problems. In *Social Movements in a Globalizing World*, ed. Donatella Della Porta, Hanspeter Kriesi and Dieter Rucht, 206-22. London: Macmillan.

Rusinek, Bernd A. 2001. Wyhl. In *Deutsche Erinnerungsorte II*, ed. Etienne François and Hagen Schulze, 652-66. München: Beck.

Sachsenmaier, Dominic. 2011. *Global Perspectives on Global History. Theories and Approaches in a Connected World*. Cambridge: Cambridge Univ. Press.

Saunier, Pierre-Yves. 2009. International Non-Governmental Organizations (INGOs). In *The Palgrave Dictionary of Transnational History*, ed. Akira Iriye and Pierre-Yves Saunier, 573-80. Basingstoke: Palgrave.

Schirach, Richard von. 2012. *Die Nacht der Physiker. Heisenberg, Hahn, Weizsäcker und die deutsche Bombe*. Berlin: Berenberg.

Schmelzer, Matthias. 2010. *Freiheit für Wechselkurse und Kapital. Die Ursprünge neoliberaler Währungspolitik und die Mont Pélerin Society*. Marburg: Metropolis.

Schriewer, Jürgen, et al. 1999. Konstruktion von Internationalität: Referenzhorizonte pädagogischen Wissens im Wandel gesellschaftlicher Systeme (Spanien, Sowjetunion/Russland, China). In *Gesellschaften im Vergleich: Forschungen aus Sozial- und Geschichtswissenschaften*, ed. Hartmut Kaelble and Jürgen Schriewer, 151-258. Frankfurt: Lang.

Schüring, Michael. 2012. West German Protestants and the Campaign against Nuclear Technology. *Central European History* 45 (4): 744-62.

Schulz, Thorsten. 2006. Das 'Europäische Naturschutzjahr 1970' – Versuch einer europaweiten Umweltkampagne. *WZB-Discussion Papers* P 2006 (7): 1-34.

Semendeferi, Ioanna. 2008. Legitimating a Nuclear Critic: John Gofman, Radiation Safety, and Cancer Risks. *Historical Studies in the Natural Sciences* 38 (2): 259-301.

Shawki, Noha. 2010. Political Opportunity Structures and the Outcomes of Transnational Campaigns: A Comparison of Two Transnational Advocacy Networks. *Peace & Change* 35 (3): 381-411.

Spiegel. 1970. Tod im Strom. Industrie Kernkraftwerke. *Der Spiegel*, 23 February, 46.

Uekötter, Frank. 2011. Globalizing Environmental History – Again. In *The Future of Environmental History. Needs and Opportunities (RCC Perspectives 3/2011)*, ed. Kimberly Coulter and Christof Mauch, 24-6. Munich: Rachel Carson Center.

Uekötter, Frank. 2012a. Fukushima and the Lessons of History: Remarks on the Past and Future of Nuclear Power. In *Europe after Fukushima. German Perspectives on the Future of Nuclear Power (RCC Perspectives 1/2012)*, ed. Salomon Temple, 9-31. Munich: Rachel Carson Center.

Uekötter, Frank. 2012b. Fukushima, Europe, and the Authoritarian Nature of Nuclear Technology. *Environmental History* 17 (2): 277-84.

Wakild, Emily. 2012. A Revolutionary Civilization. National Parks, Transnational Exchanges and the Construction of Modern Mexico. In *Civilizing Nature. National Parks in Global Historical Perspective*, ed. Bernhard Gissibl, Sabine Höhler and Patrick Kupper, 191-205. New York: Berghahn.

Walker, Mark. 2002. Amerikas Einschätzung der deutschen Atomforschung: Das deutsche Uranprojekt. *Physik in unserer Zeit* 33 (4): 167-71.

Weart, Spencer R. 1988. *Nuclear Fear: A History of Images*. Cambridge, MA: Harvard University Press.

Werner, Michael, and Bénédicte Zimmermann. 2002. Vergleich, Transfer, Verflechtung. Der Ansatz der histoire croisée und die Herausforderung des Transnationalen. *Geschichte und Gesellschaft* 28: 607-36.

Werner, Michael, and Bénédicte Zimmermann. 2006. Beyond Comparison: *Histoire Croisée* and the Challenge of Reflexivity. *History and Theory* 45 (1): 30-50.

Wöbse, Anna Katharina. 2012. Framing the Heritage of Mankind: National Parks on the International Agenda. In *Civilizing Nature. National Parks in Global Historical Perspective*, ed. Bernhard Gissibl, Sabine Höhler and Patrick Kupper. 140-56. New York: Berghahn.

Worster, Donald. 1994. *Nature's Economy. A History of Ecological Ideas*. Cambridge: Cambridge UP.

Zachmann, Karin. 2011. Atoms for peace and radiation for safety – how to build trust in irradiated foods in Cold War Europe and beyond. *History and Technology* 27 (1): 65-90.

Zelko, Frank. 2013. *Make It a Green Peace!: The Rise of Countercultural Environmentalism*. Oxford: Oxford University Press.