



The humanities in Norway: research, research organisation and external engagement

Magnus Gulbrandsen

Report 2016:36

NIFU

The humanities in Norway: research, research organisation and external engagement

Magnus Gulbrandsen

Report 2016:36

Report 2016:36

Published by Nordic Institute for Studies in Innovation, Research and Education (NIFU)
Address P.O. Box 2815 Tøyen, NO-0608 Oslo. Office address: Økerneveien 9, NO-0653 Oslo.

Project No. 12820724

Customer Norges forskningsråd
Address Postboks 564, 1327 Lysaker Oslo
Besøksadresse: Drammensveien 288, 0283 Oslo

Design Cathrine Årving
Photo Shutterstock

ISBN 978-82-327-0229-9
ISSN 1892-2597 (online)

www.nifu.no

Preface

The humanities are widely discussed in the science policy debate in Norway. Several books have been published on the field's nature and uniqueness, and its framework conditions are discussed in leading newspapers and especially in the weekly Morgenbladet, which for a long time ran a series about the "crisis in the humanities". The field is currently undergoing one of the regular large-scale evaluations coordinated by the Research Council of Norway, and a White Paper on the humanities will be published in 2017.

For all these purposes it is important to base them on solid empirical knowledge about what humanities researchers actually do, how they organise their research activities and how they collaborate inside and outside the higher education sector. In this report new analyses are carried out on a large-scale dataset based on a survey to tenured scientific personnel in Norwegian universities and colleges.

This project has been funded by the Research Council of Norway and the practical work has been carried out by NIFU and the project manager Magnus Gulbrandsen.

Oslo, 07 Oct 2016

Sveinung Skule
Director

Espen Solberg
Head of Research

Table of contents

1	Introduction	7
1.1	Data used in the report	7
1.2	Humanities in Norway: important aspects	8
2	Research profiles and activities	10
2.1	Basic information about the survey respondents	10
2.2	Organisation of research activities	11
2.2.1	Perspectives on management, priorities and external board members.....	12
2.2.2	Organisation of research activities	16
2.2.3	Research group perspectives	20
2.2.4	Students' engagement in research work	22
2.3	Funding of research.....	25
2.4	Research orientation and publication points.....	27
2.4.1	Basic or applied research?	27
2.4.2	Publications	28
2.5	Summary	29
3	External collaboration and engagement	31
3.1	Non-academic work experience	31
3.2	External engagement – different channels	32
3.3	Collaboration with external organisations.....	35
3.4	Summary	37
4	Conclusions	39
	References	42
	Appendix	43
	List of tables	44
	List of figures	45

1 Introduction

The main aim of this report is to provide an empirically based input to the humanities evaluation panels about central issues about the humanities in Norway primarily seen from the individual staff member. It will highlight central issues about the researchers' activity profiles, how they carry out their research work, their funding and collaboration patterns, and their dissemination and contact with external actors. As such the report may also be of relevance to others interested in the profiles of humanities researchers.

1.1 Data used in the report

The report utilises a large-scale survey among tenured university and college staff carried out by the Nordic Institute for Studies of Innovation, Research and Education (NIFU) in 2013. Many different issues were touched upon ranging from teaching activities, internationalisation, leadership, research activities, dissemination and the so-called "third mission" related to dissemination, external contacts and innovation. This report deals first and foremost with research and third mission activities.

The survey was sent to almost 80 per cent of all the country's scientific staff in universities and colleges, which means that it is close to a census and captures a wide variety of perspectives from different higher education institutions and disciplines. The response rate was just above 50 per cent, which is generally considered very good for surveys of this type. Tests were carried out to see if the respondents differ in significant way from the non-respondents. No such differences were found and the survey is considered representative of the population of tenured researchers in universities and colleges. For more information about the methodology see Waagene (2014) and Thune et al. (2014 and 2016). This large and representative dataset makes even descriptive findings concerning differences within the humanities and between humanities and other fields are interesting in themselves. In addition, it allows for various statistical tests for the significance of differences, controlling for a number of variables.

Some perspectives from a forthcoming book on how the humanities in Europe are valued will be used as well to frame issues and findings (Benneworth et al. 2016). The book, which is expected to be published in early November by Palgrave, discusses the situation of and debate surrounding the humanities in the Netherlands, Ireland and Norway.

Since it is based on data collected among the academic staff, the central contribution of this report is therefore the bottom-up perspective and the "view from the floor". R&D statistics and other macro- and meso-level data often gives only a bird's eye view on research activities with rough comparisons between fields and over time. Although the survey does not contain information on which sub-fields of the humanities the respondents come from, it allows us to look at the heterogeneity within the

humanities to a much greater extent than other data. In addition, it is possible to investigate the specific character of humanities by comparing with other fields. Even within specialised sub-fields in the humanities we can expect that there is a great diversity in research and collaboration profiles of the individuals. The R&D statistics has a similar challenge – more than half of the humanities research is here classified as “other” (rather than “history”, “philosophy” etc.), meaning that it offers little in terms of comparisons between disciplines within the humanities. The survey will at least allow us to depict the heterogeneity within the field.

1.2 Humanities in Norway: important aspects

Humanities research is a somewhat special field in Norway and many other countries in the sense that there is a great debate about the field in itself, more so than about most other fields of science. A fair number of books and reports on the humanities have been written (hardly any about other fields), the Research Council of Norway has made a strategy for research in this field, and a special White Paper on the humanities is expected to be published before summer 2017.

This may be seen as an indication of one of the main features of the humanities debate: many of the participants in the debate – most of them active researchers in the field – seem to underline that the humanities are special or differ in significant ways from other fields. Humanities may need special attention, support and funding mechanisms due to this nature, or they are likely to be more vulnerable to specific science policy developments highlighting societal utility and quantitative indicators of performance. Books and reports have been written about the special characteristics of humanities research such as how it deals with texts and history and that its impacts on society may be subtler or not so easy to measure (see Benneworth et al. 2016 for a further discussion).

The “exclusivity argument” contains two aspects; in addition to claims about the unique nature of the humanities, it is often based on assumptions or perspectives about the nature of other fields of science. Both of these aspects can be contested, and the survey data will shed light on this issue through comparative analyses. It will also be used to discuss some of the common prejudices or preconceptions about the humanities: that it is a more individualistic field with a tough working climate, for example.

Which fields constitute the most relevant comparisons for the humanities? When it comes to ways of working and methodologies, there may be good arguments for comparing humanities with social science. In many smaller Norwegian universities and colleges these fields are often found together in the same Faculty as only the largest universities have separate humanities faculties. When it comes to the emphasis on basic versus applied research, the humanities are closest to the natural sciences, both highlighting basic research in an international context significantly more than researchers in other fields (Gulbrandsen & Kyvik 2010; Bentley et al. 2015). The overall picture is likely to be complex, with the humanities similar to one field along a few but not all dimensions of research activities and profiles. All these matters will be discussed with fresh analyses in the next two chapters of this report.

Another aspect of the humanities debate in Norway and elsewhere is that it is often framed in negative or defensive arguments. There is a frequent emphasis in the debate on decline in political support, funding, number of positions etc. Many commentators also discuss untimely and problematic pressure from policy developments related to mergers between smaller units in the higher education sector and within institutions, standardisation of teaching, emphasis on innovation, problematisation of the boundary between basic and applied research, and increased use of quantitative indicators. Often it is not just the policy instruments and goals that are discussed, but the concepts and language used by the research council and other actors (Gulbrandsen & Aanstad 2015).

Clearly some researchers within the field respond to external pressure by protest and opposition; others probably comply silently. But there are also strategic attempts at influencing the policies themselves. Benneworth et al. (2016) find that the humanities in Norway have been largely successful

in arguing for better conditions (or at least for maintaining their position). In terms of overall funding, humanities research has grown significantly every year for close to two decades, at about (or slightly higher) than the average growth of research in universities and colleges in general. Norway is perhaps a special case in this respect, with a growth in public funding of research found in few other European countries (Benneworth et al. 2016). Humanities now has its own research council programme, researchers from the field participate in all major Research Council programmes (thematic programmes, centres of excellence, young excellent researcher awards, open funding arenas etc.) and it is perhaps included in policy discussions to a much greater extent than it used to be. Still the field is not very much covered in current national R&D priorities in Norway, as expressed in the most recent government Long term plan for Research and Higher education (Ministry of Education and Research, 2013).

The national indicator used to give credit for publications has been shaped in such a way that it gives a high score to common outputs of humanities research such as books and other publications with few co-authors. To some extent this means that the developments in the last decade have made the humanities more similar to other fields, which may explain why there is a continuing need to discuss the special nature of this large and quite heterogeneous field. The humanities are labour intensive disciplines – the field receives around 8 per cent of the research funding in the university and college sector but employs around 15 per cent of the researchers. Even in a growth situation there are very many who want to get a share of the extra funding.

Two other special features should be mentioned. First, while the humanities may have many supporters in external organisations such as ministries, the research council, other public agencies, research institutes and (some) private firms, the field probably has fewer obvious “users” than many other fields. The survey can help shed light on this issue by looking at contract research, consultancy and other related activities. Second, the field is more than any other concentrated in the university and college sector. Medical and health research is found to a great extent in academic hospitals and some firms. Social science, natural science and technology all have many and often quite large applied research institutes and such activities are common in the private sector as well. Humanities have a few research institutes (such as the institute for cultural heritage research and the Nobel institute) and some museums but not with very significant research activities. The policies and politics of higher education may be seen as particularly important for the framework conditions of humanities research. But this also means that a survey of researchers in universities and colleges is highly relevant for understanding the activities and profiles of research in the humanities. The remainder of the report only deals with university and college scientific staff.

2 Research profiles and activities

This chapter will give some background information about the survey respondents and discuss the research profiles of humanities researchers compared to those in other fields. Aspects to be discussed include time to do research, organisation of the research work, basic/applied profiles and publication outputs.

Most aspects will be presented with figures or tables. These largely deal with differences between fields and contain descriptive data. In addition, a number of statistical tests have been carried out (t-tests, Chi square tests and logistic regressions) to check whether the differences are statistically significant and to control for aspects such as seniority, institutional affiliation and more. These will be discussed in the text; no complex statistical tables are included in this report. The number of responses varies a bit from one issue to another (non-responses, opportunities to answer “not relevant” etc.); the number of respondents (N) is listed where appropriate. Due to the high number of respondents, even very small absolute differences become statistically significant. The report aims to present a balanced discussion about the uniqueness of the humanities, its similarities to other fields and heterogeneity within the field. All analyses were carried out from scratch for this report, but some findings have been reported earlier (esp. in Chapter 3 which deals with the same topic as Thune et al. 2014).

2.1 Basic information about the survey respondents

The distribution of survey respondents is shown in Table 1. Social science is the largest field, this also includes law and business administration. Natural science includes mathematics and technology includes agriculture and fishery related research. Humanities researchers constitute around 1/6 of the total number of respondents.

Table 1. Respondents per field of science, share of women.

Field	Humanities	Social science	Natural science	Technology	Medicine and health	Total
Number of respondents	725	1592	531	684	906	4438
Share	16.3 %	35.9 %	12.0 %	15.4 %	20.4 %	100.0 %
Share of women	44.1 %	42.9 %	21.8 %	19.4 %	61.6 %	40.8 %

The table also shows the number of women in each field. Humanities has a somewhat higher share of women than the average and about the same level as social sciences, but much lower than medicine and health which is the only field with more than 50 % women. This field includes large departments related to nurses' education which is a women-dominated area.

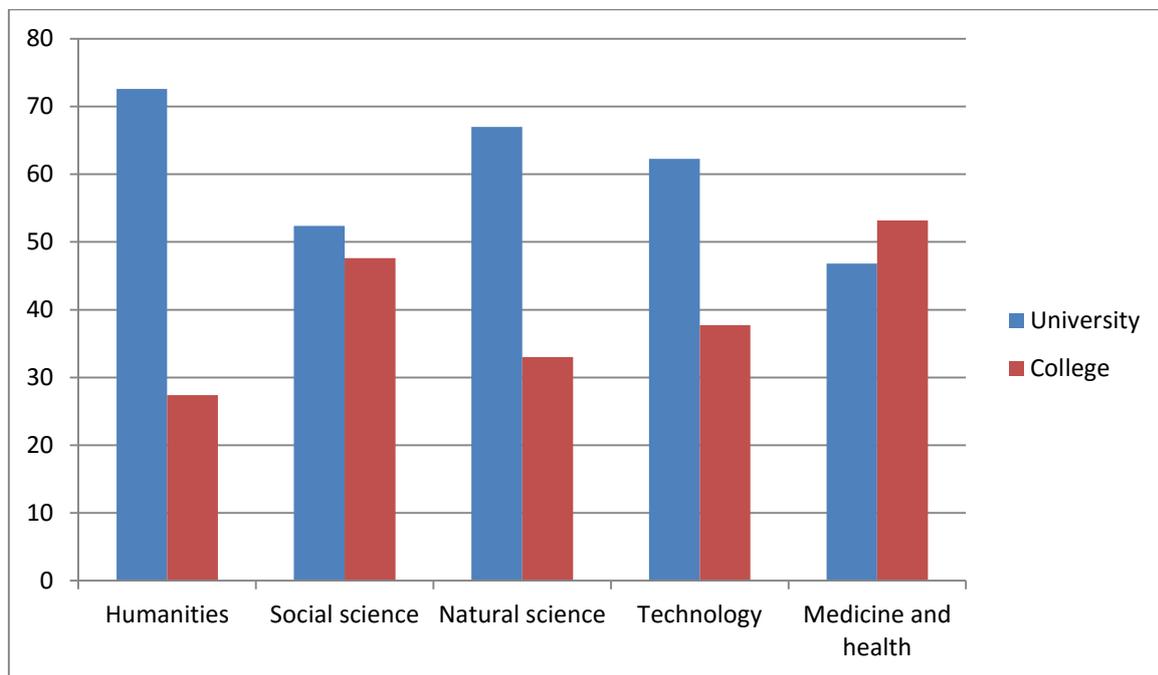


Figure 1. Share of researchers in universities and colleges per field of science. Percent

Figure 1 shows the distribution of respondents on the two different types of higher education institutions in Norway¹. This is important as the institutions have distinct framework conditions for research. In general, block grant research funding to the institution is much higher in the university setting, especially for the oldest ones which also have separate humanities faculties. Due to a high number of bachelor students in the colleges and a higher teaching load, the researchers in these institutions most likely also have less time for research (see next section). Figure 1 shows that no field is as concentrated in the universities as the humanities. This may be taken as a first indication that the field has relatively good institutional conditions for being research intensive.

2.2 Organisation of research activities

Research conditions may be further indicated by the question about the share of time for research. Respondents were asked “If you have time to do research, indicate the percentage”. Most of them (more than 90 per cent in the universities) have at least some time for research; main exceptions are some of the lecturers especially within medicine and health and in the college sector, and a few of the ones in leadership positions. The fields with the highest share of researchers working in universities rather than colleges – the humanities and natural sciences – are also the ones with the highest share of their time devoted to research and the lowest shares of researchers with zero time to do research. In addition to the institutional effect, there is also most likely a higher teaching load in the large profession-oriented programmes in the three other fields (engineering, law, business administration,

¹ There are eight universities in Norway. Four of them are counted as the “old” universities (Oslo, Bergen, NTNU in Trondheim and Tromsø), while four others are “new” as they were established after the millennium (albeit based on older colleges). Research traditions are stronger at the older ones, who also benefit from higher research funding. Finally, there is around 20 colleges (there are several ongoing mergers), most of them multi-campus regional institutions called state colleges in the official statistics. The main distinction between universities and colleges is that the latter are more teaching-intensive, have a stronger emphasis on bachelor teaching (and often few PhD students) and more professional training.

medical doctor, nurse etc.). As expected, full professors have the highest share of time for research, followed by associate professors.

Table 2. Average share of total working time time for research per field of science. Only respondents with time>0 are included. N=3484.

Field	Humanities	Social science	Natural science	Technology	Medicine and health	Total
Share of time for research	39.5 %	37.0 %	41.0 %	38.5 %	36.3 %	38.0 %

Behind the averages in Table 2 – which are fairly similar across fields – we find huge variations *within* each field and institution. In the four oldest universities, only 15 per cent of the staff members have less than 35 per cent of their time for research (and 45 per cent have more than half of their time for research). In the four newer universities, 47 per cent of the personnel have less than 35 per cent of their time for research. In other words, there are major differences in framework conditions for research in different settings, although this specific finding applies less to the humanities as they are more concentrated in the universities and in particular in the oldest ones.

For the humanities, an interesting pattern is that although most of the researchers in the field have at least some time to do research, there are relatively few with a very high share of their time devoted to research. If we divide time for research into four categories – less than 35 per cent, 35-44, 45-50 and more than 50 per cent – the groups are fairly equal in size. Only 23 per cent of the humanities researchers have more than 50 per cent of their time for research, which is lowest of all fields (social sciences is at the same level) and significantly lower than natural science. This could indicate that most humanities researchers have substantial teaching or other duties and that there are fewer personnel in “pure” researcher positions than what may be the case in other fields. Limited access to and/or low success in applications for external R&D funding may also explain some of this pattern (see below).

2.2.1 Perspectives on management, priorities and external board members

In the survey, four questions were asked about the intellectual and organisational environment of the researchers, related to communication between the management of the scientific unit and the scientific employees, possibilities for influencing research directions, processes surrounding prioritisation of research areas, and the role of external board members (which is common at most level in academia in Norway). The results are shown in the next four figures.

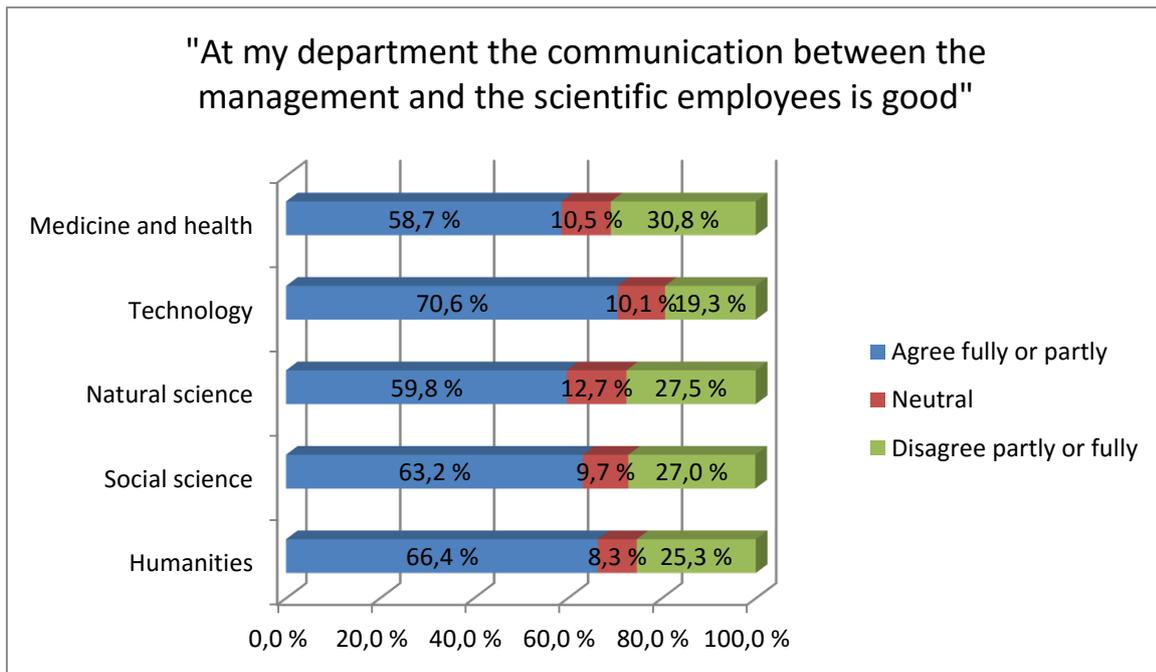


Figure 2. Communication between management and scientific employees. N=4378.

Figure 2 shows that most researchers agree that the communication between the management and scientific employees is good. The field differences are statistically significant, however, and the most content ones are found in technology and in the humanities. Since the humanities have gone through reorganisations at the larger universities the last decade with smaller units being merged into larger ones, this is perhaps a bit surprising. It does support a general picture that the humanities are doing fairly well if we take this as an indication of trust between researchers and their department heads. Still, one in four disagrees that the communication is good.

The question about "influence" is shown in Figure 3. This question was phrased in such a way to measure "workplace democracy", i.e. whether individuals feel that they have a strong influence on their own work situation, which is a key value in Norwegian work life. The shares of "agree" are generally lower here, but again the researchers from technological disciplines are significantly more content than the other ones. Humanities researchers score below the average (but is only very different from the ones from technology), and one-third disagree fully or partly that they have such an influence. There seems to be no systematic pattern behind this with respect to which institutions they come from. Still, the majority agree to the claim in the questionnaire.

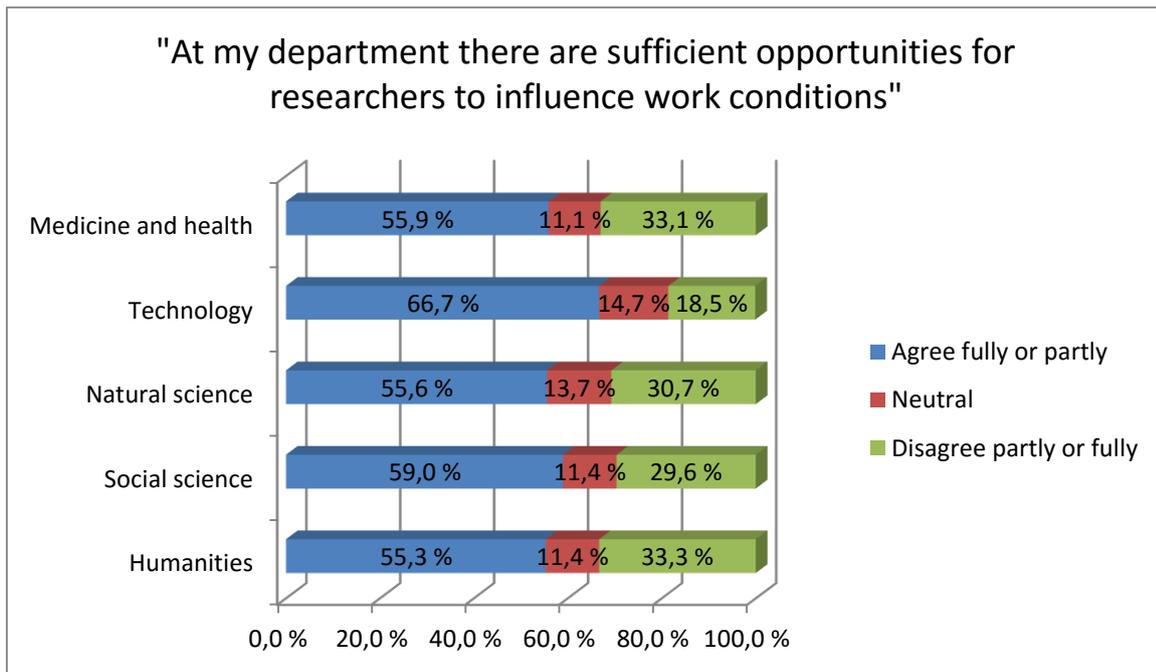


Figure 3. Opportunities for worker influence. N=4362.

In Figure 4, which deals with setting scientific priorities, the picture is more negative. In most disciplines there are equally many who disagree than who agree that the processes surrounding scientific priority-setting are good, which may indicate a great variety between sub-disciplines and organisational settings. Differences between fields are mostly as in the previous figures with technology researchers significantly more content, but the differences are quite small. It could be that they represent disciplines with a stronger tradition for teamwork and priority-setting from other actors such as industry.

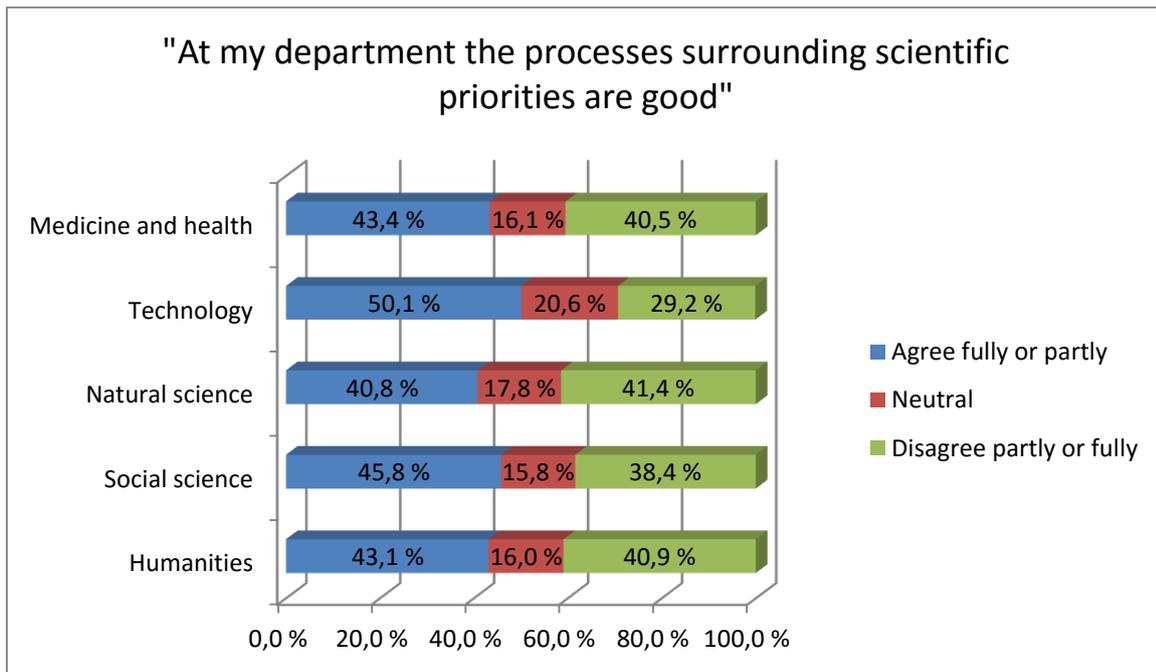


Figure 4. Scientific priority-setting. N=4327.

Finally, Figure 5 shows the respondents' views on whether external board members provide valuable competences for the academic unit. The tendency is that the share of disagree is higher than agree, especially among the fields with the strongest basic research orientation (humanities and natural science). Note that the share of "neutral" is higher than for the other questions, and the number of responses is smaller, which perhaps indicates that the respondents do not know or that their unit's board may not have non-academic members. There may be an element of "ideology" in the responses as well, and we do not know on what basis the respondents have answered here.

The general picture is that the researchers experience good internal communication and have a fairly broad trust in their management. They are somewhat more reluctant when it comes to their own influence, and they are quite critical towards how priorities are made and to the value of external board members. This probably reflects broad academic values related to autonomy.

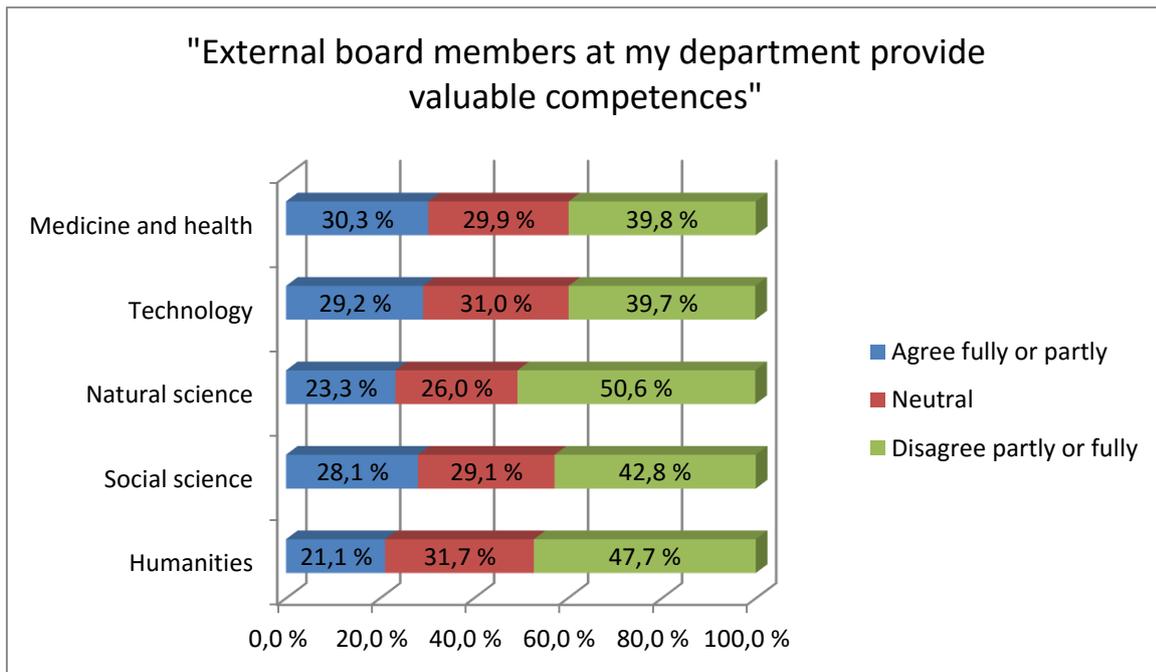


Figure 5. Views on external board members. N=3151.

In total, these questions demonstrate two characteristics when it comes to the humanities. First, the respondents from this field are not very dissimilar from the other ones in their assessment of these statements about various organisational issues affecting research. They are most dissimilar from the ones from technological disciplines and generally closest to the ones from natural science. Second, there is a significant variation in perspectives among the humanities respondents. For example, almost 20 per cent of the humanities researchers “completely agree” that the processes surrounding research priorities are good, and an equal number of respondents disagree strongly. This indicates that there is a significant heterogeneity among humanities researchers in their views of various aspects of the organisation of research work. But on the other hand a similar heterogeneity is seen in all fields, so the preconditions for research work and/or perspectives on policy developments may differ equally much here as well. All fields may be characterised by stratification with some tiers, elites and possibly victims of various framework conditions and changes.

2.2.2 Organisation of research activities

A number of questions were asked about how the respondents carry out their research work, and the results are shown in the next figures. The questions were not asked to be mutually exclusive. For example, a respondent could be part of a research centre, cross-disciplinary group etc. yet still to some extent or even a great extent carry out research activities on her or his own.

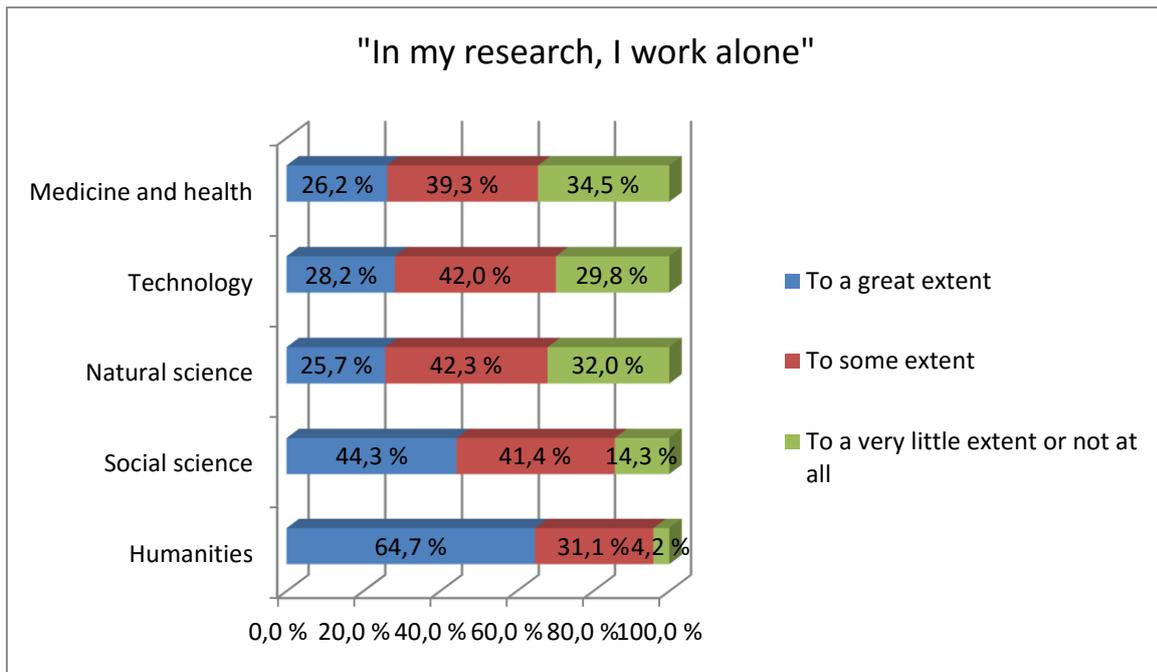


Figure 6. Individual research. N=3751.

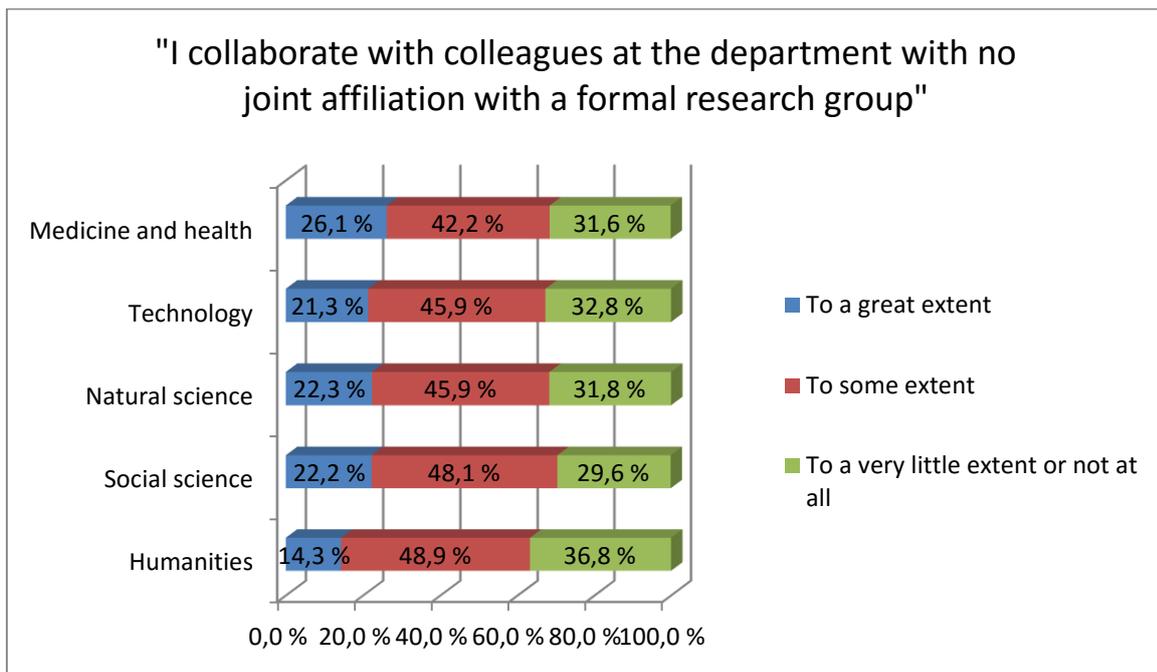


Figure 7. Informal local collaborative research. N=3624.

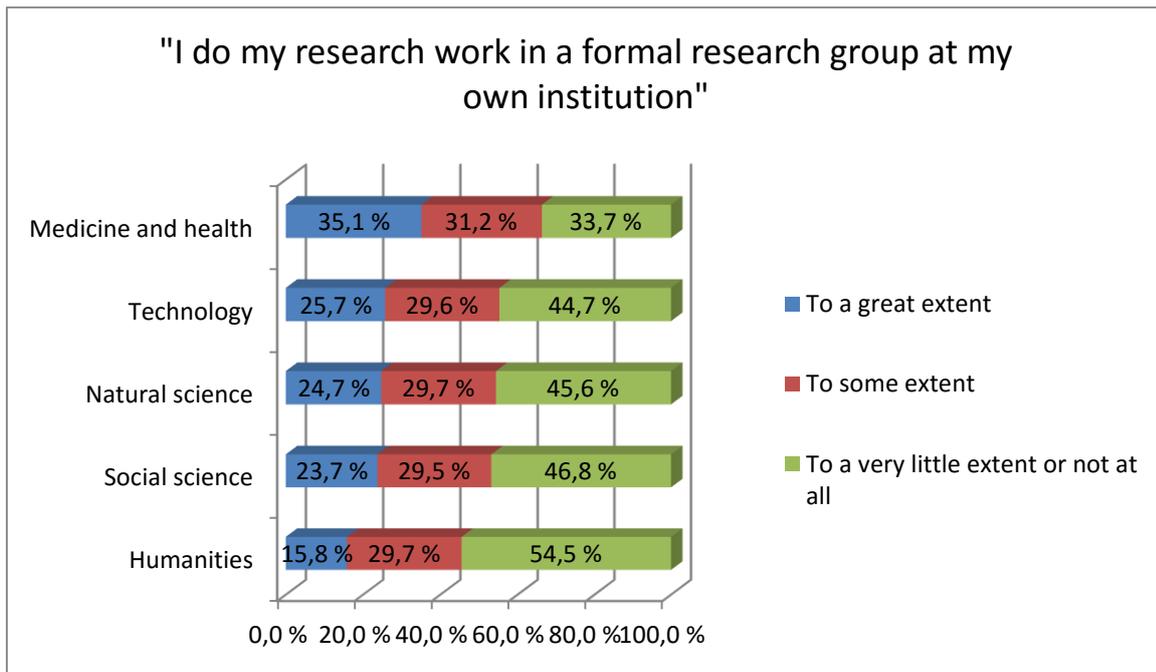


Figure 8. Formal local collaborative research. N=3529.

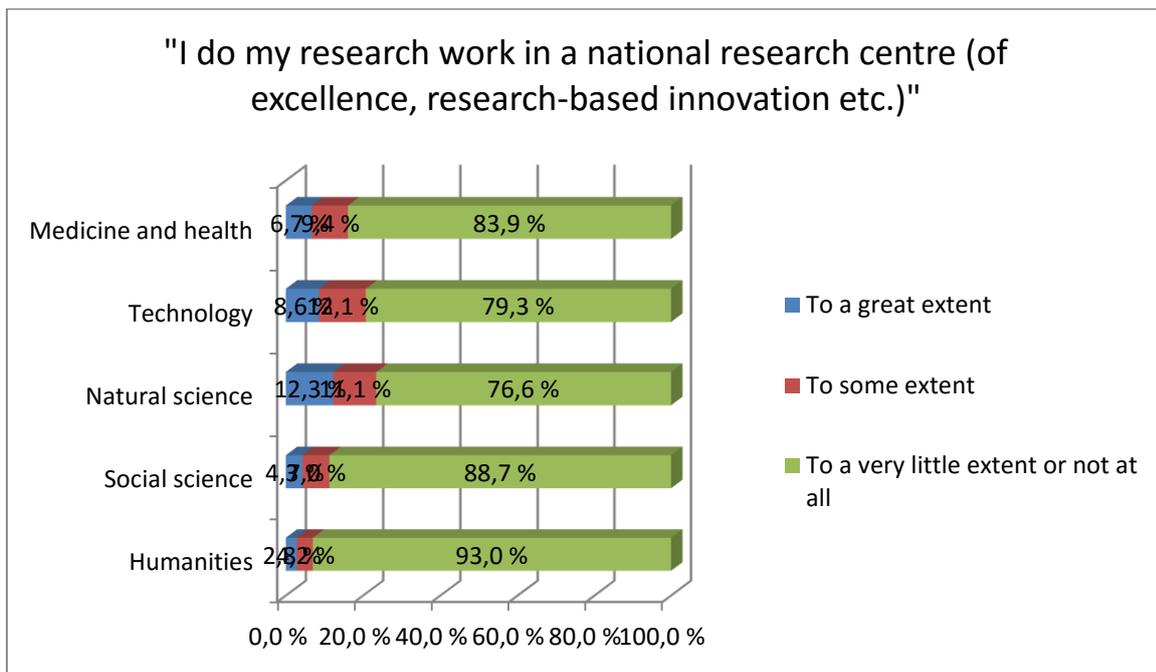


Figure 9. Affiliated with national centre of excellence. N=3257.

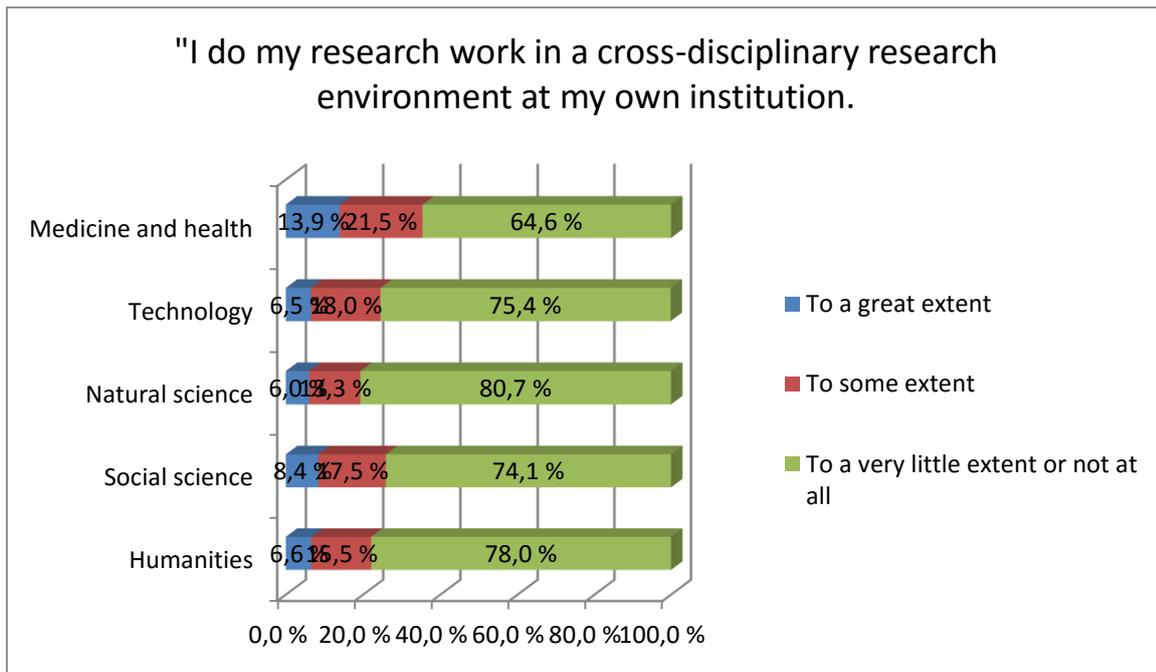


Figure 10. Cross-disciplinary research. N=3313.

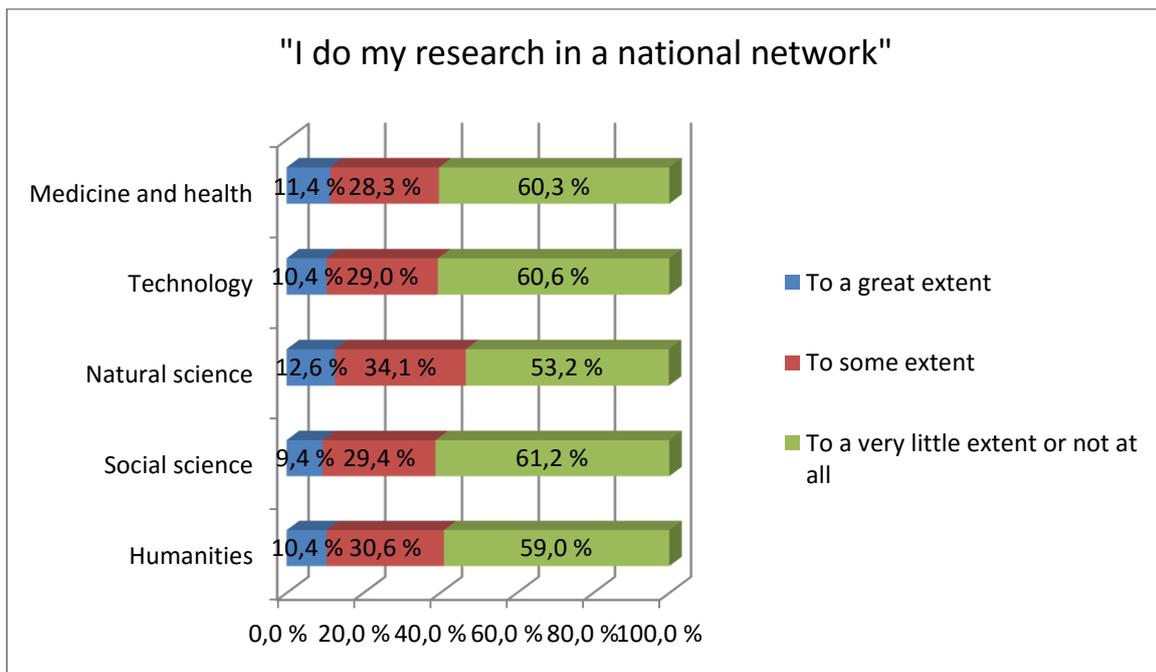


Figure 11. Nationally networked research. N=3378.

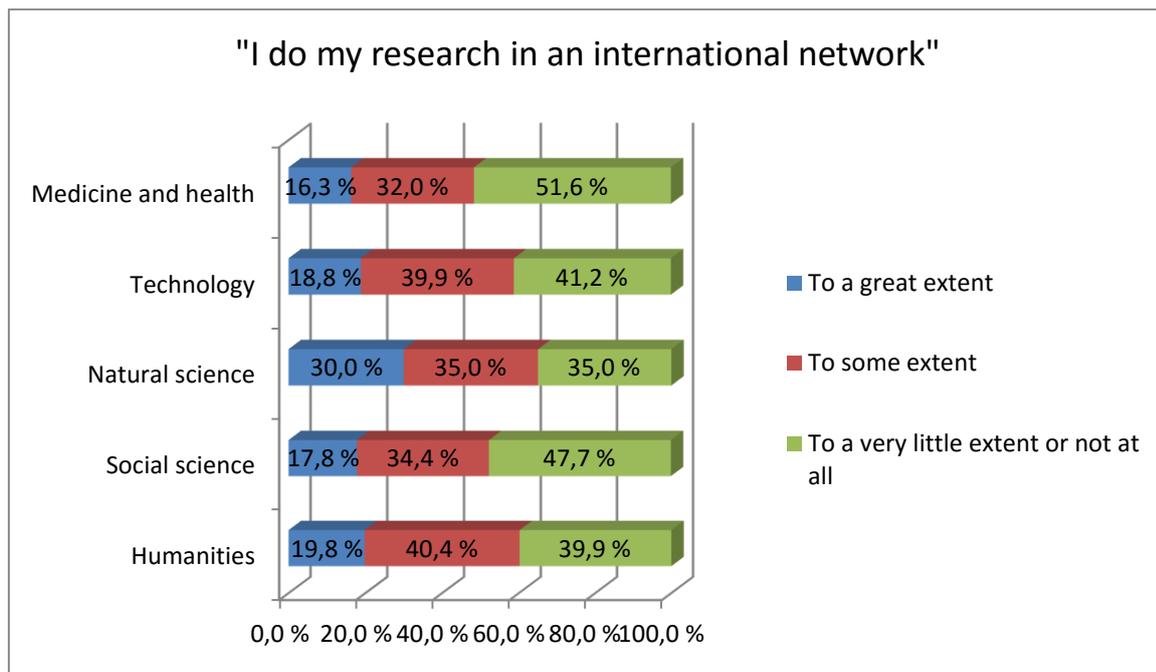


Figure 12. Internationally networked research. N=3495.

An interesting picture emerges from these data with a more distinct humanities profile (and closest to social science). First, humanities researchers work much more individually than the other ones. The difference here is very large. Second, and probably as a natural consequence of the more individualistic work, to a somewhat lesser extent they do their research in the context of formal groups and centres. Probably there are more externally funded centre schemes relevant for some of the other disciplines (like the centres for research-based innovation and centres for renewable energy technologies), which may explain some of the differences on this question. But the way we have defined the questions formal membership in a group/network can still mean that the research activity is carried out with little influence from this wider group/network.

Third, participation in cross-disciplinary centres is fairly rare but this is the case for all disciplines. The data do not allow us to claim that humanities researchers are generally less cross-disciplinary than other ones. Finally, they are more internationally oriented than the average, which may be a natural consequence of their basic research orientation and more frequent affiliation with universities rather than colleges. If we exclude the college researchers, a comparison (not shown in a figure) shows that the ones from the other fields are almost as internationally oriented as the humanities researchers. Still, a question about research stays abroad and collaboration with researchers in other countries (not shown in a table or figure) supports the claim that the humanities researchers are slightly but significantly more internationally oriented than the average. Individualistic tradition of organisation of work and international orientation of humanities research may constitute a particular context for evaluations. In other fields the larger research unit may be a natural level of analysis, while it may be argued that this is slightly more problematic in the humanities.

2.2.3 Research group perspectives

To follow up on this issue, and because there has been a strong growth in the recent decades in formal research groups also in fields where this has been less common, two questions were asked about group affiliation and the importance of the group for quality and collaboration.

Table 3. Share of respondents who are part of a formal research group at their department.²

Field	Humanities	Social science	Natural science	Technology	Medicine and health	Total
Part of group	49.6 %	56.8 %	64.8 %	58.0 %	60.5 %	4096

Only the ones who answered yes were given the option to assess the contribution of the group for their work. As the table shows, humanities researchers are less likely to be part of a formal group, but the absolute differences are not very large (compared to the question of individualistic work), and almost half of the humanities researchers are part of a group at the department.

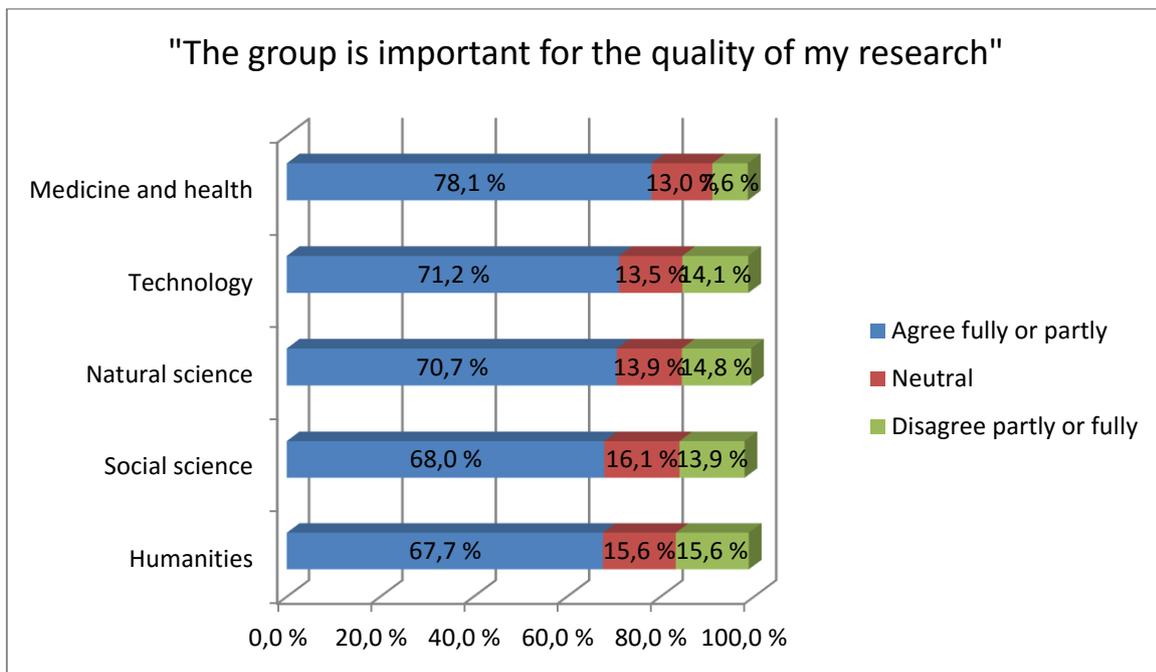


Figure 13. Research group and quality of research. N=2463.

Figure 13 shows that among the respondents who are affiliated with a research group, a clear majority agree that the group is important for research quality. In this and the next figure the respondents who said “Don’t know” (an option on these items only) are excluded (the share of “don’t know” is less than 2 percent in almost all cases). The differences between fields are small; the ones from medicine and health are the most supportive of the notion that groups positively influence research quality. It is interesting that even though the humanities researchers often work alone, they have positive experiences with group affiliation.

Figure 14 shows the perceptions about whether the research groups have improved collaboration between the scientific staff members. Again, the assessment is positive – and the humanities researchers express this strongest (they also have the highest share of “agree fully”). A likely explanation could be that establishment of research groups has a stronger effect on collaboration in fields with a more individualistic research tradition.

² Note that this question was about formal group membership, while Figure 8 was based on a question about how the respondents carried out their research activities. This allowed us to see whether membership in a research group also had an influence on the actual research activities.

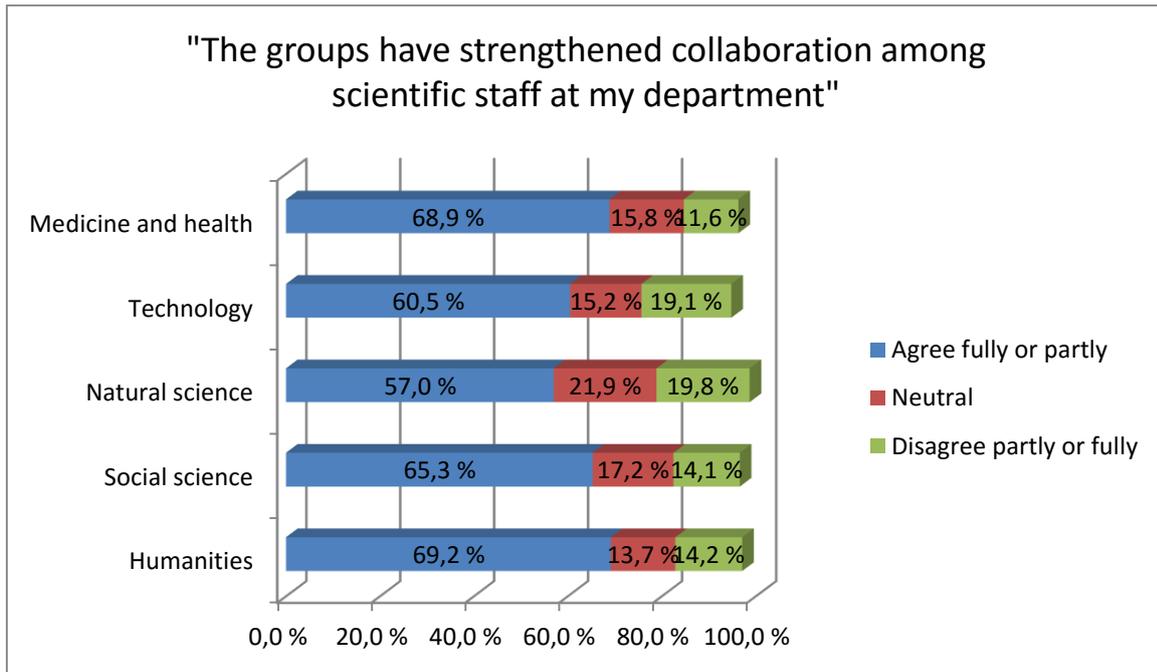


Figure 14. Research groups and improved local collaboration. N=2462.

2.2.4 Students' engagement in research work

To further explore how research work is carried out in various fields, a few questions were asked about the involvement of master and PhD students in research and the use of research in teaching at these two levels. Involvement of master students is shown in Figure 15, while involvement of PhD students is found in Figure 16. There is strong political and institutional support in Norway of the notion of research-based teaching, and this is the ideal also in the colleges and starting at the bachelor level.

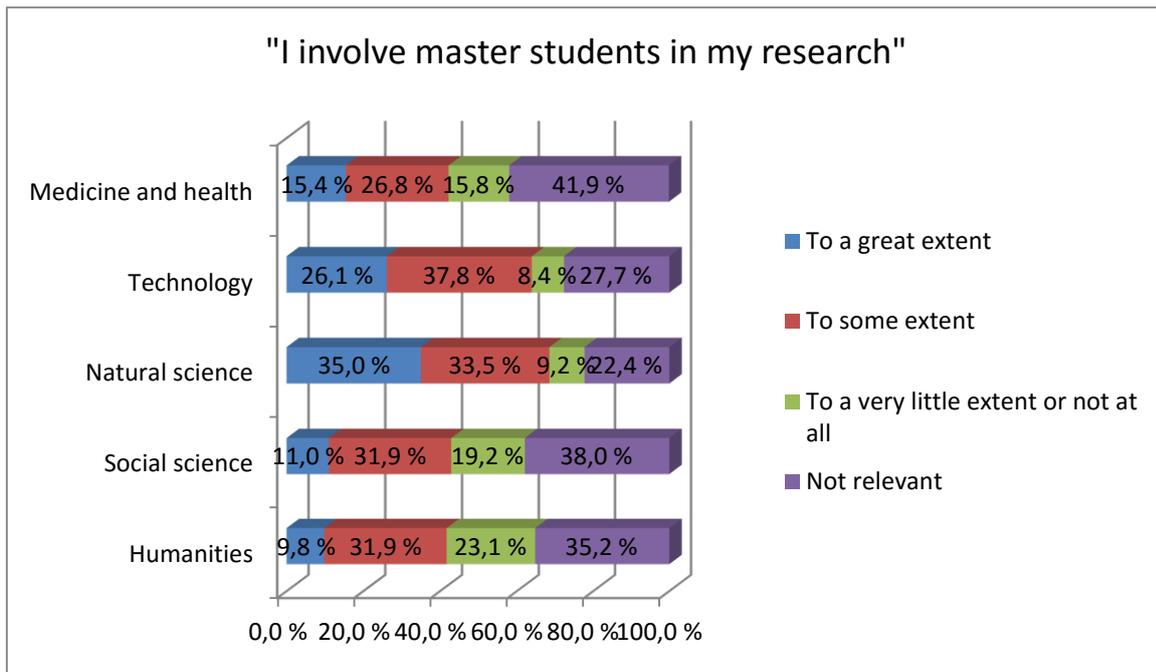


Figure 15. Involvement of master students in research. N=3761.

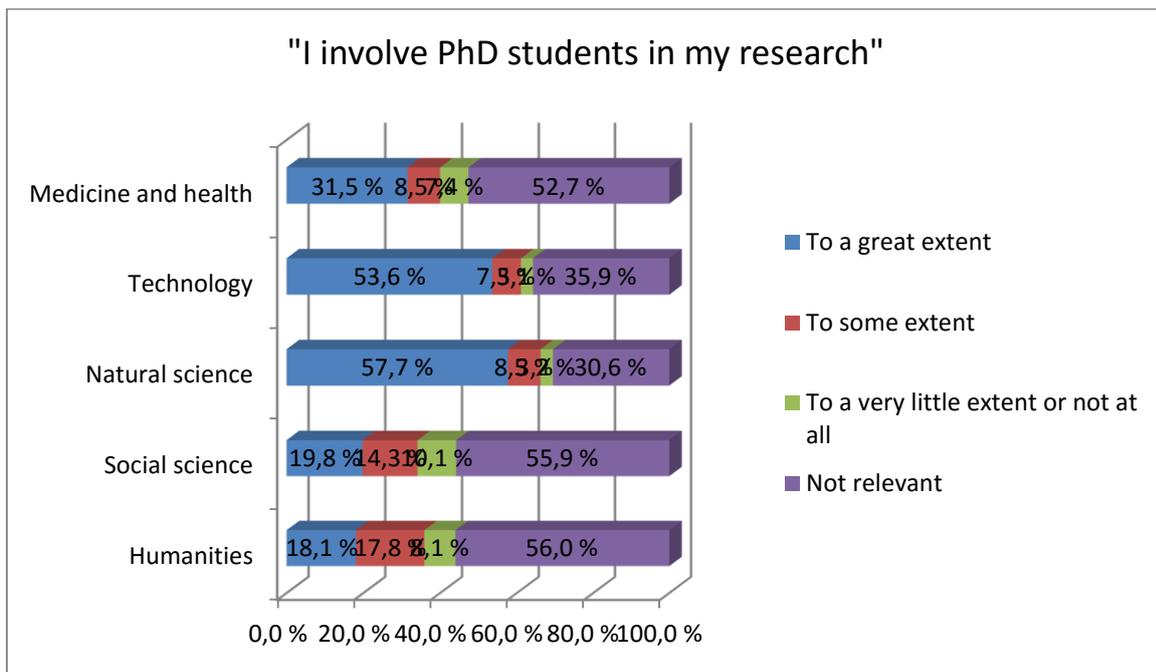


Figure 16. Involvement of PhD students in research. N=3616.

The figures show very large differences between disciplines and a fair degree of similarity between social science and the humanities – both are fields in which it is rare to involve master and even more so PhD students in the research work. This could indicate that PhD (and master) students to a greater extent choose their own topics instead of being part of a larger project. The high degree of student involvement in natural science and technology could be explained by these fields' higher share of external funding and thus in clearly defined projects (but this does not explain social science which also has a fairly high share of such funding).

Figures 17 and 18 show the extent to which the respondents use/disseminate their research when teaching. Again the social sciences and humanities have a similar pattern – these are the only fields where a smaller number of respondents to a great extent disseminate their research in PhD teaching compared to master teaching. Again this could indicate a different and more individualistic mode of work. Still it should be noted that a high share of respondents stated that these questions were not relevant, probably because they are not engaged in teaching at these levels (especially PhD). We also do not know whether there are field-specific differences in the type of training that PhD students receive, e.g. the balance between individual supervision and courses.

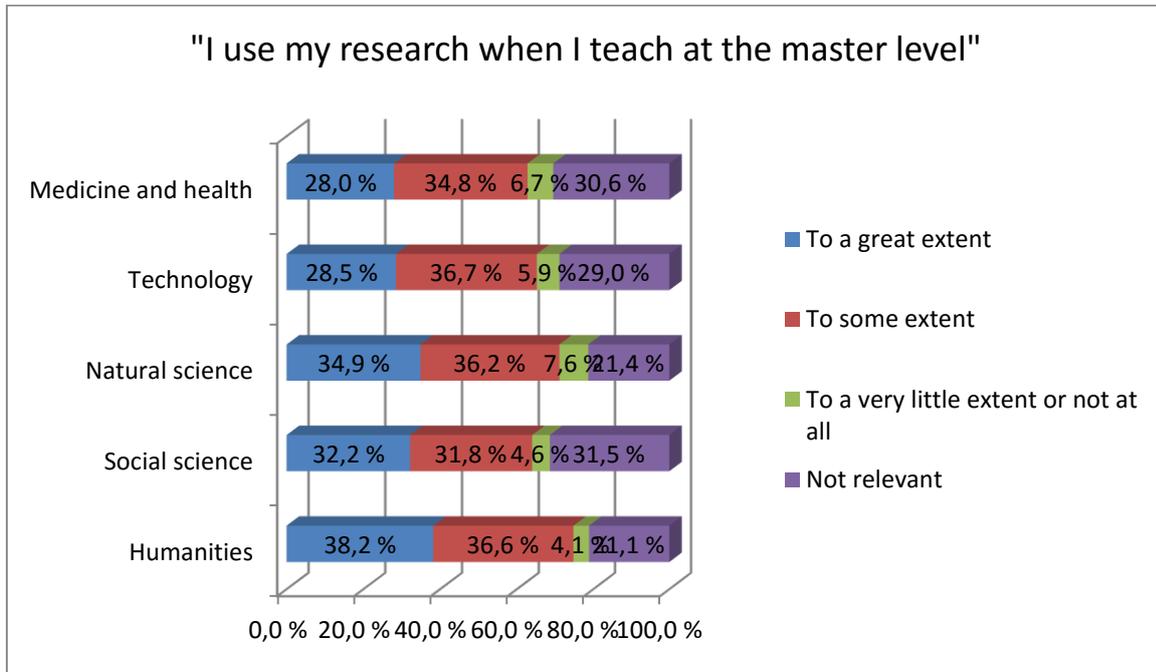


Figure 17. Use of research in teaching at master level. N=3764.

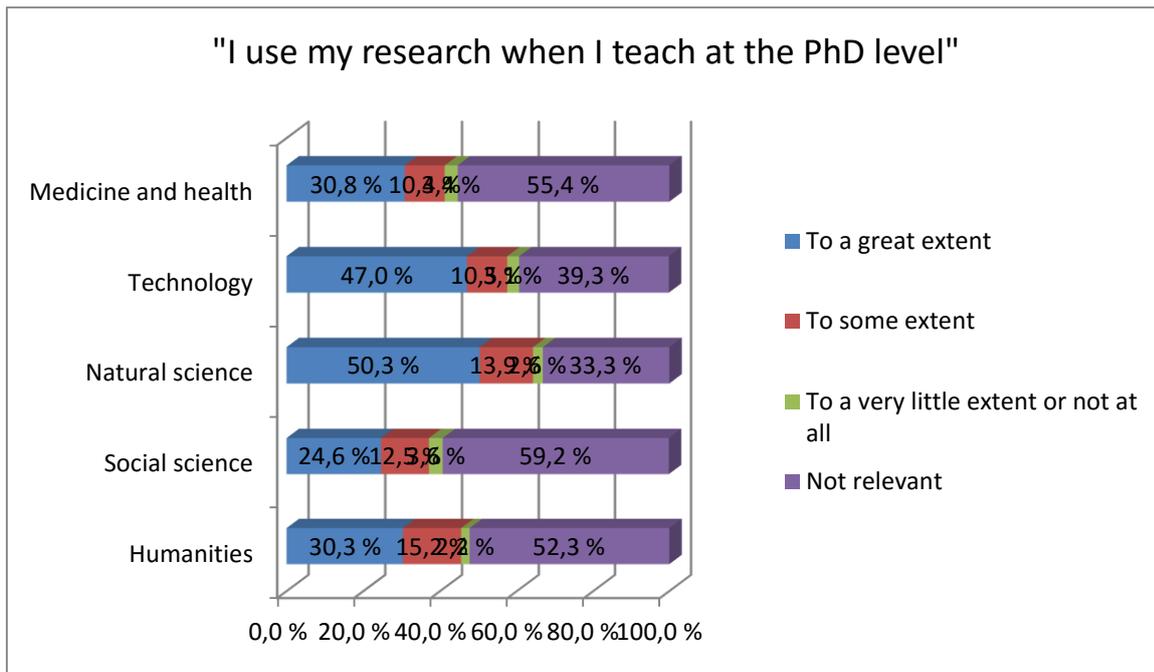


Figure 18. Use of research in teaching at the PhD level. N=3537.

2.3 Funding of research

Figure 19 shows the pattern of Norwegian external research funding per source and field as reported by the individuals. This means that the figure shows the share of university and college permanent staff in each field that has received a specific form of funding, not the level of funding (we have no information about that in the survey; this is covered at the department level and above in the R&D statistics). The question was about funding in the last five years. Note that the numbers do not add up to 100% because some researchers have funding from several different sources. Some of the differences are as expected, such as the higher share of researchers from technological disciplines that receive funding from industry.

For the humanities, probably the most striking result is that more than half of them have not had external national funding at all in the five-year period. This is not the case in any of the other fields, although this number is high also in medicine and health and in social science. As such these three fields are fairly similar. It is also noteworthy that the share of humanities researchers with a specific type of external funding is lower than the average, for all sources of funding except for funding from the Research Council of Norway (RCN) in medicine. It is not clear if this is a result of a lower demand for humanities research, lower success rate in applications, fewer targeted funding mechanisms or something else. It does support the finding in Benneworth et al. (2016) that there may be fewer direct "paying" users of humanities research and therefore fewer opportunities for contract and collaborative research. This is explored further in Chapter 3. In this context it is also relevant to note that humanities receive the lowest share (3-4%) of funding from the Research Council. Furthermore, the Ministry of Cultural Affairs, which could be a potential funder and commissioner of research in this area, is one of the smallest R&D funding ministries, accounting for only 0,6% of total government R&D funding in 2016. On the other hand, humanities is most like the other fields when it comes to funding from foundations/NGOs, which may be seen to represent broader public interest than firms and specific public agencies.

But humanities research is as mentioned concentrated in the universities, more than that in other fields. Although block grant funding is comparatively high in Norway, this may also make humanities

researchers vulnerable to changes in the basic institutional funding and to the bargaining and institutional-internal politics that may be tied to this type of funding.

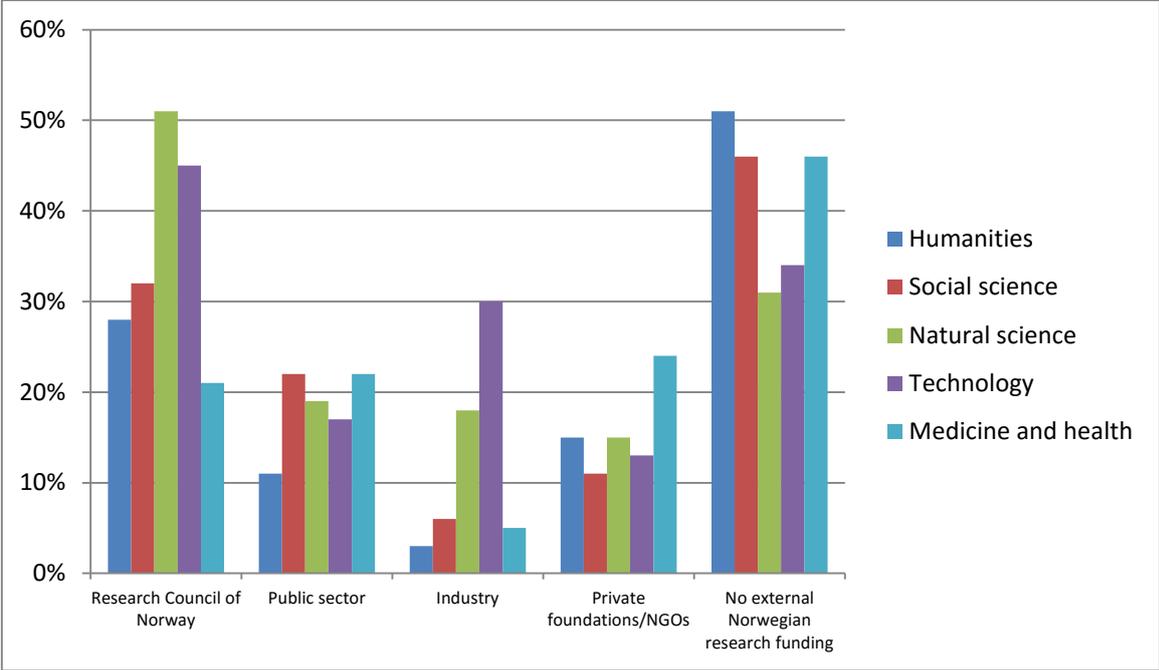


Figure 19. Have you received research funding from one or more of these national sources the last five years? Share of respondents per discipline. N=4440.

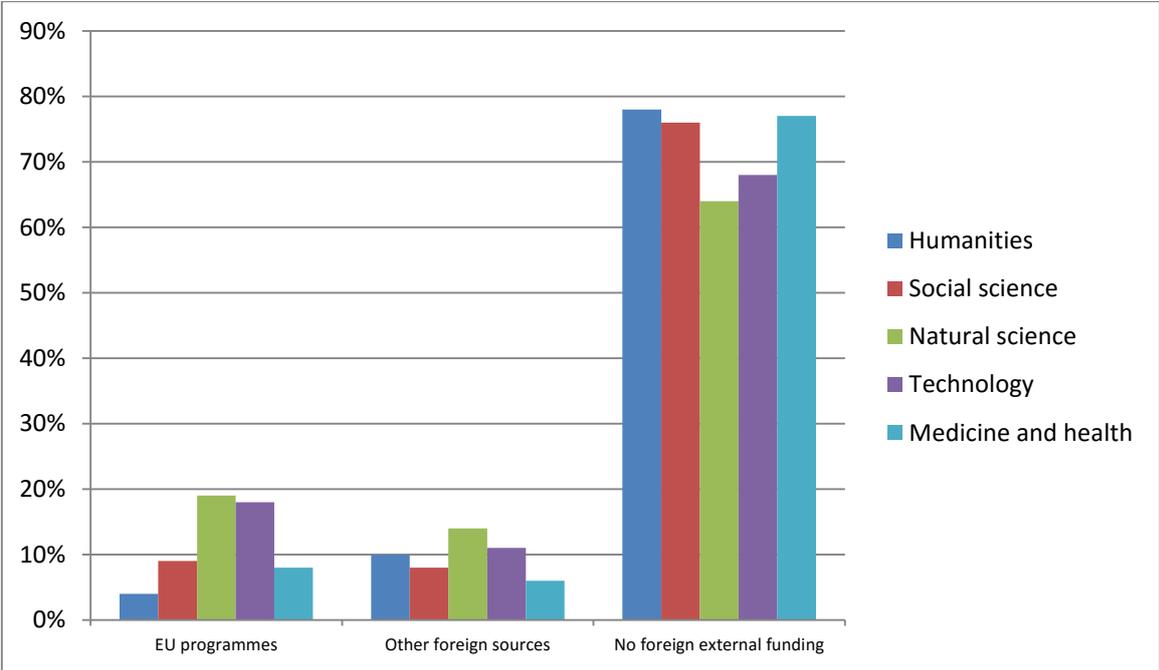


Figure 20. Have you received research funding from one or more of these international sources the last five years? Share of respondents per discipline. N=4440.

For the international external funding, shown in Figure 20, the general picture is that this is not very common when seen from the individual level. Around 3 out of 4 Norwegian tenured staff members in universities and colleges have not had foreign research funding the last five years. The share of such funding is lowest in the humanities, but the differences between fields are smaller albeit still

statistically significant. Low funding from EU programmes might be due to the special profile of these funding instruments, which traditionally have been more relevant for researchers from the hard sciences. But given the increased emphasis on social science and humanities in the 7th framework programme and Horizon2020, this low share may still be seen as a challenge.

2.4 Research orientation and publication points

In the last section of this chapter, the research orientation and publications of the respondents will be discussed.

2.4.1 Basic or applied research?

The survey contained four questions related to research orientation that were designed to capture various dimensions of basic and applied research:

- Orientation towards scientific originality
- Orientation towards gaining a fundamental understanding of specific phenomena
- Orientation towards practical problems
- Orientation towards solving externally defined problems

Figure 21 shows the responses per field of science. Note that the value 1 equals “to a little degree or not at all” and 3 equals “to a high degree”. The figure again highlights how humanities and natural science differ from the other three fields with a stronger emphasis on originality and fundamental understanding and a weaker emphasis on problem-solving. The differences are highly statistically significant (p-value less than 0.001) although the absolute differences in such a three-point scale are not very large.

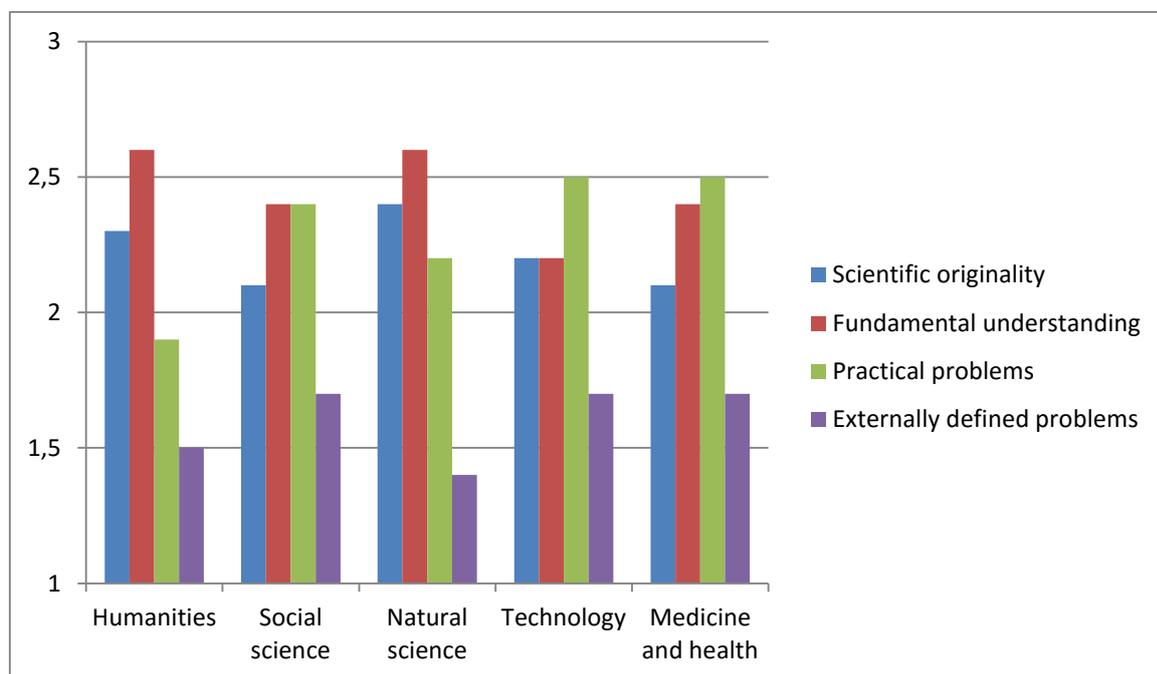


Figure 21. Research orientation per field. N=4400.

A further analysis shows that there is a very strong correlation between the first two items, which may be termed “basic research orientation”, and between the last two items which can be seen as “applied”. The variables can therefore be combined into new indexes, but they show exactly the same pattern. These indexes also allow a test to see the share of researchers that have a high score on both aspects, which has been termed “Pasteur’s quadrant” (Stokes 1997) and is often seen as

particularly important research as it combines high scientific ambitions with practical problem-solving. Less than 20 per cent of the respondents fall into this category, and fewest again from the humanities and natural science. It must still be stressed that a minority of respondents in all fields diverge from the main pattern. There are some humanities researchers who work predominantly applied or who combine the two different orientations, and they are found in both universities and colleges.

The main messages are that the humanities as a whole are different from (some) other fields, and that there is significant heterogeneity within each field. In the humanities, 29 per cent of the respondents describe their research as to a moderate or high extent oriented at practical problems. We can use the two categories to define four different profiles: “pure basic”, “pure applied”, “high score on basic and applied”, “low score on basic and applied”. 40 per cent of the humanities respondents can in this manner be defined as “pure basic” researchers, 15 per cent as “pure applied” and 10 per cent as a combination of basic and applied. The latter is the lowest share of all fields. Interestingly around 35 per cent of the humanities respondents give a low score both on the basic and applied research items, which is the highest share of all fields. Little is known about this category (low score on both is probably not desirable from a science policy perspective), but it might be that humanities research has some special characteristics (archival work, interpretation/re-reading of a corpus of texts etc.) that do not fit well the standard ways of asking about research profiles. It might also be that humanities researchers are more involved in applied activities which do not fit well with the term “practical problems”.

The most important explanatory variable for research orientation is the institutional setting: university respondents are significantly more into basic research and less into applied research than college respondents. As seen in the beginning of the chapter the humanities are more than other fields concentrated in the university sector. Regressions nevertheless indicate that both the institutional setting and the field of science have independent effects on research orientations. There is only a weak relationship between profiles and funding: the ones with funding from the Research Council of Norway have a stronger basic research orientation. Interestingly, the ones with other sources of funding – public sector, industry and foundations/NGOs – do not have a significantly more applied profile than the ones without such funding.

2.4.2 Publications

In Norway, a portion of public research funding is redistributed among the higher education institutions based on a set of performance indicators, including publication scores. Each academic employee has to register all publications in a national database called CRISTin, which contains a list of all approved journals and publishing houses that publishes academic books (they are checked for having serious peer review).

Approved scientific outlets are further classified as Level 1 and Level 2. Level 2 outlets are the most significant and prestigious journals/publishers in each scientific field as decided by national disciplinary peer committees. No more than around 20 per cent of the publications in each scientific field can be classified as Level 2. An article in a leading journal (Level 2) yields 3 publication points, while an article in a Level 1 journal yields 1. For book chapters the corresponding scores are 1 and 0.7; a whole book yields 8 or 5 points. For more on publication in the humanities seen from a bibliometric perspective, see Aksnes & Gunnes (2016).

The value of using this database is that it covers both journals and other kinds of scientific publications (book chapters and books), which is necessary when studying research performance in multiple academic disciplines, especially fields such as social science and humanities which more often publish books and where the largest journal databases such as ISI Web of Knowledge traditionally has a more narrow coverage. In addition, the points are adjusted for co-authorship which means that two or more

authors get a fraction of the total publication point score. In general, this is beneficial to fields where it is more common to publish alone.³

Survey data used in this report was matched with the publication database so that we have information about total publication points for each individual (adjusted for co-authorship) for a period of three years (2011, 2012 and 2013), as well as the share of their publications at “Level 2”. The first may indicate productivity while the second is a rough (but also somewhat problematic) indicator of quality. These two variables are shown in Table 4.

Table 4. Total publication points 2011-2013 and share of publication points in the most prestigious outlets, per field of science.

Field	Humanities	Social science	Natural science	Technology	Medicine and health	Average
Average publication points per individual	2.3	1.6	2.1	1.7	0.9	1.6
Share of points at “Level 2”	14 %	11 %	24 %	15 %	14 %	14 %

It is striking that the humanities researchers on average have much more publication points than those from other fields. Their share of points in the most prestigious journals and publishing houses is average, however. Several regressions have been run to see which variables may explain the differences in publication points. The most important ones seem to be basic research orientation and university affiliation, but there is also a significant positive effect of working within the humanities or natural science.

The number of publication points might also be an artefact of the way the system is constructed with the simple division of points for co-authorships and the large number of points awarded to books. Both of these choices are probably beneficial to the humanities and the more individualistic research profile found here.

2.5 Summary

This chapter has shown that humanities researchers in many ways are similar to those from other fields when we look at how research is carried out and organised. They are particularly similar to the natural sciences when it comes to a strong basic research profile and international orientation, and particularly similar to the social sciences with respect to the relationship between research and teaching which seems to be weaker, especially regarding the involvement of PhD students in the scientific employees’ own research. They rarely work in formal cross-disciplinary settings, but they do not differ from the other fields in this respect.

Humanities research does stand out from the rest on four dimensions. First, it is to a much greater extent found in universities rather than colleges, which means that the framework conditions are likely different from those of other fields, for example with respect to having more time to do research work. Second, it is clearly more individualistic. Even though the researchers in this field often are formally affiliated with a research group or (to a lesser extent) with a centre, they still overwhelmingly state that they often work by themselves, much more so than other researchers. Interestingly, the humanities researchers that do work in groups strongly agree that group organisation of research has positive effects on quality and collaboration – for the latter claim no one agreed more than the humanities researchers.

³ Note that the scoring system has recently changed with less punishment for co-authorship (now square root adjustment rather than linear). This will probably have a major effect on publication points per field but does not influence the data used in this report.

Third, they seem to have weaker external funding – around half of all the humanities researchers have not had any external funding for the last five years (at the time of the survey). The reasons are not really clear and may be related both to demand (fewer funding opportunities) and needs (some types of humanities work may have less need for external funding). Finally, they have a comparatively high number of publication points. This can be explained in various ways – by the basic research orientation and university affiliation or special features of the way in which the points are calculated. A basic message is nevertheless that humanities as a whole is a research-intensive field with many highly active researchers.

Still, there is an underlying variation that has only been briefly touched upon. To name some examples: Although the majority of humanities respondents are happy about research priorities and the academic leadership, a minority is not happy at all about these and other aspects. Some humanities respondents state that they work primarily applied, a few others have funding from industry although this is rare. Publication points are high but also highly skewed with many researchers having less than one point over a three-year period. A hypothesis might be that there is likely to be significant variation in research opportunities *within* the humanities and also within humanities sub-fields.

3 External collaboration and engagement

This chapter will discuss various aspects of the researchers' collaboration with non-academic organisations through various "channels" ranging from traditional dissemination activities to commercialisation of research. Academic engagement has been a central policy issue for many years, and the ideal is that academics should be involved in activities that contribute to learning, knowledge diffusion and researchers becoming inspired by the challenges and perspectives outside of the higher education sector. This has been expressed with many different concepts such as the "third mission", dissemination and innovation. Currently the main interest seems to be tied to the concept of *impact*, and various research evaluations and indicator systems now want to explore the impacts of academic research. This is also the case with the most recent evaluations coordinated by the Research Council of Norway.

Often the discussion about these issues is based on or indicates that policymakers believe that academics do not sufficiently carry out engagement-oriented activities. There is a continuing worry about the "ivory tower" and that researchers are not sufficiently taking care of the impact of their research. Although several large-scale surveys refute such a picture, including the "Hidden connections" report from the UK focusing on arts and humanities (Hughes et al. 2011), there is still a need to analyse data about engagement as a foundation for good policies and evaluations.

3.1 Non-academic work experience

Respondents in the Norwegian survey were asked whether they had more than one year of full-time non-academic work experience after their master degree. This was believed to be an indication of skills not necessarily related to research and of networks with non-academic organisations and individuals. More than half of all the respondents had this type of experience. The highest share was found in engineering (62 per cent) and the lowest in the humanities (48.1 per cent), but the shares are quite high in all fields.

In addition, the ones with such experience were asked to indicate which sector this was related to, and the results per field are shown in Table 5. The most common sector of earlier employment for the humanities researchers is education, here (presumably) referring to primary and/or secondary education. More than 10 per cent also have experience from the public sector and from industry. Differences between fields are largely as expected, such as medical researchers having experience from the health and care sector, and those from technological disciplines from industry.

Table 5. External work experience per field and sector of experience. N=4440.

Field	Work experience from:					Total non-academic work exp.
	Public sector	Applied research institutes	Health and care sector	Education	Industry	
Humanities (N=725)	14.8 %	4.8 %	1.4 %	20.8 %	11.6 %	48.1 %
Social science (N=1594)	20.5 %	10.0 %	5.9 %	22.4 %	14.2 %	58.6 %
Natural science/math. (N=531)	8.9 %	16.0 %	1.7 %	10.7 %	17.7 %	45.0 %
Technology/engineering (N=592)	9.1 %	21.3 %	1.9 %	7.4 %	38.7 %	62.0 %
Medicine and health (N=906)	8.2 %	5.3 %	30.2 %	7.9 %	5.1 %	48.3 %
Agriculture/fish./vet.med. (N=92)	14.1 %	8.7 %	6.5 %	2.2 %	34.8 %	55.6 %
Total for each type of exp. (N=4400)	14.0 %	10.4 %	9.1 %	15.4 %	16.0 %	52.8 %

Note that the sum in the last row does not add to 52.8% because some individuals have several types of non-academic work experience.

As far as we know, there are no similar broad-based investigations of this issue that look at different types of work experience and include all academic fields. Earlier investigations have primarily looked at industry experience among researchers within natural science and technology, and non-academic work experience has been operationalised in different ways. From these studies we have a hunch that the share of non-academic work experience in general is quite high in Norway, including in the humanities. But if this is correct, we do not know why. It may demonstrate one aspect of traditional Norwegian academia: there have seemingly been many pathways into the system in addition to a “pure research” pathway where one academic position (PhD, postdoc, lecturer/associate professor etc.) follows another. It could also indicate a low level of mobility, leading younger researchers into other types of work awaiting available positions. In the next sub-chapter it will be shown that non-academic work experience is one of the key explanations for academics’ external engagement.

3.2 External engagement – different channels

Respondents were asked about whether they in the last three years had done different types of external engagement activities, which may be considered as different “channels” for interaction with society. A list of 22 different channels was made based on similar earlier investigations such as Hughes & Kitson (2012) and earlier Norwegian surveys such as the one reported in Gulbrandsen & Smeby (2005). The main descriptive findings are presented in Figure 22.



Figure 22. Percentage of respondents who in the last 3 years have carried out different external engagement activities. N=4400.

As the figure indicates, most respondents have been involved in one or more of these activities or channels. Seven per cent reported that they had not been involved in any of them. The most common ones are participation at meetings with users/the general public, publication of popular science articles and making invited presentations for users/the general public. Training activities are also common. The least frequent engagement forms are related to commercialisation: licensing, patenting and starting a new firm. Paradoxically these are the only three channels which the Ministry of Research and Education in Norway monitors every year. On average, the respondents have been engaged in slightly more than five (5.2) of these activities, and ten per cent have been engaged in more than ten.

Although these results are interesting in themselves and may be used to support a claim that academics are generally engaged with society in many ways, there is clearly a lot of variation between the respondents in how they interact with society. For the interpretation of these results it is also important to bear in mind that the question focuses on the *occurrence* of various types of interactions and says little about the frequency and range of the interactions reported. We carried out a factor analysis to look for systematic variation between the different engagement activities. This yielded a set of four categories which correspond well to earlier studies from other countries (Hughes & Kitson 2012; Ramos-Vielba & Fernandez-Esquinas 2012) (a few stray activities with few researchers involved were removed from the analysis). The factor analysis means that if a respondent does one activity within a category, there is a high chance that he or she will be involved in another in the same category. For example, the factor analysis reveals that there is a collaborative aspect of engagement – researchers who have formal research collaboration with firms are also more likely to have this with the public sector. The four categories are:

Dissemination:

- Popular science publishing
- Publishing of contribution to the public debate

- Invited presentations for users/the general public
- Participation at conferences/meetings with users/the general public

Training:

- Training of people at their workplace
- Involvement in continuing and further education
- Period of practice in non-academic settings
- Placement of students in work life

Research collaboration:

- Contract research on externally defined topic
- Collaborative R&D with public sector
- Collaborative R&D with industry
- Establishment of laboratories/infrastructure with external stakeholders

Commercialisation:

- Applied for a patent
- Licensed research results etc. to others/users
- Started a new firm
- Involved in development/testing of prototypes

There is little variation in the involvement in these four types between researchers from different types of institutions. The differences between research fields are shown in Figure 23 in a radar diagram for increased visibility.

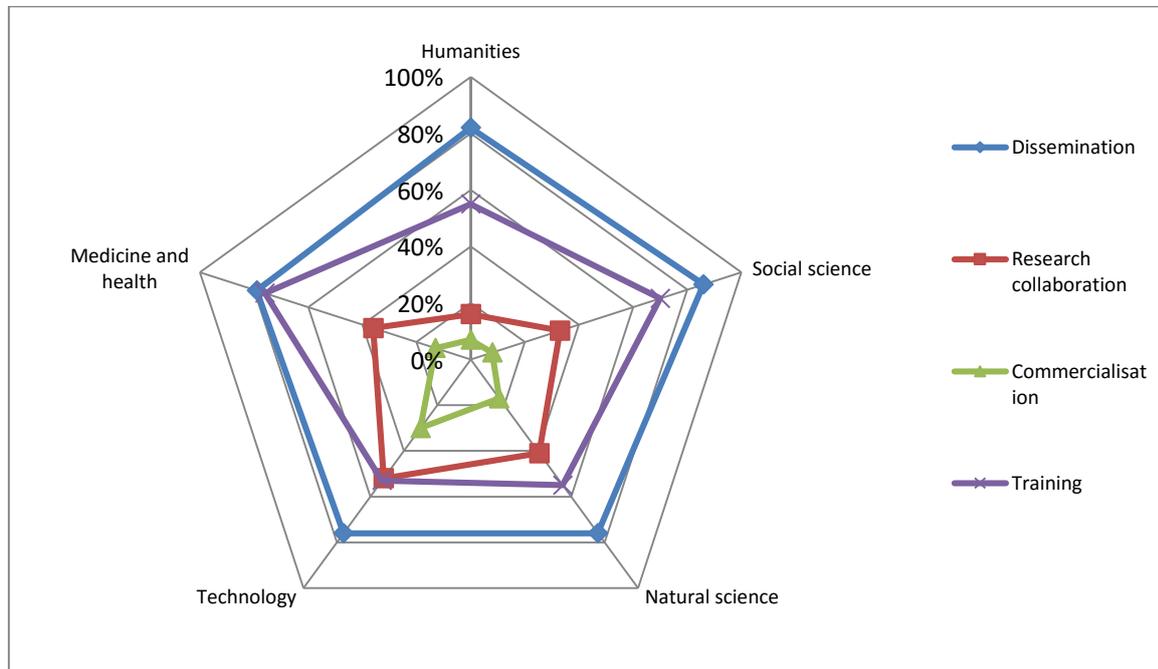


Figure 23. External engagement (share of researchers), differences between academic fields. N=4400.

The most striking aspect of Figure 23 is possibly the similarities rather than differences when it comes to the importance of these four categories of interaction. Dissemination is the most common form of external engagement in all fields, training the second most common, research collaboration the third most common (these two have about the same number of researchers in technology) and commercialisation the least common. These results may be used to criticise the “exclusivity” argument often encountered in the humanities debate. The humanities are not dominated by a unique pattern of interaction with society – the overall pattern is fairly similar across fields, and it is difficult to claim that the other fields for example have a major involvement in commercialisation.

That being said, there are of course clear differences between the fields as well, mainly as expected. Natural science and technology researchers are for example more engaged in commercialisation than the other ones, and training is particularly important in medicine and health. But again the results may also be used to highlight the variation within each field. When looking at the humanities, more than 80 per cent are involved in dissemination, but around 15 per cent are involved in formal research collaboration with non-academic partners and 7 per cent are involved in commercialisation. This may be seen as a warning sign against too strong or idealised preconceptions about what the humanities (or any other field) are or are not.

Does the field really matter? We have carried out a number of logistic regression analyses (details in Appendix 1) to explore which variables might explain or at least be related to different forms of external interaction (in the appendix we have also done regressions for collaboration and scientific productivity). There are four aspects which stand out as particularly important when controlling for a large number of variables:

Seniority: all forms of engagement are more frequent among the senior staff such as full professors and (often) research leaders. This indicates that academic engagement requires experience and/or expertise and may not be something that can be expected of everyone.

Non-academic work experience: all forms of engagement are positively related to this. When we dig deeper into the data, we see that the effects are more nuanced. Work experience from industry is positively related to all categories, while work experience from the school and public sector – the two most common forms for humanities researchers – are positively related to dissemination and training.

Research orientation: all forms of engagement are positively related to a stronger score on “applied research”. A combination of applied and basic research, as described in Chapter 2, does not have a significant influence on engagement. The ones with a weak score on both basic and applied are less involved in all four categories than the ones with a strong score on basic research only.

External funding: respondents with no external funding, especially from national sources, are less involved in all four categories. The underlying reasons are not clear, but probably external funding comes with various strings attached including demands for dissemination and other forms of knowledge transfer. It probably also sometimes entails collaboration with non-academic organisations.

Type of institution does not matter apart from for dissemination where the colleges are more active than the universities. Field of science does matter also when controlling for other aspects. Affiliation with the humanities is positively related to dissemination and negatively related to commercialisation and research collaboration. This is most likely an indication of an average tendency rather than of a unique mode of engagement in the humanities – researchers in all fields are very active in dissemination and to a little extent active in commercialisation, and the humanities score slightly above the average for the first and below for the second.

3.3 Collaboration with external organisations

A number of questions were asked more broadly about collaboration with external organisations, i.e. not just formal research collaboration but any kind of contact including teaching, consultancy,

dissemination and more. The questionnaire distinguished between collaboration (in the last three years) with firms from different types of industries, (public) health and care organisations, municipalities and regional authorities, non-government organisations (NGOs), ministries and national agencies, and international organisations. 79 per cent of the respondents had collaborated with the public sector, 45 per cent with industry (a much higher share than if we had only looked at research funding, cf. Chapter 2) and 27 per cent with NGOs.

Public sector collaboration is the most common in the humanities involving a little more than half of the researchers. One in four has collaborated with industry and one in five with NGOs. In total the humanities researchers are slightly less collaborative than the average – a higher share of researchers in the other fields reported collaboration with various external organisations. On this aspect the pattern of the humanities is again closest to that of the natural scientists. It is still interesting that 25 per cent of the humanities researchers had collaborated with private firms in the last three years, which means that the topic of university-industry partnerships is not alien to humanities in general.

A factor analysis shows that there are three main categories of this wider measure of collaboration: with private firms, with local/regional public sector including health and care and NGOs with national/international public sector including organisations such as OECD, EU and the World Bank. The collaboration patterns per field of science are shown in Figure 24.

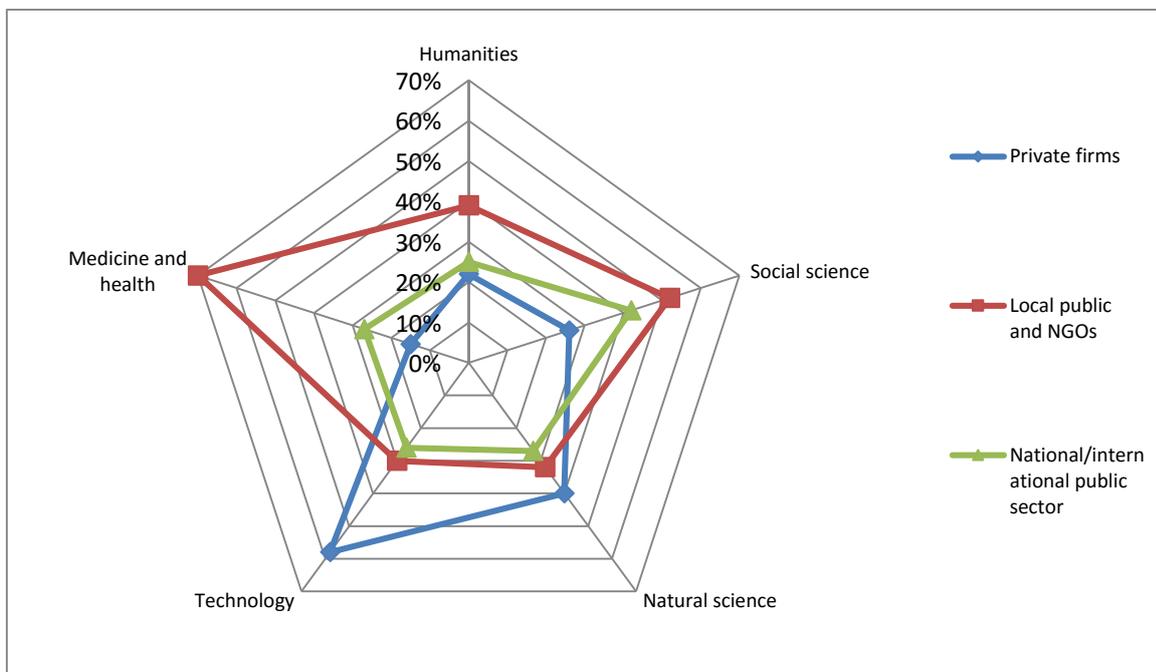


Figure 24. External collaboration patterns per field of science. Share of respondents.

Figure 24 shows that the fields have distinct partnership profiles and collaborate mainly with different societal sectors. Humanities appears as a field with a less distinct profile apart from less frequent collaboration, somewhat similar to natural science.

A number of questions were asked also for the motives behind collaboration. The results are shown in Figure 25. The most important motives are related to finding opportunities for students, getting insight into practical problems and testing the relevance of the research. These are also the most important reasons in the humanities, although fewer respondents supported the claims than in many other fields. Getting an extra income was the least important motive, but the only one in which the humanities have a slightly higher score than the rest. This may be related to the individualistic type of research where one's expertise is something that can be capitalised on in somewhat different ways than in teamwork-based research.

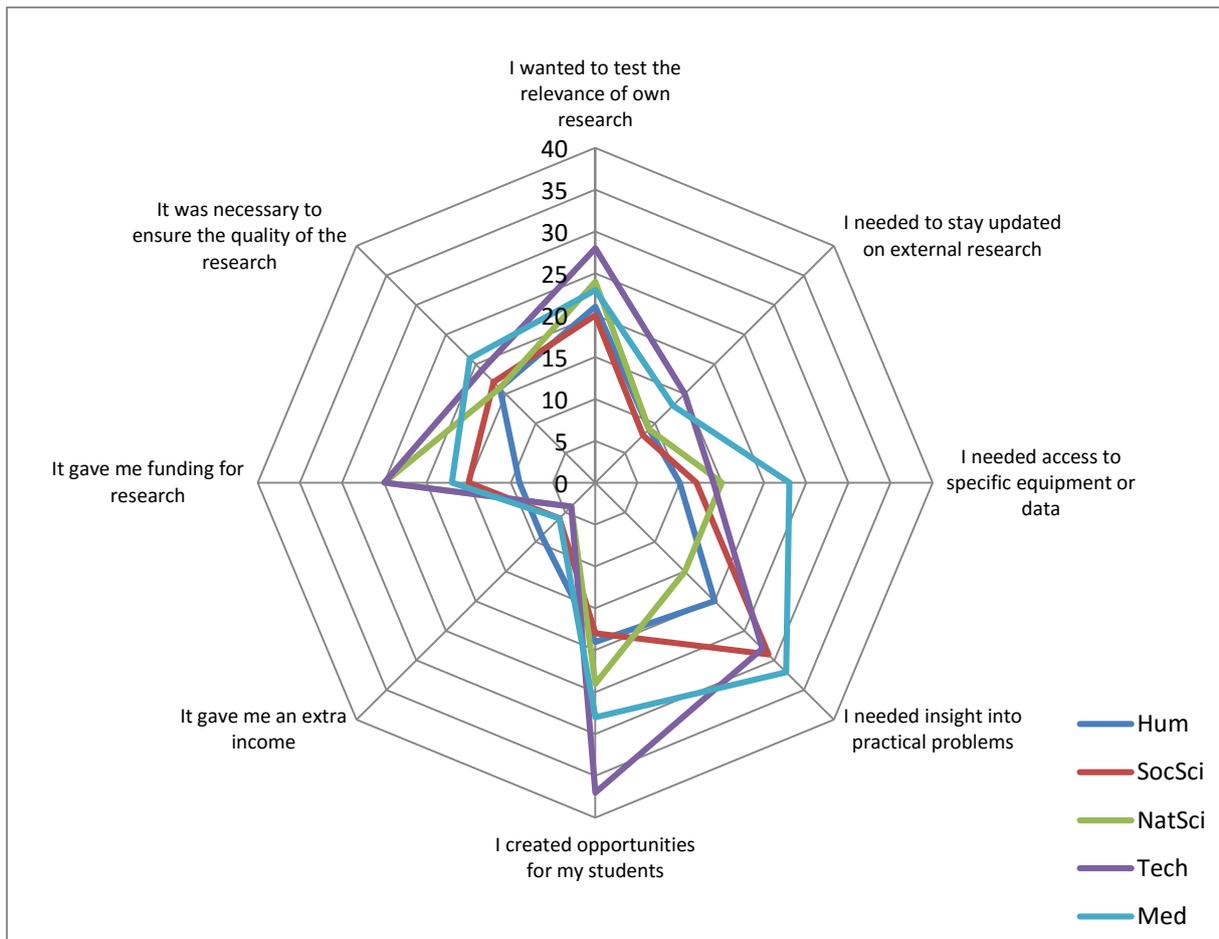


Figure 25. Motives for collaboration with external organisations, per field.

3.4 Summary

This chapter has presented a broad perspective on academic engagement and related this to various activities or “channels” of interaction between researchers and society. The main pattern is similar to what is found also in other countries (e.g. Abreu & Grinevich 2013) – dissemination and training are the most important types of interaction, followed by formal research collaboration and with commercialisation only involving a few researchers in most fields.

Central explanations for engagement are seniority, external research funding, an applied research profile and non-academic work experience. Almost half of the tenured academic personnel in the humanities have at least one full year of such experience after their master’s degree; it is lowest but still a quite high share. The pattern of engagement is similar across fields, with humanities researchers slightly above the average on dissemination and below on formal research collaboration and commercialisation. Still, some humanities researchers are active here as well: seven per cent of them have applied for a patent, licensed a research result and/or started a new firm.

When we look at more general partnerships with non-academic organisations, humanities researchers predominantly collaborate with the public sector – although one-fourth of them cooperate with firms (which is higher than in medicine and health). A smaller proportion of humanities researchers report collaboration compared to other fields, however. Their motives for collaboration are similar, but fewer humanities researchers express that they want to create opportunities for their students and need insight into practical problems, compared to respondents from most other fields.

Overall the data indicate that the humanities have a strong engagement profile and that almost all researchers in the field are at least involved in some activities that involve interaction with non-academic organisations or networks. It may be argued that also their engagement profiles are a bit more individualistic with less formal collaboration and a stronger weight on dissemination and more personal motives.

4 Conclusions

The main intention of this report has been to create an empirically based foundation for understanding humanities research, as seen from the individual “bottom level” perspective. A large survey among tenured scientific staff (i.e. no postdocs or PhD students) in Norwegian universities and colleges has been the data source throughout. The survey is representative and close to a census with more than 700 respondents from the humanities alone. The primary context for the analysis is the ongoing evaluation of the humanities in Norway, but the findings may be relevant to the broader discussion of the humanities as well. The report is not part of the evaluation itself and has sought to present a nuanced and detailed picture of research profiles, organisation, collaboration and engagement.

In Norway as in other countries, the debate about the humanities has been active and often quite defensive or negative, stating that the field is threatened by a utilitarian trend in science policy and by the accompanying language, indicators and funding instruments that are not well suited to the unique characteristics of the humanities. An underlying premise is that the field represents something different in its research, topics and relevance to society.

This report has shown that, at least when we look at research profiles, organisational and collaborative aspects, that the humanities are indeed fairly similar to other fields along several dimensions. Researchers in the humanities are similar to the natural scientists in emphasising basic over applied research and in their collaboration patterns. They are similar to social scientists in some aspects of how research is organised, for example the low tendency to involve master and PhD students in research projects. Many such similarities have been discussed in the empirical chapters.

The humanities represent research-intensive disciplines and no field has a higher average publication point score in the Norwegian system. Most of the field’s researchers have a fair amount of time to do research, although the share of respondents with more than 50 per cent of their time for research is comparatively low. There seem to be clear differences in framework conditions between universities and colleges seen from the individual perspective. Studies of researchers in general are biased towards the successful elites, and the science policy debate is at least to some extent dominated by the ones who are very unhappy about directions and priorities. In practice there are probably a lot of researchers in all departments who do not fall into these two categories. Large-scale field evaluations and other similar investigations may be an opportunity to look more closely at the detailed variation.

A major message in the report is that the variation within each field is often greater than the variation between fields. This applies to the humanities as well. Although there may be tendencies for the humanities to have certain ways of organising work, receiving funding and collaborating with external organisations, there are many exceptions for almost all the aspects discussed in the report. To name two examples: While the majority express trust in the management of their academic units and the

way they themselves can influence its direction, a considerable minority disagrees. And while most humanities researchers interact with society through traditional dissemination, some of them apply for patents, license research results or start new firms. We have few reasons to assume that this represents a systematic variation between sub-fields or disciplines within the humanities. If we look at the profiles of the ones who represent a minority way of working with research, collaborating with society etc. they are not concentrated in one institution or have other aspects in common. The field-internal variation probably indicates that there are different ways of shaping an academic career that at least to some extent are also influenced by individual preferences and characteristics.

Research profiles may be a good example of this. 40 per cent of the humanities respondents can be classified as having a “pure basic research” profile, while 15 per cent have a “pure applied” profile. One in ten has a high score on both applied and basic research, while the rest (35 per cent) have a low score on both aspects. Although there are systematic differences between institutional settings (more basic research in universities and applied research in colleges, simply put), this clearly represents a great variety which probably is found also within (at least some) subfields and settings in the humanities. Of particular interest is, perhaps, the group with a low score on both basic and applied research preferences. What type of work are such researchers engaged in? How do you assess its quality? No field has more researchers in this category than the humanities.

There are other aspects in which the humanities stand out from the rest. First, more than the other fields the humanities disciplines are found in the universities rather than the colleges, and in the oldest and most research-intensive universities as well. Again this probably means that their framework conditions for research are good, which we see when we look at time for research, but also that they may be vulnerable to the way the universities are managed and how they handle their internal resources.

Second, a very high proportion of humanities researchers stated that they to a great extent do their research work on their own. Few other issues presented in the report had such large absolute differences between the humanities and the rest. It indicates a more individualistic way of doing research, which poses certain challenges for evaluations (appropriate level of analysis, data collection etc.). It is still interesting that the humanities respondents were generally very positive about how formal research groups could improve research quality and scientific collaboration. The field seems individualistic also for younger researchers who to a lesser extent are active parts of the tenured personnel's projects. It is unclear whether this poses particular challenges for younger researchers; they were not part of this report's survey but should be followed up. Fewer of the humanities respondents are tied to formal research groups, centres and networks (the ones with group affiliation have a positive view of this). They are also to a little extent engaged in formal cross-disciplinary initiatives, but this applies to all fields. Cross-disciplinarity is a complex issue which is also central in the humanities debate (should the field be valued for itself or for how it contributes together with other fields), but little is known about it. Much humanities research is in the R&D statistics classified as “other”, which makes it difficult to make comparisons between subfields. On the other hand it could be an indication that many humanities researchers work in (partly) cross-disciplinary units since they often will be classified as “other” if they do not have a dominating discipline.

Third, more than half of the tenured academics in the humanities have not received any kind of external research funding over the past five years. The reasons are not clear and may be related to the demand side (fewer external opportunities) and also the needs of the researchers (more time rather than more funding/equipment, for example). External funding is an important explanation for societal engagement probably because it comes with certain demands and represents a meeting place partly outside of the academic setting. The relationship between funding and societal engagement deserves further investigation.

Another interesting aspect for further inquiry is the relationship between funding and quality. In most fields, external funding is associated with higher publication productivity and publication in more prestigious journals and leading publishing houses (Gulbrandsen & Smeby 2005 was one of the first

studies of this, based on Norwegian data). It is unclear whether this is the case in the humanities; many do not have external funding but are active in research and have impressive publication outputs. The relationship between research quality and external engagement also deserves follow-up. A clear finding in this report is that societal engagement, regardless of which type of engagement, is strongly related to a preference for applied research. Publication scores on the other hand are strongly related to a preference for basic research. There seems to be a trade-off here, mediated by other factors such as non-academic work experience. But are there settings in which a strong research academic output can be combined with a strong engagement profile? What does this look like in the humanities? These are questions for which we so far have little information.

In sum, the humanities in Norway seem to be research-intensive with fairly good framework conditions (time for research, situated in the most well-funded institutions) and a high publication output. It is more individualistic and slightly less collaborative than other fields, but the internal heterogeneity in the humanities is perhaps more striking than how the humanities stand out from other fields.

References

- Abreu, M. & Grinevich, V. (2013). The nature of academic entrepreneurship in the UK: widening the focus on entrepreneurial activities. *Research Policy* 42(2), 408-422.
- Aksnes, D. & Gunnes, H. (2016). *Evaluation of research in the humanities in Norway: Publication and research personnel. Statistics and analyses*. Oslo: NIFU, Report 2016:14.
- Benneworth, P. et al. (2016). *The impact and future of arts and humanities research*. London: Palgrave, forthcoming November.
- Bentley, P., Gulbrandsen, M. & Kyvik, S. (2015). "The relationship between basic and applied research in universities", *Higher Education*, 70(4), 689-709.
- Gibbons, M. et al. (2004). *The new production of knowledge. The dynamics of science and research in contemporary societies*. London: Sage Publications.
- Gulbrandsen, M. & Aanstad, S. (2015). "Is innovation a useful concept for arts and humanities research?" *Arts & Humanities in Higher Education*, 14(1), 9-24.
- Gulbrandsen, M. & Kyvik, S. (2010). "Are the concepts basic research, applied research and experimental development still useful? An empirical investigation among Norwegian academics", *Science and Public Policy*, 37(5), 343-353.
- Gulbrandsen, M. & Smeby, J.-C. (2005). "Industry funding and university professors' research performance", *Research Policy*, 34, 932-950.
- Hughes, A., Kitson, M. & Probert, J. (2011). *Hidden Connections: Knowledge exchange between the arts and humanities and the private, public and third sectors*. Cambridge: CEBR/Bristol: Arts & Humanities Research Council.
- Stokes, D. E. (1997). *Pasteur's Quadrant. Basic Science and Technological Innovation*. Washington, D.C.: The Brookings Institution Press.
- Thune et al. (2014). *Noder i kunnskapsnettverket: forskning, kunnskapsoverføring og eksternt samarbeid blant vitenskapelig ansatte i UH-sektoren*. Oslo: NIFU, Report 23/2014.
- Thune et al. (2016). "Universities and external engagement activities: particular roles for particular universities?" *Science and Public Policy*, online first.
- Waagene, E. (2014). *Metodenotat: Dokumentasjon av data fra spørreskjemaundersøkelsen til fast vitenskapelig ansatte i U&H-sektoren våren 2013*. Oslo: NIFU, Arbeidsnotat 3/2014.

Appendix

<i>Variable</i>	<i>Dissemination</i>	<i>Training</i>	<i>Research collab.</i>	<i>Commercialisation</i>	<i>Productive researcher</i>	<i>Elite researcher</i>	<i>Collab. firms</i>	<i>Collab. public local</i>	<i>Coll. public nat/intnat</i>
Gender (male=1, fem=2)	-.079	.153	-.111	-.759***	-.013	.010	-.536***	-.035	-.032
Age (-40 ref)									
Age 40-49	.100	.218	.075	-.128	-.096	-.633***	.149	.229	.226
Age 50-59	.258	.244	-.059	-.106	-.505***	-1.130***	.107	.367**	.460***
Age 60+	.133	.203	-.249	-.193	-.859***	-1.363***	-.110	.267*	.549***
Field (humanities=ref)									
Social science	.067	.293**	.769***	.111	-.079	-.129	-.032	.056	.629***
Math./natural science	-1.036***	-.098	1.022***	.657**	-.419**	.161	.475***	-.583***	-.216
Engineering/agriculture	-1.027***	-.427**	1.417***	1.234***	-.342*	-.096	1.069***	-.863***	-.294*
Medicine/health	-.425*	.561***	1.040***	.645**	-.651***	-.407	-.585***	.844***	-.038
Position (full prof ref)									
Associate professor	-.360*	.256**	-.238*	-.167	-.891***	-1.111***	-.198	.212*	-.353***
Lecturer/assistant prof	-.921***	.491***	-.715***	.022	-2.923***	-3.474***	-.172	.202	-.653***
Academic leader	.609	-.455*	.243	-.387	-.967***	-.509	.623***	.921***	.874***
Institution type (1=uni, 2=college)	.462***	.211*	.066	-.164	-.805***	-.905***	-.060	.420***	-.034
No national external research funding	-.701***	-.362***	-1.365***	-.360**	-.419***	-.335*	-.493***	-.592***	-.619***
No international ext research funding	-.403	-.191*	-.164	-.439***	-.323***	-.364**	-.384***	-.060	-.571***
Work experience public sector	.333	.204	.116	-.696***	.094	.061	-.031	.427***	.568***
Work experience research institutes	.224	-.238*	.528***	.076	-.022	.341*	.261*	-.067	.035
Work experience health sector	.430*	.722***	.011	.486**	-.128	.241	-.141	.896***	.351**
Work experience school system	.289*	.464***	.010	-.060	.116	-.105	-.075	.320**	.150
Work experience industry	.303*	.220*	.275**	.618***	-.263*	-.316	1.024***	-.012	-.013
Basic research orientation	.099	-.033	.063	.043	.339***	.488***	-.002	-.028	-.011
Applied research orientation	.389***	.409***	.589***	.316***	.000	-.013	.346***	.439***	.307***
Strong weight on both (Pasteur's quad)	-.005	-.106	-.160	.141	-.129	-.375	.151	-.159	.031
Constant	.576	-1.487***	-3.065***	-2.098***	.612	-1.465	-1.207*	-2.398***	-1.496***

List of tables

Table 1. Respondents per field of science, share of women.	10
Table 2. Average share of time for research per field of science. Only respondents with time>0 are included. N=3484.	12
Table 3. Share of respondents who are part of a formal research group at their department.	21
Table 4. Total publication points 2011-2013 and share of publication points in the most prestigious outlets, per field of science.	29
Table 5. External work experience per field and sector of experience. N=4440.	32

List of figures

Figure 1. Share of researchers in universities and colleges per field of science. Percent.....	11
Figure 2. Communication between management and scientific employees. N=4378.	13
Figure 3. Opportunities for worker influence. N=4362.....	14
Figure 4. Scientific priority-setting. N=4327.....	15
Figure 5. Views on external board members. N=3151.....	16
Figure 6. Individual research. N=3751.	17
Figure 7. Informal local collaborative research. N=3624.....	17
Figure 8. Formal local collaborative research. N=3529.....	18
Figure 9. Affiliated with national centre of excellence. N=3257.	18
Figure 10. Cross-disciplinary research. N=3313.	19
Figure 11. Nationally networked research. N=3378.	19
Figure 12. Internationally networked research. N=3495.	20
Figure 13. Research group and quality of research. N=2463.	21
Figure 14. Research groups and improved local collaboration. N=2462.	22
Figure 15. Involvement of master students in research. N=3761.	23
Figure 16. Involvement of PhD students in research. N=3616.	23
Figure 17. Use of research in teaching at master level. N=3764.....	24
Figure 18. Use of research in teaching at the PhD level. N=3537.	25
Figure 19. Have you received research funding from one or more of these national sources the last five years? Share of respondents per discipline. N=4440.	26
Figure 20. Have you received research funding from one or more of these international sources the last five years? Share of respondents per discipline. N=4440.	26
Figure 21. Research orientation per field. N=4400.	27
Figure 22. Percentage of respondents who in the last 3 years have carried out different external engagement activities. N=4400.	33
Figure 23. External engagement (share of researchers), differences between academic fields. N=4400.	34
Figure 24. External collaboration patterns per field of science. Share of respondents.....	36
Figure 25. Motives for collaboration with external organisations, per field.	37

Nordisk institutt for studier av
innovasjon, forskning og utdanning

Nordic Institute for Studies in
Innovation, Research and Education

www.nifu.no