

# Networks of knowledge and power: working collaboratively on the HoNESt project

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## Abstract

Working collaboratively across national and disciplinary boundaries poses both challenges and opportunities for historians. The results of international collaborative research projects are directly shaped by their structure and the people working on them, from opening up new avenues of enquiry, to talking at cross-purposes with colleagues from different disciplines. Writing in *English Historical Review*, Ludmilla Jordanova introduces the concept that history and social science pursue similar questions, but do so with different 'habits of mind'. Jordanova proposes that it is the differences between these 'habits of mind' which can cause confusion and misunderstanding between scholars. In this article I will outline how these different habits have come to the fore in the History of Nuclear Energy and Society (HoNESt) project, and how the project has been planned to account for them. Such differences in 'habits of mind' whilst working collaboratively, transnationally and inter-disciplinarily, have shaped the research pursued, prompted us to ask new questions and provided surprising and unexpected results.

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## Keywords

Nuclear power, nuclear history, interdisciplinary research, social movements, protest, British history, European history

## What is the project?

HoNESt is an interdisciplinary project funded by Euratom (the European Atomic Energy Community) and the European Commission's Horizon 2020 programme. This three-year project, beginning in September 2015 and ending in September 2018, was a response to a call from the European Commission for research projects which would further the understanding of the

relationship between nuclear energy and society. As such HoNESt examines how nuclear energy and society have interacted across Europe and the United States from 1945 to the present day and seeks to inform discussion and debate about the role of nuclear energy, and society's ability to shape it, now and in the future. Around these research aims, the project has been structured to facilitate comparative, transnational and interdisciplinary working.

**Figure 1**



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Map detailing countries participating in HoNESt

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HoNESt is a consortium of 23 institutions (largely universities and national museums), with groups of historians and social scientists working together. Scholars from various institutions across Europe, including museums, were invited to participate in the project based on their experience as historical researchers. HoNESt was a natural fit for the Science Museum's expertise in researching the public's engagement with science, as part of the growing number of researchers in the Museum's Research and Public History department. Project management is provided by staff at the University of Pompeu Fabra in Barcelona, but because there are so many people working on the project, researchers are divided into groups, called 'Work Packages', which in turn have their own leaders across Europe. Each Work Package has a number of reports to write according to a prearranged schedule. For example, my work at the Science Museum, and most of the historical research in HoNESt, has taken place in a research group of historians (Work Package 2), which is responsible for creating a Short Country Report examining the history of nuclear energy in each country.

Keeping all of these normally independent historians on track to write easily comparable Reports has required a highly defined structure and careful management. The Reports have been through three completely different structures, and have been re-drafted many times. Although some of these changes were arrived at in our large group of historians, a lot of the more interesting questions and challenges came from Work Package 3, which is made up of historians and social scientists, and meets regularly via Skype, and in person whenever possible. It is in the meetings for Work Package 3 that the first differences between our 'habits of mind' became clear.

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## **Working across disciplines: what we learned**

In many ways Work Package 3 have had the hardest job. Their official role is to ‘integrate a historians’ committee and a social scientists’ committee that will coordinate and monitor the interactions between Phase 1 (historical data collection) and Phase 2 (social scientific analysis) ...’ (HoNESt, 2018). Historians often strive to explain complexity, reject generalisations and (particularly when engaging in national histories) emphasise the exceptional. Whilst this is suitable for the kind of historical work necessary to understand each country’s unique experience of nuclear power, successes and failures, and provide the basis for comparative histories, such methods or ‘habits’ of mind have not always delivered the kind of work which social scientists on the project expected. Unlike the historians on the project the work of the social scientists is to understand the interactions between society and nuclear energy across Europe and beyond, to find commonalities in failures and successes, and to suggest the mechanisms of engagement and interaction which have led to them. Rather understandably, these different ‘habits of mind’ have involved a lot of mediation in Work Package 3, and this has led to extensive drafting (and re-drafting) of the Short Country Reports over the last eighteen months.

Understanding these different ‘habits of mind’ has been one of the key challenges which we have had to face. In historical research, it is common to focus study and modes of enquiry first onto areas for which a base of sources exists. Rather than pointing out where a lack of sources prevented enquiry, historians often seek to understand what is there rather than listing what isn’t. Coming from a discipline in which it is common to outline criteria for inclusion or exclusion, social scientists on the project frequently asked historians to address openly whether ‘silences’ in their analysis were because certain events were relatively unimportant, or whether there were insufficient sources to understand how important an event was.

Another example of these clashing approaches was triggered by a request from social scientists to include more examples of ‘grassroots activism/activity’. In most early drafts, historians felt that they had covered any or all large activist groups which had formed, or, had explained limits on the formation of groups imposed by dictatorial systems of government. To us it seemed that we had done all we could to include what we felt could be classed as ‘grassroots activism/activity’. As historians, we assumed that the social scientists would come with certain assumptions around what ‘grassroots activism/activity’ was, and that there would be certain criteria which citizen activity would have to meet in order to be called by the term. In fact, the social scientists were using what they thought were clear words without any underlying assumptions. They were asking us for absolutely every interaction between citizen and state which could be found.

Most interestingly, this clash was not actually between our two different habits of mind, but was in fact brought about by our assumptions about each other’s ways of working and ways of meaning. Realisation that, for the social scientists, any well-sourced interaction between state and society was one worth explanation opened the door to a variety of new approaches for historians. Colleagues in Spain had initially stressed that there was no space for ‘grassroots activism’ under Franco’s dictatorial regime, yet in the course of their research had unearthed highly local responses to nuclear power. Whilst no major campaign groups were formed, and complaints rarely reached the central government, the siting of nuclear stations in Spain often prompted many individual citizens to write to their local council expressing concerns and hopes about the new technology. For historians these letters are very interesting – giving examples of how much citizens understood about the technology, and whether local people were in general for or against a nuclear station in their area – but, we assumed, would be of little interest to social scientists (Rubio-Varas et al, 2017). A key element of learning on this project has been to always ask for examples when terms are used, to prevent our assumptions about each others’ habits of mind from getting in the way.

Communication between the disciplines has at times been at cross purposes, and the work done in Work Package 3 in explaining the reality of historical and social scientific work to each discipline has been vital in ensuring that clarity rather than confusion has reigned. The final product, twenty national reports tracking the (sometimes only planned) development of nuclear power across Europe and in the USA, has sought to provide a suitable and, most importantly, readily comparable set of historical work from which the social scientists could conduct the broader analysis required in their groups – Work Packages 4 and 5.<sup>[1]</sup>

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## The Short Country Reports

Although the main purpose of the Short Country Reports was to outline the general relationship between nuclear energy and

society between 1945 and 2010, and to provide a foundation for the work of social scientists, this does not mean that it is their only function. Now that the Reports are complete, we are attempting to understand the links, differences and similarities between the experience of all twenty countries; to understand why some nations' experiences led to a successful and growing nuclear power programme, whilst similar experiences led to programmes which were cancelled, delayed or obstructed. As this work goes on, historians are free to work together (with other historians, and in some cases with social scientists) to engage in new types of analysis about nuclear power and society in Europe (and beyond).

The research undertaken to construct the Short Country Reports stretches to far more than that referenced in the 1,200 pages of Reports available on the project website.<sup>[2]</sup> Whilst for some countries (such as the US and Federal Republic of Germany (West Germany)), an established body of secondary literature could provide the majority of the source-base, for others (such as Spain, Bulgaria, or Greece) primary archival research and oral history interviews undertaken represent the first major forays into those particular national nuclear histories. Not only is a significant proportion of this historical research new, but the research has been undertaken in parallel by a large team of researchers working towards the same goals. This huge collection of knowledge about the way that nuclear power has been experienced and shaped by society, combined with the opportunity to collaborate with colleagues across Europe and in the US has provided the opportunity to ask new questions about nuclear power in a transnational perspective.

Working with each other has not only highlighted differences and clashes in our habits of mind, but also surprising concurrences. As the first drafts of the Short Country Reports were completed in September 2016, a large meeting of HoNESt historians and social scientists in Barcelona sought to understand the value of the research conducted. Given the large amount of research to be read, we split into six groups to read six Short Country Reports, and to find similarities and differences between them which surprised us. Once this had been done, each small group reported back their findings to the meeting. Even though some groups were mainly analysing Reports from countries with large nuclear programmes, or Eastern European countries with their own distinct histories, one of the most unexpected things was that those small presentations often covered the same ground. The process of meeting in person, instead of by Skype, and understanding the commonalities in the national research we had all done individually has been vital in identifying links, and unifying themes which underpin the relationships between society and nuclear energy across Europe.

**Figure 2**



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Historians and social scientists meet in Barcelona to broaden understanding of the work undertaken

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## Future research

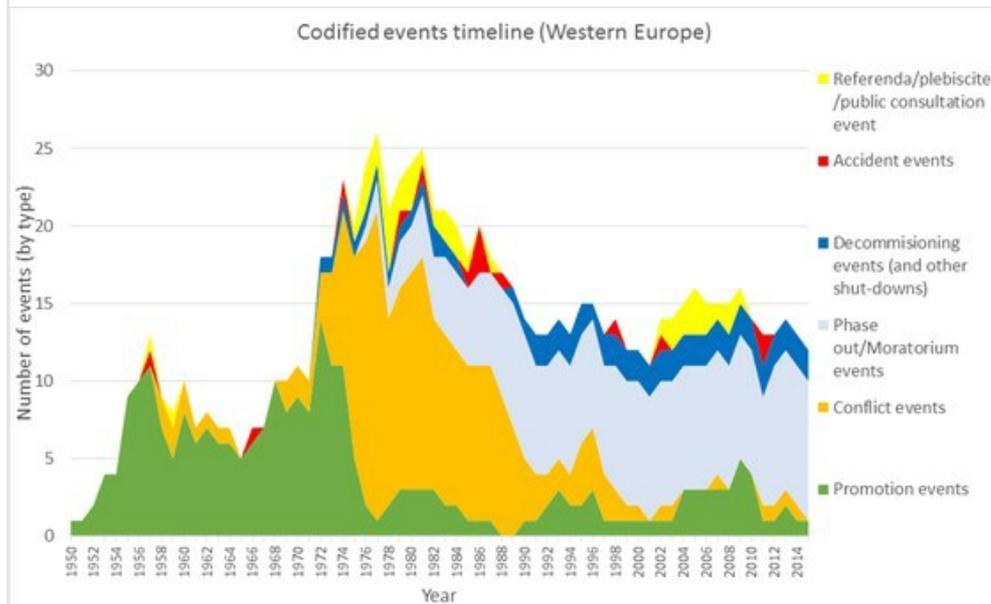
HoNESt's main aim is to further understand how, why and when groups in society engage, positively or negatively, with nuclear power. Given that nuclear power is not a new invention, it is necessary to learn from the past, to build more equitable and successful relationships in the future (whether they include increasing or decreasing the amount of nuclear power that is employed). Although the Country Reports are a very good introduction to our historical research on the way nuclear energy and society have interacted across Europe, they represent only a small portion of the work undertaken. As work on the project continues, we have had to work closely to examine opportunities for new work, and to be ruthless in an effort to focus our collaborative efforts on a manageable number of publications which contribute not just new information, but a new way of understanding the way in which nuclear energy and society have interacted across Europe.

Understanding the mechanisms through which anti-nuclear movements can become part of broader societal concerns is a key part of the second phase of the project's work, as is understanding the role of attempts to communicate (or indeed obfuscate) on both sides of the nuclear debate. By understanding the way in which society and nuclear power have interacted in the past we can learn lessons from past successes and failures (in communication, planning, engagement and representation) that have led to vastly differing national experiences of nuclear power across Europe. Through our collaboration with social scientists, we set the groundwork for a new type of relationship between nuclear power and society.

The scope of this project has also led us to conclusions which would be hard to verify if the work had not been undertaken simultaneously across such a wide range of countries. One of the most interesting findings has been in identifying and

understanding the growth of anti-nuclear protest across Europe. Although the growth of anti-nuclear protest in the 1970s is a key part of many national histories, there is a tendency to generalise when extracting lessons which apply across the continent, or even multiple countries (for example, [Hultman and Koomey, 2013](#)). It is a seductive short-hand to track the growth of anti-nuclear protest to reactor accidents at Three Mile Island (1979) or Chernobyl (1986), and suggest that a safe, and otherwise well-regarded nuclear industry was simply unlucky. However, the HoNESt studies show that well before these accidents occurred, key anti-nuclear movements were being formed and societal perceptions and discourses were changing across Europe and beyond. Accidents, and subsequent attempts by politicians and nuclear industry managers to communicate to the public, reinforced growing scepticism and mistrust about civil nuclear power. A simple attempt to classify the events examined in each of the Country Reports gives us a striking and easy to read picture of the growth of public concern in the early and mid-1970s (see, for example, [Kirchoff and Trischler, 2017](#), pp 25–27; [Meyer, 2017](#), pp 21–38).

**Figure 3**



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A codified events timeline for Western Europe highlights the growth of protest in the early 1970s

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There is no simple explanation for how, why, or specifically when this occurred across Western Europe, but what is clear is that the majority of those opposing civil nuclear power found it an issue through which they could express a variety of wider societal concerns. For example, the anti-nuclear protests at Wyhl (West Germany) in 1975 became focused as much on the citizen's right to protest as they were focused on citizens protesting against civil nuclear power specifically. In Spain, conflicts over nuclear power plants encompassed Basque nationalism, regional and local political concerns and water-usage rights (among others) ([Rubio-Varas et al, pp 36–67](#)). Protests in France were as much connected to concerns of American influence in Europe as they were about the safety of American licensed reactor designs ([Lehtonen et al, p 50](#)). What has struck all of us on this project is that nuclear concerns and nuclear 'events' are never solely nuclear. People's reasons for opposing nuclear power plans range from the highly political or moral on a national or international level to the highly personal and highly local.

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## Differences between countries

Whereas in the West, anti-nuclear and other protest groups were able to take advantage of the concerns raised by accidents, in former Communist states the combination of dictatorship and censorship made the release of radiation at Chernobyl in 1986 a key turning point. However, this should not imply that Chernobyl was the sole factor. The loosening of state control and censorship under Gorbachev was vital in increasing the public's scepticism about the truthfulness of state media, which insisted damage was minimal and radiation was limited to small area. In countries such as Lithuania, Bulgaria, and Belarus, concerns about the response of the State (at the national and Soviet level) directly fed into burgeoning protest against it (Stsiapanau, 2017a; Tchalakov and Hristov, 2017; Stsiapanau, 2017b). In Bulgaria, growing concern about industrial pollution had led to the formation of a campaign group called Ecoglasnost, which grew far stronger after Chernobyl. Calling for openness and transparency in the Communist state about industrial pollution, and challenging the state's response to Chernobyl made Ecoglasnost a major force for change: a number of members went on to become vital to the creation of one of Bulgaria's first democratic political parties, the Union of Democratic Forces (Tchalakov and Hristov, 2017, pp 17–20).

**Figure 4**



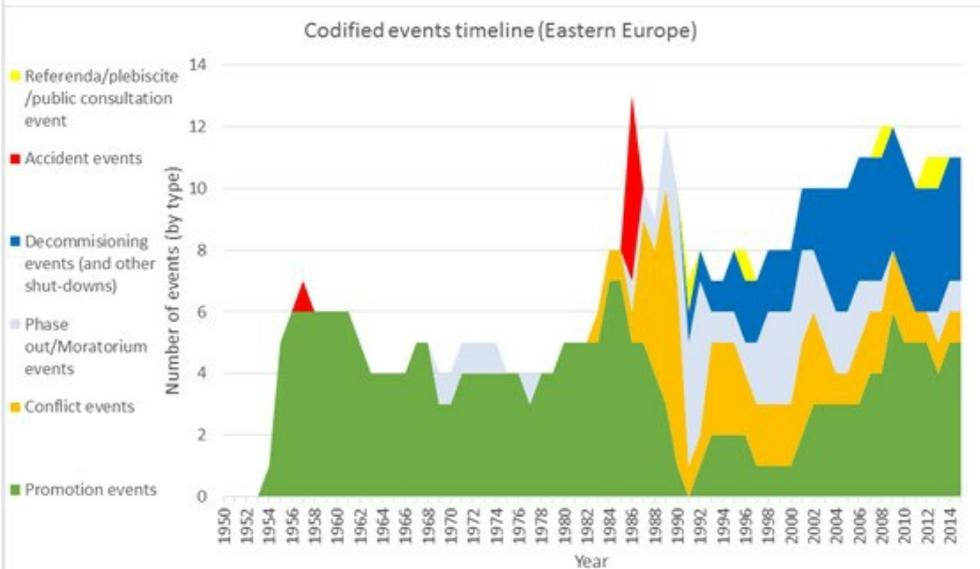
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Decisions about nuclear power can be highly personal and highly local as well as moral or international. It is important to remember that there are many publics involved with nuclear power at national and local levels

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Being able to take this broader view across most of Europe enabled us to challenge existing assumptions about the way nuclear energy has been experienced in the last 75 years. Working together across borders has given us the chance not only to spot similarities and differences in each others' experiences, but also to reflect more closely on the narratives and assumptions at the heart of our standard national histories.

Figure 5



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A codified events timeline for Eastern Europe highlights the importance of Chernobyl and the region's continued commitment to nuclear power

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## The case of the UK

Unlike some other country historians on the project, when working on the UK I was confronted with a vast array of existing literature about the British experience of nuclear power in the twentieth century (Butler and Bud, 2017). However, the majority of research on the UK's experience has focused on the development of nuclear weapons, protest opposed to the development of those weapons, or has discussed histories of civil nuclear policy with little discussion of the public's interactions with it. Since its very beginnings, this division between controversial nuclear weapons, and less controversial nuclear power, has been promoted by key industry and political figures. The Queen's speech at the opening of the UK's first nuclear power station, at Calder Hall in 1957, began by constructing a narrative which separated nuclear weapons as 'a terrifying weapon of destruction' from nuclear power, which would be 'harnessed...for the common good of our community' (The National Archives, AB 16/1864). This was reflected in the growth of major campaign groups such as the Campaign for Nuclear Disarmament (CND), which were 'single issue' well into the 1970s and 1980s (to the extent that early CND pamphlets suggested that weapons scientists should be redeployed to the civil nuclear effort) (Luckin, 1990). This divided narrative is, in part, why the British civil nuclear power programme has been relatively uncontroversial compared with the rest of Europe.

This is not something which I would have felt comfortable writing before becoming a member of HoNESt. If one looked at the UK alone one would conclude that here nuclear power has been highly contested at the local and national level since its very beginnings, and public challenges to the expansion of facilities, testing for waste repositories and new nuclear stations have directly shaped the nuclear industry and forced a more consultative and dialogic approach in its efforts to communicate with the public (Curd, 1990; Luckin, 1990; Welsh, 1993). Organisations such as Friends of the Earth, Greenpeace, and the Council for the Preservation of Rural England [3] have fought for the public's right to be consulted, worked with trades unions to end at-sea-disposal of nuclear waste, and ensured that all nuclear facilities are careful to be 'good neighbours' by sponsoring local leisure and cultural amenities (Bolter, 1996; Parmentier, 1999). However, when compared with similar nations in Western Europe, such as France and West Germany, the public's response to nuclear power specifically has clearly been more muted.

There have been no national-scale protests of tens of thousands, very little violence, and very few heavy-handed interventions by the state.

**Figure 6**



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Comparing anti-nuclear protests and responses in Wyhl, Federal Republic of Germany, 1975, and in Lincolnshire, UK, 1986. The difference in the State's response is clear here

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Whilst reactor accidents at Chernobyl and Fukushima raised new concerns about national nuclear programmes across Europe, the British public remained relatively convinced that British nuclear power was safe. Examining the public's acceptance of government plans for new nuclear power stations after 2006, social scientist Karen Bickerstaff termed this restrained public response 'reluctant acceptance', and it is clear from our historical work that this attitude is not new ([Bickerstaff et al, 2008](#)). A key question which has developed because of our ability to easily compare and contrast these differing national experiences is to explain how and why the British public have largely accepted nuclear power even as reactor accidents abroad have shaken confidence elsewhere. Working on HoNESt allows us to take a transnational and comparative approach to understand how this type of response has been constructed in the UK and how attempts to construct similar narratives elsewhere have been less successful, creating historical research with direct policy relevance.

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## **Reflecting on the research process: how the project structure shaped findings**

Of course, the selection of countries involved and the structure of the project have to some extent shaped our work and our findings. As a project, we are focused almost entirely on civil nuclear energy rather than military applications; on links and similarities with other countries in Europe (and the USA); and very specifically on public interactions with and reactions to nuclear power. The strengths and limitations of this were very apparent in our discussions at the meeting in Barcelona, and similar discussions since. In many countries, civil nuclear power was established in tandem with nuclear weapons programmes, relying heavily on each other for their continued development; European protest groups and the nuclear industry are global, not solely European; and technical, engineering and scientific decisions about nuclear power have had an important impact on public links to and interactions with civil nuclear technologies. Whilst the link between civil and military programmes does require further exploration, the vast majority of existing scholarship examines solely nuclear weapons rather than nuclear power. Our work, which focuses on power rather than weapons seeks to address this imbalance, and provide a way forward for comparison in the future.

## Conclusions

As has been outlined above, the structure of the HoNESt project has offered us opportunities and challenges. Comparing and contrasting the relationship between nuclear energy and society in twenty countries across Europe and beyond has provided an unparalleled opportunity to draw out transnational links, and has highlighted the importance of non-nuclear events, priorities and concerns in shaping societies' responses to nuclear power. Amalgamating such a large amount of data from many national experiences allows us to track these responses not just across time, but also across international (and in some cases continental) borders, providing a much more nuanced picture of the relationship between nuclear power and society. It is hoped that the Short Country Reports will be a useful resource for anyone – be they an academic, a member of the public, or a museum curator – interested learning more about nuclear power in Europe.

Of course, the structure of the project, its primary aims, focuses and even the countries chosen have implications for the conclusions drawn. However, the wide selection of data from across Europe has allowed us to identify large-scale trends. The emphasis on nuclear power, rather than a joint approach considering nuclear weapons programmes may be viewed as limiting. However, in many nations there is a unique story of society's response to civil nuclear programmes which is quite separate from their response to nuclear weapons programmes. Indeed, in nations like the UK the successful narrative construction of this separation has been a key feature since the industry's very beginnings.

As work on the second phase of HoNESt enters its final stages, collaboration among historians, and between historians and social scientists becomes more important. The development of mutual understanding, the ability to understand each other's 'language' (or 'habits of mind' as Jordanova would put it), allows us to combine the experiences of the past with our understanding of the present and gives us new insight into the relationship between nuclear energy and society.

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## Tags

- [History of technology](#)
- [Science and society](#)
- [Public engagement](#)
- [Public history](#)
- [Energy](#)

## Footnotes

1. These are focused on understanding societal engagement with nuclear energy, and on backcasting ideal futures. Further details can be found here: <http://www.honest2020.eu/workpackages>.
2. They can be found here: <http://www.honest2020.eu/d36-short-country-reports>
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