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# One model fits all? How centres of excellence affect research organisation and practices in the humanities

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## ABSTRACT

Centres of Excellence (CoE) have become a common research policy instrument in several OECD countries the last two decades. The CoE schemes are in general modelled on the organisational and research practices in the natural and life sciences. Compared to 'Big science', the humanities have been characterised by more individual research, flat structures, and usually less integration and coordination of research activities. In this article we ask: How does the introduction of CoEs affect the organisation of research and research practices in the humanities? By comparing Norwegian CoEs in different fields of research and studying the specific challenges of the humanities, we find that CoEs increase collaboration between different fields and make disciplinary and organisational boundaries more permeable, but so far they do not substantially alter individual collaboration patterns in the humanities CoEs. They further seem to generate more tensions in their adjacent environments compared to CoEs in other fields.

## KEYWORDS

Research policy; research practices; humanities; centres of excellence; organisation of research

## 1. Introduction

Research funding initiatives aiming for 'excellence' have in the last decade become a common instrument in a number of OECD-countries (Hellström 2018; Cremonini, Hurlings, and Hessels 2017; OECD 2014; Aksnes et al. 2012; Bloch and Sørensen 2015; Orr, Jaeger, and Wespel 2011). One of these, centres of excellence (CoEs), has especially gained wide-spread attention. Key components of the CoE schemes are the allocation of competitive grants and concentration of long-term and flexible research funding to the best research groups. Contrary to competitive grants which target certain strategic topics, the CoE schemes are often open to all scientific fields and topics, and the centres are generated through bottom-up initiatives. The scheme represents as such an institutional innovation as it offers opportunities for scientific renewal by giving the possibility to establish or expand a research unit that can span organisational (department, faculty and university) borders (Laudel and Gläser 2014). The scheme also includes an expectation of interdisciplinarity as the research in the centres is expected to explore emerging fields of science and create cooperation among scholars (Hellström et al. 2018).

In general, funding agencies rarely take epistemic differences into consideration in designing their schemes or instruments, and Big Science, in the sense of science requiring large teams and expensive infrastructure, is often taken as a standard (Morris 2010; Gläser et al. 2010; Fuller 2009). This implies that funding schemes to a large extent apply a one-model-fits all approach. Indicative already in the

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label, centre of excellence schemes imply that the selected research group(s) forms a centre, that is, some organisational structures are required. Moreover, the size of the annual funding from the scheme is not necessarily differentiated between the scientific fields, and research groups in the humanities might receive the same amount as research groups in life science. Given that a faculty of humanities hosts many heterogeneous and often small research units/fields and that research in the humanities often is characterised by rather individualistic practices, the features of the CoE scheme might affect the humanities differently than other fields (Pull, Pferdmenges, and Backes-Gellner 2016).

Recently, there has been a call for studies investigating the potential impact of research policy on research itself (Gläser and Laudel 2016). In this article we ask: *How does the introduction of centres of excellence affect the organisation of research and research practices in the humanities?* The question is approached by comparing Norwegian CoEs in different fields of research and studying the specific challenges of the humanities on several interrelated levels, both the researcher/centre level, and the more general conditions for research at the department and faculty level. The article is structured as follows: We first present a theoretical framework where we build upon previous studies of differences between scientific fields and impacts of policies on research, followed by a presentation of context, methods and data. Then we present our results and analysis, and end with a conclusion and policy recommendations.

## 2. Scientific fields and the organisation of research

Scientific fields are heterogeneous and research is organised in many different ways. Frameworks have been developed to analyse the heterogeneity and these underline the differences in academic cultures and the social organisation of research (Becher and Trowler 2001; Whitley [1984] 2000). Becher and Trowler (2001) argue for a difference between academic groups in the way they organise their professional work in relation to the intellectual task. They suggest a to differentiate between hard/soft and pure/applied, where humanities are often found in the soft-pure category – characterised by a nature of knowledge that is, among other, personal, value-laden, lack of consensus over significant questions to address. Whitley ([1984] 2000) argues that scientific fields differ along two central dimensions: degree of task uncertainty and degree of mutual dependence. The first dimension refers to variation in the visibility, uniformity and stability of task outcomes (technical task uncertainty), and to the uniformity, stability and integration of research strategies and goals (strategic task uncertainty) (Whitley [1984] 2000, 122–30). The clearer defined and the more stable and integrated goals and outcomes, the lower the task uncertainty. The second dimension can also be split in two; functional dependency concerns the degree to which researchers need to use the results and methods of others in order to make valid claims and is e.g. related to standardisation of skills and training programmes. Strategic dependency refers to the 'extent to which researchers have to persuade colleagues of the significance and importance of their problem and approach to obtain a high reputation from them' (Whitley [1984] 2000, 88). In other words, researchers, to different extents, depend on the research produced by others and on agreements about the importance of the research.

Along these dimensions, fields within the humanities will often have a high degree of task uncertainty and a low degree of mutual dependence, the latter also emphasised by Becher and Trowler (2001). Whitley characterises this combination as 'fragmented adhocracy' (Whitley [1984] 2000, 158–59). Fragmented adhocracies produce 'diffuse, discursive knowledge of common sense objects' and research is personal and weakly coordinated across research sites. Standards alter and are open to a variety of interpretations, and the control system is pluralistic and unstable. In other words, a 'fragmented adhocracy' diverge from what funding authorities envisage when they design schemes for centres of excellence which can be said to emphasise the role of the research groups, collaboration, leadership and interdisciplinarity (Hellström 2011; Borlaug 2015a). Compared to other fields – especially in Big Science which often have large coordinated projects with functional

task division, the humanities are characterised by individual researcher practices, flat structures and little co-authorship<sup>1</sup> (Hessels et al. 2019). On this background, we expect the CoE scheme to generate different impacts on the intellectual and social organisation of research in the humanities compared to other fields.

Other studies of policy instruments such as the UK Research Assessment Exercise (now known as the Research Excellence Framework – REF) have pointed to this.<sup>2</sup> Findings indicate that the REF impacts the structures and cultures of humanities and social science departments more than the science departments (Henkel 2000; Morris 2010). These effects were smaller in the natural science disciplines due to their organisational features ‘... and prior acculturation of scientists to competitive and increasingly selective funding systems’ (Morris 2010, 261). A study of impact of research evaluations in Italy by Reale and Seeber (2011) supports this argument. They found that evaluations have limited effect on professors in the natural sciences as these are more used to evaluations compared to their peers in management studies, whom due to the evaluation became more tuned towards fundamental research and publication in international journals. Others have also demonstrated that the fragmented structure of the humanities departments, hosting many small and specialised research units with few scholarly synergies with their neighbouring fields, implies that researchers may have different criteria, standards and meanings of what can be characterised as excellence (Lamont 2009). This fragmented structure can contribute to specific challenges in institutionalising the CoEs in the humanities.

### 3. Researchers as strategic actors and symbolic compliance to funding schemes

During the past decades, the proportion of block-grant funding to higher education institutions has been reduced and project-based funding has increased in most countries (Whitley 2010). This implies that researchers to a larger extent have to apply for external grants and act strategically in order to obtain resources. Resource dependence theory (RDT) assumes that organisations have strategic autonomy to negotiate the uncertain resources available in their environments in the interests of organisational survival and to obtain power (Pfeffer and Salancik 1978). Organisations are rarely self-sufficient and depend as such upon other organisations (resource providers) in the environment for critical resources. For research organisations, the availability of resources varies, and according to RDT, researchers will use their strategic autonomy to reduce their resource uncertainty by looking for new ways of funding their research (Leišytė 2007). Research in the humanities is, however, less resource intensive and resource dependent compared to other fields like biology and physics which have relatively high dependence upon research funds and resources for infrastructures<sup>3</sup> as the main currency in humanities is uninterrupted research time (Gläser et al. 2010; Leišytė, Enders, and de Boer 2010). That being said, the availability of alternative funding sources in the humanities is scarce and often limited, for instance in the European Union framework programmes, humanities and social sciences receive slightly less than 20 percent of the funding available to research (Jacob and Jabrane 2018). The scarcity of funding may therefore push researchers to apply for external research grants and may also increase funding programmes’ impact on research agenda, problem choice and the organisation of research (Leišytė, Enders, and de Boer 2010; Gläser et al. 2010; Gibbons et al. 1994; Ziman 2000). One example on this matter is the Swedish funding programme which supports early career humanities and social science researchers stay in firms and public agencies with the aim of increasing the relevance of the research (Jacob and Jabrane 2018). A key rational for the researchers to apply for this type of funding was precisely the scarcity of other funding alternatives.

There is, however, varying evidence and few studies of whether an adaption to the funding environment is likely to affect the organisation of research and the content of scientific knowledge (Gläser and Laudel 2016). While resource dependence theory emphasises the economic context of the organisation, institutional theory underlines the social context, meaning the norms, values and institutionalised behaviours (Oliver 1997; Scott 2008). This perspective argues, amongst others,

that organisations adapt to environmental pressures by constructing symbols of compliance to environmental change by mimicking other organisations in their field while de-coupling their core activities from the 'perceived' organisational change (DiMaggio and Powel 1983; Meyer and Rowan 1977). According to this perspective, researchers may adapt their research proposals and application style to the requirements of the funding agencies and once funded, they may still pursue their own research agenda, and funding programmes may as such have relatively minimal impact on research itself (Leišytė, Enders, and de Boer 2010). Studies show that external funding seems to have an impact on the organisation of research, but not on research practices. Ylijoki (2003), for example, found that the growth of external funding in the humanities contributed to a change from individualistic to more collective, project-oriented research, but the researchers continued to work in traditional ways *within* the projects.

#### 4. Research questions, data and context

In this paper we investigate if and in what ways CoEs affect the organisation of research and research practices in the humanities, and to what extent this may differ from other academic fields. The research questions derive from the conclusions of the above sections: Fields of research in the humanities are often characterised by higher task uncertainty and a lower mutual dependence than other fields, implying that the humanities are typically characterised by individual researchers, flat structures and little coordination of research. Based on previous studies (Ylijoki 2003), we may expect that the CoE scheme impacts the formal structures of research in the humanities, but to a lesser extent the internal research practices and its individualistic nature. Comparing between the scientific fields, we may further presume that the scheme's terms and requirements for collaboration and expectations of interdisciplinarity will affect the fields differently depending on degrees of dependence and uncertainty. The impact of CoE schemes may furthermore depend on the reactions of the surrounding research environments and the university leadership, their attitudes towards the centres and willingness to embrace and adopt the CoE policy. We expect this may play out differently in the humanities – having many and small research fields – compared to other fields (Lamont 2009). The extent to which changes are symbolic adaptations to the scheme or new research practices (in the centres as well as in their surroundings), may further depend on whether CoE terms and organisation are perceived as positive or negative for the humanities, and the perceived possibilities for adapting the CoE idea to the needs of the various research fields within the humanities. On the one hand, the CoE scheme may be perceived as a good way of filling the needs for external funding, increasing the coordination of research and building good research environments. On the other hand, it may be perceived as inadequate for such purposes and damaging for the CoEs' environments, e.g. because CoEs attract much research talents and resources to specific research topics

Based on the above we investigate the following questions:

Has the CoE scheme increased the collaboration between researchers and disciplines in the humanities?

To what extent are changes merely symbolic adoptions in order to comply with the formal requirements of the CoE scheme, and to what extent are new research practices and/or research subjects instigated?

What are the impacts of CoEs on adjacent environments?

##### 4.1. Data sources

The data for studying these questions derive from multiple sources. The first is a study of the CoE scheme in Norway (Langfeldt et al. 2013), involving questionnaire replies from 20 CoEs and semi-structured interviews with 10 centre leaders, as well as interviews with CoE board members, research fellows and partners, representatives of CoE host institutions and non-successful CoE applicants

(‘silver medallists’), in total 76 informants. This study covered all Norwegian CoEs in 2010, and hence a broad set of research areas, including three CoEs within the humanities. The second project is an interview-based study of four Centres of Excellence and Centres of Competence in 2009, representing different scientific fields in Norway, where 5 out of 16 interviews relate to the humanities (Borlaug 2015b). The centre leader and central and senior researchers were interviewed. These sources were supplemented by three additional interviews in 2013 with researchers and university managers involved in a CoE within the humanities, which filled in the identified gaps in existing data. We also apply document analyses of mid-term evaluations of the CoEs, and their annual reports and their institutional websites.

#### **4.2. The CoE scheme and its national policy context**

The terms, objectives and policy context of the Norwegian CoE scheme constitute the background to the study. Based on open calls for proposals and a two-stage review process by international expert panels, the Norwegian CoE scheme provides generous long-term, lump-sum funding for the selected research groups. The aims of the scheme are to promote cutting-edge basic research, to strengthen the internationalisation of Norwegian research and to promote researcher recruitment. The scheme was first announced in 2002, and so far there has been a new call for proposals every fifth year. It is administered by the Research Council of Norway (RCN) and currently comprises 23 CoEs, all awarded for a five + five year period. CoEs may be awarded to groups within all disciplines; the scheme contains no thematic priorities. The CoE terms are seen as highly attractive among Norwegian scholars and being awarded a CoE brings high prestige. Each centre receives a CoE grant of between one and three M Euro per year and there are no restrictions on the size of the centres or the CoE’s possibilities to receive other grants. CoEs get substantial co-funding from their host institutions, and most often also large resources from other competitive funding programmes.

Norwegian universities enjoy considerable block-funding compared to other European universities, which are often more dependent upon project-based grants. About sixty-five percent of the total R&D expenditures at Norwegian universities are based on general university grants, and this figure is higher within the humanities (81 percent) than in other fields.<sup>4</sup> The Research Council of Norway administers all major national grant schemes, including the CoE scheme and the Norwegian scheme for independent research projects which is a major source for external research grants for the humanities at the universities.

Another characteristic of Norwegian universities is that they are built upon the Humboltian model that postulates the unity of research and teaching. The job description of tenured researchers is therefore relatively fixed and involves little flexibility: Norwegian professors have about half their time reserved for research and half their time reserved for teaching. This specific feature is of importance for the discussion of the CoE scheme’s impact on the field since the most important resource for research within the humanities is uninterrupted research time.

### **5. Results and analysis**

This section is divided into three categories of impact of the CoE scheme which are derived from the data: collaboration, interdisciplinarity and general research conditions.

#### **5.1. Impact on collaboration**

The Norwegian CoE scheme encourages physical co-localisation of researchers affiliated with the centre. This is expected to facilitate and institutionalise collaboration and interdisciplinarity. How does this impact the individualistic researchers in the humanities? One humanities centre leader

claimed: '(...) the whole idea of collaborative projects is somewhat new for the Norwegian colleagues involved in [my field]'. The same person said:

In the humanities there is a long tradition of individuals doing research and not doing it as team work, even though of course they have people they talk to and discuss their projects with. But it's not like there is one overall project and different people contribute with different aspects to the solution of the questions they have raised. And [this individualistic tradition] is particularly strong in Norway.

This tradition of individualistic work may pose a challenge in the process of establishing a new research unit and creating an environment for collaboration. One dean underlined this by referring to a great deal of conflict when one of the centres was established. This concerned especially the issues of management and being a part of a research group as the researchers were used to a flat organisational structure. Through the scheme they were exposed to issues of hierarchy and research management, and according to several of the informants, much time was spent on coming to terms with this. One CoE leader said: 'Leadership roles are somewhat more important. The seniors take responsibility, but it may still be a rather flat structure in the groups'.

Several of the informants emphasised that the centres had contributed to increase the number of PhD students and post docs and to enhance the collaboration between senior and junior researchers, as seniors engaged more in the work of the juniors. Weekly seminars, lunches and reading groups have decreased previous distance. One CoE leader explained the change in this way:

Previously people were in their individual offices, now we have groups with weekly meetings, in total 10–12 reading groups and seminars. And often researchers participate in multiple groups. Such enormous activity is seldom in the humanities. So far there are not many researchers co-authoring publications, but still much more frequently than previously.

The centres contribute to increased collaborative activities – within the fields and across departments. A search through the publication lists of key researchers in the humanities CoEs, confirmed some increase in co-authorship for one of the three humanities CoEs. A similar increase in key researchers' co-authorship was not found for the other humanities CoEs studied. For one of these, unchanged collaboration patterns among the senior researchers were also corroborated by informants. This centre included researchers from several fields and one of its goals was interdisciplinary research, but both the centre leader and the head of the department said that the collaboration in the centre – the team effect – was a symbolic act. The senior researchers continued to collaborate with the same persons (if any) as prior to the centre grant. A likely explanation of these differences between the centres, is the different degrees of mutual dependence: the research topics and questions of the CoEs demanded to varying extents (new) interaction and collaboration. Notably, the CoEs were in different humanities fields, some characterised by more regular research collaboration than others.

## **5.2. Impact on interdisciplinarity**

Despite these variations in co-authorship and individual collaboration patterns, the size of the grant had expanded the 'scope of collaboration' in all the centres, in the sense that the researchers to a larger extent made strategic alliances with research groups in other departments and faculties. This was illustrated by one humanities CoE leader:

Another thing is that these centres of excellence are large research centres, a lot of money goes into these centres and a little group of (researchers) who just want to do some research that's not enough for filling the framework as it has been predetermined for a research centre. We thought this was an opportunity to try to bring in people from other fields who are in a way interested in the same phenomena, but from their respective points of view.

Hence, the centre scheme provided the opportunity for establishing new and extended relations across fields and research areas. Several of the informants underlined that the CoE grant had increased their contact with researchers in other departments. Moreover, one of the CoEs underlined

interdisciplinarity as a key strategy for activities after the CoE period. By collaborating with other departments and making their research relevant for a variety of teaching programmes, they hoped to ensure resources and goodwill also when the CoE grant is terminated. In this particular case, interdisciplinarity seemed to be a deliberate strategy for reducing resource uncertainty.

The role of the CoE grant in facilitating interdisciplinarity was furthermore corroborated by informants outside the CoEs. Two interviewed unsuccessful applicants for CoEs within the humanities ('silver medallists') underlined the importance of large and long-term funding for facilitating interdisciplinarity. They both managed to go ahead with part of the applied projects (as 'silver medallist' in the competition they were awarded some extra funding from their host institution), but emphasised that they had not been able to implement the more interdisciplinary plans and collaborations. One applicant pointed out that they had not obtained funding for their social science partner and therefore not been able to include any social scientists in the project. The other applicant explained that they had pursued the main research idea within smaller projects, but not been able to combine the different subfields as planned in the CoE applications.

Taken together, the data indicate that CoEs in humanities enable larger projects and more interaction with other fields, but that much of the core research practices remain individualistic, e.g. without collaborative research or a general increase in co-publications. However, one of the CoEs had an increase in co-authorship. There were also somewhat different stories in terms of the role of multi-disciplinary collaboration in the humanities CoEs. In one of the cases, an already established collaboration with other fields continued and expanded in the CoE. In another case, there were ambitious plans for extensive new collaboration across disciplines, and even if these plans did not seem to be implemented and some characterised the collaboration as symbolic, the research activities of this CoE were perceived as very successful. In the third case, the collaboration with other fields (including the social sciences) increased during the CoE period, in part as a strategy for ensuring resources after the CoE period.

It should be added that the majority of the Norwegian CoEs reported increased interdisciplinarity and collaboration with other departments. However, these practices seem to be far more common and institutionalised in other fields than in the humanities. In the humanities, we see an increase in the interaction frequency, and to some extent in collaborate research and in one case in co-authorship, whereas in other CoEs we observed interdisciplinarity that enabled pursuing new research lines and solving complex tasks.

### **5.3. Impact on more general research conditions**

The combination of large grants, 'low cost' research in the humanities and research time as the main 'currency', also had some particular implications for the research conditions of the involved researches, as well as for their host departments/faculties. Some informants argued that centres in the humanities seemed to have challenges in spending the grant, as they needed little equipment or infrastructure for research. It is 'cheap research' as underlined by one of the interviewed deans. One head of a humanities host department believed that the centre compensated for low-cost research by too much activity in terms of seminars and presentations. This was seen as affecting research negatively since the researchers had less time for their own research. However, the grant enabled the researchers to buy free from teaching duties to increase their time for research, but this strategy had some drawbacks. Firstly, all the humanities CoEs reported some decreased involvement in teaching at the undergraduate level as well as at the master level, resulting in less coverage of the CoE's research topics in the teaching curriculum.<sup>5</sup> Compared to other fields this seemed to be a more widespread challenge in the humanities. Centres in other fields reported that it was primarily (and often only) the centre leader that did not have any teaching. Secondly, buying time for research implied that the administrative tasks (committee work etc.) in some cases increased for those who were not affiliated with the centre and this augmented the tensions between the centre and its adjacent environments. However, the increase in administrative

tasks seemed to be a problem in several other departments and faculties as well and was not exclusively found in the humanities.

Another issue was that several of the colleagues on the outside disagreed on the value of the research topic of the centre and contested the degree to which it could be considered as excellent research (cf. Lamont 2009). We saw this in two centres in the humanities, and according to one department head this led critical researchers to take active distance from the centre instead of participating in the centre's activities, thus decreasing the possibilities to generate positive synergies between the centre, the hosting department and the faculty. A centre leader also emphasised that the relevance of research in the humanities is not always self-evident and this might contribute to greater dissonance regarding what research is considered as excellent. These sorts of tensions were more pronounced in the humanities than the other fields. We also found the same tensions in centres characterised by interdisciplinarity, where (outside the humanities) a few centre leaders experienced scepticism from peers which contested the 'excellence' of the research. Generally, potential tensions in the other centres seemed to relate to organisational conditions rather than the content or the perceived excellence of the scientific knowledge.

We further observed that the faculties and departments hosting centres in the humanities faced different challenges than faculties in other fields. These challenges were related to the relatively small fields that constitute the faculty of humanities and their characteristics. According to the head of the department that hosted one CoE, the fact that the CoE scheme is modelled on Big Science is a detriment to the humanities. Small fields of research lack enough breadth to gather researchers for a centre, and as such, some fields in the humanities are considered as left out of the competition for the grant. Even if applicable to some fields within the humanities the 'size-terms' of the CoE scheme limits its relevance to much of the humanities as it is currently organised. However, as noted above, the CoE scheme offered the opportunity for interdisciplinarity and collaboration across fields, departments and faculties, and to re-organise to meet the terms of the scheme.

While the size of the grant generated challenges in terms of spending the resources, it was important for generating impacts in the fields. One CoE humanities host department head underlined that the size of the CoE grant had enabled the field to become internationally renowned and 'it has put \*the city\* on the map'. This would not have happened to the same extent with a smaller grant.

## 6. Conclusions and implications

A key purpose of CoEs is collaboration between researchers on overall research questions and across fields and disciplines (Hellström et al. 2018). In our studies we observed to some extent increased research collaboration and more permeable disciplinary boundaries within the humanities as a result of having a CoEs. The studied centres included researchers from multiple disciplines and subfields interacting in weekly seminars and reading groups, and one centre also had an increase in co-authored scientific publications. Still, in general, the degree of mutual dependence between the researchers seemed low, and some of the increase in collaboration was explained as symbolic acts by the informants. To some extent the humanities CoEs were constructs to comply with the funding agency's requirements for centre structures, whereas the research itself was still basically individualistic. Research questions in the humanities do not often demand establishing research groups with task division and there is no evident reason for initiating co-authorship. This resonates with previous studies of impact of external funding in the humanities (Ylijoki 2003).

On the other hand, the centres pursued some overall research questions and the relatively high increase in activities like seminars, reading groups and general interaction likely increased both coordination and task division among the involved researchers, even though the core research activities were individual. The increase in the coordination of research problems and results, and subsequent division of labour, may imply some strengthened mutual dependence in the involved fields of research – e.g. in terms of the degree to which the researchers build on each other's results and methods to make valid claims (Whitley [1984] 2000). Further examination of this question,

and whether CoEs have a more general impact on mutual dependence within humanities research, remains for future studies.

The CoEs are part of general policy trends that encourage project organisation and interdisciplinarity – both trends require additional funds for research if to be implemented within the humanities. Notably, the CoEs encompass large numbers of PhDs and postdocs and train a new generation of researchers who have developed their research questions in closer dialogue with colleagues and may therefore be more apt, than their peers outside the centres, to collaborate both within and across subdisciplines to answer their questions – with or without co-authorship. The socialisation dimension of CoEs may also be a topic for further studies.

A general observation of the Norwegian CoE scheme – regardless of academic field – is that it tends to have a great impact on the host organisations, especially in terms of pushing for strategic priorities. The conditions and the status of the scheme are attractive, and most CoEs attract additional external funding of importance to the host organisation. Key actors at the organisational level, as well as in the departments, are eager to compete for CoEs – both for obtaining the long-term generous funding and the prestige attached to it. It is as such an important instrument for the hosts.

However, as noted, research within the humanities is low-cost compared to most fields within the natural and medical sciences. It differs from other fields of research – not only by having less needs for group structures, coordination and task division, but also in less needs for research infrastructures. Individual and uninterrupted research time is as such the most important ‘currency’ in the humanities. Even if the CoE scheme is not designed for such needs, the flexible long-term funding provided by the CoE scheme is as attractive in the humanities as in other fields of research. The adaptation to the scheme creates therefore some specific challenges. When individual research time is the most important ‘currency’ and a generous research grant is obtained, there is both an incentive and option to buy free from teaching duties – which in some cases entailed negative impacts both for the studied CoEs and their local environment. Another issue is that the size of the grant implied a substantial scaling up of the research in one field, which generated strained relations to adjacent environments of the CoEs. Hence, adapting the CoE terms to the needs of the humanities entailed some drawbacks both for teaching and in some cases a negative attitude in the adjacent environment. As a result, some deans and department heads doubted the adequacy of regular CoE terms for the humanities.

Moreover, substantial scaling up of the activities in one among many small humanities fields, or in one specialised topic within a field, may imply challenges when the CoE grant terminates and the activities are to be integrated into the ordinary faculty/department budget. External funding opportunities in the humanities are considered scarce, and the expectations and potential of maintaining a high activity and funding level after the CoE period are therefore low. The studied CoEs have recruited substantial numbers of PhDs and postdocs and tried to secure a future position of their subfield within their host department or faculty. To enable this, different strategies were employed by the centres, including applying for additional funding, relying upon internal funding from the faculty, or interdisciplinarity collaboration to highlight their research’s relevance to other fields.

As we have shown, CoE terms and conditions may impact the humanities in different ways. Studies comparing the varying impact of governance instruments on different fields indicate that high performing researchers do not experience resource constraints, while low performing researchers pursue a variety of strategies to solve resource constraints and this seems to occur independently of fields (Leišytė, Enders, and de Boer 2010; Gläser et al. 2010). In our studies, all centres are high performing groups which in tough competition with others have received a prestigious grant, and their different experiences indicate that resource strategies vary by field of research and the availability of funding sources.

Returning to our main questions, how CoEs affect the organisation of research and research practices in the humanities and in their adjacent environments, our results show that the humanities experience particular impacts compared to other fields and policymakers may take this into account when designing such schemes. CoE grants are very attractive as they provide long-term

flexible funding and enable more extensive research lines. The size of the grant itself adds to the prestige and attractiveness of the grant. There are few other funding schemes offering such opportunities for recruiting talent, building expertise and pursuing research questions in the humanities. The fact that the CoE scheme requires an establishment and organisation of a research group with a centre leader – which go against the individualistic nature and flat structures of many fields of the humanities – had in our cases relatively large impacts on organisation of the research, but less on publication practices. One may expect, however, that long-term proximity of fields and subfields may also impact research practices and content.

The concentration of resources to certain fields, potential negative impact on the adjacent environments and local conflicts, limits the local enthusiasm for the CoE scheme. Negative impacts may lead to some reluctance – at least from a leadership perspective – to support future (large) CoEs in the humanities as they may be difficult to re-integrate into the ordinary activities. The terms and requirements of the CoEs may further lead to symbolic compliance. On the one hand – taking our findings into account, it might be appropriate to adjust the size of the grant to the needs of the different fields. On the other hand, such adjustments may imply less probability of CoE schemes to influence the research practices in the humanities. It should be noted that our analysis rests on data from the Norwegian research context and the first and second generations of CoEs. As indicated above, over time future generations of researchers within the humanities, of which a substantial part got their training within the collaborative and interdisciplinary context of a CoE, may instigate a change in the organisation and content of humanities research.

## Notes

1. Even if the co-authorship rate has increased in the humanities over the last decades, it is still much lower than in other fields of research (Kyvik 2003; Larivière, Gingras, and Archambault 2006; Ossenblok, Verleysen, and Engels 2014). Notably, there are substantial differences between disciplines, and higher co-authorship rate e.g. in linguistics than in literature (Ossenblok, Verleysen, and Engels 2014), and moves towards comparative research in the social sciences and the humanities call for collaborative projects (Jacobs and Meek 2013:342).
2. REF assesses the research performance of individual departments within UK universities.
3. Figures from Norwegian R&D statistics show that the total R&D expenditure by staff member (full time equivalents) in the humanities is about 75 per cent of R&D expenditure the natural sciences (higher education sector, figures for 2011, NIFU R&D statistics: <http://www.nifu.no/en/statistikk/databaser-og-registre/rd-statistics-bank/>).
4. Source 'Det norske forsknings- og innovasjonssystemet' <http://www.forskingsradet.no/prognett-indikatorrapporten/Forside/1224698172624>, Tables A.7.2 and A.7.5. Figures for 2015.
5. By not securing sufficient teaching for undergraduate and master students in the subfield of the CoE, the centres pull up the ladder and risk that their field of research is not covered in the teaching plans, thus missing potential recruits.

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## References

- Aksnes, D., M. Benner, S. B. Borlaug, H. Foss Hansen, E. Kallerud, E. Kristiansen, L. Langfeldt, A. Pelkonen, and G. Sivertsen. 2012. "Centres of Excellence in the Nordic Countries. A Comparative Study of Research Excellence Policy and Excellence Centre Schemes in Denmark, Finland, Norway and Sweden." NIFU Working Paper 4/2012. Oslo.
- Becher, T., and P. Trowler. 2001. *Academic Tribes and Territories: Intellectual Enquiry and the Culture of Disciplines*. London: Society for Research into Higher Education and Open University Press.

- Bloch, C., and M. P. Sørensen. 2015. "The Size of Research Funding: Trends and Implications." *Science and Public Policy* 42 (1): 30–43.
- Borlaug, S. B. 2015a. "Moral Hazard and Adverse Selection in Research Funding: Centres of Excellence in Norway and Sweden." *Science and Public Policy* 43 (3): 352–62.
- Borlaug, S. B. 2015b. "Excellence and Innovation in Research Policy – External Steering and Internal Responses." PhD, Thesis. University of Oslo, Oslo.
- Cremonini, L., E. Horlings, and L. K. Hessels. 2017. "Different Recipes for the Same Dish: Comparing Policies for Scientific Excellence Across Different Countries." *Science and Public Policy* 45 (2): 232–45.
- DiMaggio, P. J., and W. W. Powel. 1983. "The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields." *American Sociological Review* 48: 147–60.
- Fuller, S. 2009. *The Governance of Science*. Buckingham: Open University Press.
- Gibbons, M., C. Limoges, H. Nowotny, S. Schwartzman, P. Scott, and M. Trow. 1994. *The New Production of Knowledge*. London: Sage.
- Gläser, J., S. Lange, G. Laudel, and U. Schimank. 2010. "The Limits of Universality. How Field-Specific Epistemic Conditions Affect Authority Relations and their Consequences." In *Reconfiguring Knowledge Production- Changing Authority Relationships in the Sciences and their Consequences for Intellectual Innovation*, edited by R. Whitley, J. Gläser, and L. Engwall, 291–324. Oxford: Oxford university press.
- Gläser, J., and G. Laudel. 2016. "Governing Science: How Science Policy Shapes Research Content." *European Journal of Sociology* 57 (1): 117–68.
- Hellström, T. 2011. "Homing in on Excellence: Dimensions of Appraisal in Center of Excellence Program Evaluations." *Evaluation* 17 (2): 117–31.
- Hellström, T. 2018. "Centres of Excellence and Capacity Building: From Strategy to Impact." *Science and Public Policy*, 45, 543–52, scx082, <https://doi.org/10.1093/scipol/scx082>.
- Hellström, T., E. Brattström, and L. Jabrane. 2018. "Governing Interdisciplinary Cooperation in Centers of Excellence." *Studies in Higher Education* 43 (10): 1763–77 .
- Henkel, M. 2000. *Academic Identities and Policy Change in Higher Education*. London: Jessica Kingsley.
- Hessels, L. K., T. Franssen, W. Scholten, and S. de Rijcke. 2019. "Variation in Valuation: How Research Groups Accumulate Credibility in Four Epistemic Cultures." *Minerva* 57 (2): 127–49.
- Jacob, M., and L. Jabrane. 2018. "Being There in the Flex: Humanities and Social Science Collaborations with Nonacademic Actors." *Studies in Higher Education* 43 (10): 1718–29.
- Jacob, M., and L. V. Meek. 2013. "Scientific Mobility and International Research Networks: Trends and Policy Tools for Promoting Research Excellence and Capacity Building." *Studies in Higher Education* 38 (3): 331–44.
- Kyvik, S. 2003. "Changing Trends in Publishing Behaviour among University Faculty, 1980–2000." *Scientometrics* 58 (1): 35–48.
- Lamont, M. 2009. *How Professors Think. Inside the Curious World of Academic Judgment*. Cambridge: Harvard University Press.
- Langfeldt, L., S. B. Borlaug, D. W. Aksnes, M. Benner, H. F. Hansen, E. Kallerud, E. H. Kristiansen, A. Pelkonen, and G. Sivertsen. 2013. "Excellence Initiatives in Nordic Research Policies: Policy Issues – Tensions and Options." NIFU Working Paper 10/2013. Oslo.
- Larivière, V., Y. Gingras, and É Archambault. 2006. "Canadian Collaboration Networks: A Comparative Analysis of the Natural Sciences, Social Sciences and the Humanities." *Scientometrics* 68 (3): 519–33 .
- Laudel, G., and J. Gläser. 2014. "Beyond Breakthrough Research: Epistemic Properties of Research and their Consequences for Research Funding." *Research Policy* 43 (7): 1204–1216.
- Leišytė, L. 2007. *University governance and academic research: Case studies of research units in Dutch and English universities*, University of Twente.
- Leišytė, L., J. Enders, and H. de Boer. 2010. "Mediating Problem Choice: Academic Researchers' Responses to Changes in their Institutional Environment." In *Reconfiguring Knowledge Production- Changing Authority Relationships in the Sciences and their Consequences for Intellectual Innovation*, edited by R. Whitley, J. Gläser, and L. Engwall, 266–290. Oxford: Oxford university press.
- Meyer, J. W., and B. Rowan. 1977. "Institutionalized Organizations: Formal Structure as Myth and Ceremony." *American Journal of Sociology* 83: 340–63.
- Morris, N. 2010. "Authority Relations as Condition for, and Outcome of, Shifts in Governance: The Limited Impact of the UK Research Assessment Exercise on the Biosciences." In *Reconfiguring Knowledge Production- Changing Authority Relationships in the Sciences and their Consequences for Intellectual Innovation*, edited by R. Whitley, J. Gläser, and L. Engwall, 239–265. Oxford: Oxford university press.
- OECD. 2014. *Promoting Research Excellence: New Approaches to Funding*. Paris: OECD Publishing. [doi:10.1787/9789264207462-en](https://doi.org/10.1787/9789264207462-en).
- Oliver, C. 1997. "Sustainable Competitive Advantage: Combining Institutional and Resource Based Views." *Strategic Management Journal* 18 (9): 697–713.
- Orr, D., M. Jaeger, and J. Wespel. 2011. *New Forms of Incentive Funding for Public Research: A Concept Paper on Research Excellence Initiatives*. Paris: OECD.

- Ossenblok, T. L. B., F. T. Verleysen, and T. C. E. Engels. 2014. "Coauthorship of Journal Articles and Book Chapters in the Social Sciences and Humanities (2000–2010)." *Journal of The Association for Information Science and Technology* 65 (5): 882–97.
- Pull, K., B. Pferdmenges, and U. Backes-Gellner. 2016. "Composition of junior research groups and PhD completion rate: disciplinary differences and policy implications". *Studies in Higher Education*, 41 (11), 2061–77.
- Pfeffer, J., and G. R. Salancik. 1978. *The External Control of Organizations*. New York: Harper and Row.
- Reale, E., and M. Seeber. 2011. "Organisation Response to Institutional Pressures in Higher Education: The Important Role of the Disciplines." *Higher Education* 61 (1): 1–22.
- Scott, W. R. 2008. *Institutions and Organizations: Ideas and Interests*. Los Angeles: Sage.
- Whitley, R. (1984) 2000. *The Intellectual and Social Organization of the Sciences*. 2nd ed. Aufl. Oxford: Oxford University Press.
- Whitley, R. 2010. "Reconfiguring the Public Sciences: The Impact of Governance Changes in Authority and Innovation in Public Science Systems." In R. Whitley, J. Gläser, & L. Engwall (Eds.), *Reconfiguring Knowledge Production: Changing Authority Relationships in the Sciences and their Consequences for Intellectual Innovation*, 3–47. Oxford: Oxford University Press.
- Ylijoki, O.-L. 2003. "Entangled in Academic Capitalism? A Case-Study on Changing Ideals and Practices of University Research." *Higher Education* 45: 307–335.
- Ziman, John. 2000. *Real Science: What it is, and What it Means*. Cambridge: Cambridge University Press.