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Four types of research in the humanities: setting the stage for research quality criteria
in the humanities

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Abstract

This study presents humanities scholars' conceptions of research and subjective notions of quality in the three disciplines German literature studies, English literature studies, and art history, captured using twenty-one Repertory Grid interviews. We identified three dimensions that structure the scholars' conceptions of research: quality, time, and success. Further, the results revealed four types of research in the humanities: positively connoted 'traditional' research (characterized as individual, discipline-oriented, and ground-breaking research), positively connoted 'modern' research (cooperative, interdisciplinary, and societal relevance), negatively connoted 'traditional' research (isolated, reproductive, and conservative), and negatively connoted 'modern' research (career-oriented, epigonal, calculated). In addition, fifteen quality criteria for research in the three disciplines German literature studies, English literature studies, and art history were derived from the Repertory Grid interviews.

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Bibliometric indicators are used in the life sciences and natural sciences to compare research performance (see, for example, Forsl w et al. 2005: 3; Gimenez-Toledo et al. 2007: 137; Lane 2010: 488). Behind the use of bibliometric indicators are one hundred years of science studies on research practice in the life and natural sciences (see Bradford 1934; Cole and Cole 1967; De Solla Price 1963; Garfield 1972, 1976; Gross and Gross 1927; Lotka 1926; Merton 1957, 1968). These bibliometric methods coming from the life and natural sciences are suited only to a very limited extent for use in the arts and humanities to make research performance visible or to measure it, because they do not follow the conventions of arts and humanities research practice (Archambault et al. 2006; Bourke and Butler 1996; Butler and Visser 2006; Finkenstaedt 1990; Gl nzl and Schoepflin 1999; Gomez-Caridad 1999; Guillory 2005; Hicks 2004; Moed, Luwel, and Nederhof 2002; Nederhof et al. 1989; Nederhof 2006). To develop an appropriate toolbox for comparing research performance in the humanities, we need empirical knowledge on the subjective notions of quality that humanities scholars use to interpret, structure, and evaluate the entities and events during their research activities. These notions of quality shape research practices and guide judgements on what is good or bad research. Quality criteria and indicators should be based on these notions of quality. Criteria and indicators are neither a priori facts nor arbitrary constructs. Instead, they are rational, explicit items based on characterizations of notions of quality and models of how research is done (see, for example, Barr  2010: 229; Hellstr m 2010: 310; Scheidegger 2007: 13).

Here in the introduction, we present characteristics of humanities research that are mentioned in empirical studies and introduce the differentiation between tacit and explicit knowledge.

Characteristics of humanities research

Up to now there have been only few empirical studies on quality criteria in humanities research: 'Existing research in the sociology of science ... generally concerns the natural sciences' (Guetzkow, Lamont, and Mallard 2004: 191). As Hemlin (1996: 53) noticed, 'science and technology studies have for many reasons neglected the humanities'. The results of the few available studies taken together with existing, descriptive examinations of the publication behaviour of humanities researchers reveal the following characteristics of humanities research:

1. Humanities research is *focused on theory, source, and text*.

MacDonald (1994) argues that writing is a fundamental component of knowledge generation. Comparing characteristics of academic writing in English literature, history, and psychology, MacDonald found that literary scholars, as representatives of the humanities, tend to be more text-driven, whereas psychology scholars, representing the social sciences, tend to be more concept-driven: 'a reader or interpreter of a literary text begins in some way with the text, a given that exists prior to interpretation and drives the development of interpretive abstractions based on it. ... By contrast, scientists are likely to set up studies ... in order to make progress toward answering specific conceptual questions' (MacDonald 1994: 37).

Hemlin described the working methods of researchers in English literature and linguistics as follows: 'Researchers in literature used a qualitative, interpretative methodology. The dominating research in modern English linguistics was text analyses based on corpora of written or spoken English' (Hemlin 1996: 56-58). This text-focused working method is reflected in the evaluation of quality criteria. Humanities scholars are 'more likely

than historians and social scientists to define originality in reference to the use of original “data”, which ranges from literary texts to photographs to musical scores’, as Guetzkow et al. (2004: 200) concluded from their study.¹ By analysing formal criteria that panellists use to determine excellence in grant proposals, Lamont (2009: 167) found that humanities scholars do emphasize clarity much more than social scientists, who emphasize methods. This is in line with the results of an earlier study by Hemlin (1993: 12) that revealed that humanities scholars ‘favored the Reasoning and Writing Style of research papers ... [and] also laid more emphasis on Stringency criteria and Theory aspects of a Research Effort as well as on Creative Research’ than scholars in the hard sciences. These criteria emphasize theoretical and text-oriented aspects.

2. Research is seen as a process of *introducing new perspectives and reflections*. *Criticism* is an essential part of research.

Since at least the 1980s, the tasks of the humanities have often been seen as, for one, to critically examine the strong technologization (see, for example, Luckman 2004: 84) and, for another, to build abilities as a fundament of democracy: e.g. the ‘ability to think critically; the ability to transcend local loyalties and to approach world problems as a “citizen of the world”’; and, finally, the ability to imagine sympathetically the predicament of another person’ (Nussbaum 2010: 7). Criticism is an important characteristic also referring to science itself: ‘The humanities and social sciences have always been marked by controversy and competing visions of how things should be’ (Fisher et al. 2000: ‘The Value of a Liberal Education’, para. 2). Humanities research does not follow a linear process of development; instead, the focus is on extending knowledge and on the coexistence of competing knowledge (Lack 2008: 14). Correspondingly, according to Guetzkow et al. (2004: 201) the most important category of originality in the humanities is an ‘original approach’, understood as:

originality at a greater level of generality: ... the project's meta-theoretical positioning, or else the broader direction of the analysis rather than the specifics of method or research design. ... Whereas discussions of theories and methods started from a problem or issue or concept that has already been constructed, discussions of new approaches pertained to the *construction of problems* ... (Guetzkow et al. 2004: 199).

This finding led Hellqvist to conclude: 'this might be due to the nature of the process of research in the humanities as an effort to introduce new perspectives and reflections rather than discovering new facts' (Hellqvist 2010: 315). And in a catalogue of criteria of quality in education research put together through interviews and review of the literature, Oancea and Furlong (2007) include the dimension 'phronesis' in addition to the dimensions 'episteme' und 'techne', drawing on Aristotelian terminology. 'Episteme' and 'techne' correspond roughly to the criteria 'rigour' and 'impact' from the Research Assessment Exercise/Research Excellence Framework (RAE/REF) (see Higher Education Funding Council for England 2009: 10, 14); 'phronesis' encompasses aspects such as 'criticism', 'reflexivity' and 'personal growth' (Oancea and Furlong 2007: 133). This points to the aim of humanities research: to develop new, different, and critical perspectives.

3. *Individual research* as an important cornerstone of humanities research.

According to Weingart et al. (1991: 145), the humanities still follow the ideal of individual research. Finkenstaedt's (1990: 413) examination of publications 'showed again the highly individualistic nature of research in the humanities. There is little team work and few publications are co-authored'. More recent studies (Cronin et al. 2003; Hellqvist 2010; Hemlin 1996) also confirm this finding. This is shown with regard to the quality discourse in the linking of research quality with the person of the researcher, which is more pronounced in the humanities than in other disciplines (Hemlin 1993: 11-12). In a questionnaire study of

factors influencing research productivity, Hemlin and Gustafsson (1996: 424) found that ‘respondents rated individual characteristics as strongest in importance ... for the production of papers’. And in their study on originality, Guetzkow et al. (2004: 203) found that ‘panelists often connected substantive originality with morality’.

4. *Productivity and success are not especially important.*

In their report for the Humanities and Social Sciences Federation of Canada, Fisher et al. (2000: ‘The Value of a Liberal Education, para. 18) wrote the following concerning success in the humanities: ‘Some efforts soar and others sink, but it is not the measurable success that matters, rather it is the effort’. Accordingly, compared to the natural and life sciences, in the humanities productivity and success are not especially important in the assessment of research quality (Hemlin 1993: 11-13).

5. *Societal orientation* in the sense of the influence of research on society.

In an overview of the literature on research practice in the humanities, Hellqvist (2010) concludes that humanities researchers are rooted in their culture, and therefore the audience is not limited to the scientific community. In addition, the research is often of regional interest (Hellqvist 2010: 314). Weingart et al. (1991: 14) noted that the public assigns the humanities the functions of providing orientation knowledge and of safeguarding cultural identity. With regard to quality criteria this is recognizable in the following from the study by Guetzkow et al. (2004: 203): ‘Producing work deemed socially significant ... was associated with caring about real-world problems as opposed to being solipsistic’.

6. The *influence of society* or other stakeholders outside science on research is assessed negatively.

Compared to the other studies mentioned above, Hemlin's (1993: 11-12) results revealed a somewhat more differentiated view of societal orientation. Whereas humanities researchers (and social scientists) assessed the influence of research on culture and society as much more important than life, natural, and technical scientists did, external influences on research, such as external funding or evaluation, were clearly rejected by humanities researchers, whereas researchers in other disciplines assessed external influences more positively.

Tacit and explicit knowledge

Polanyi (1967) proposed a distinction between *tacit knowing* and *explicit knowledge*. According to Polanyi, *explicit knowledge* is knowledge that is 'capable of being clearly stated' (Polanyi 1967: 22), whereas *tacit knowing* describes the 'fact that we can know more than we can tell' (Polanyi 1967: 4).

The studies mentioned above used surveys and open interviews as methods and therefore captured mainly *explicit knowledge*. To capture researchers' *tacit (or implicit) knowledge*, which has been neglected up to now, this study used the Repertory Grid technique as the data collection and analysis method. Using the Repertory Grid method it is possible to gather information on explicit and tacit knowledge and, through structuring, to explicate tacit knowledge (Buessing et al. 2002: 7-8; Jankowicz 2001: 64).

This exploratory study has two aims: (1) Producing sound insights into humanities researchers' conceptions of research and (2) Deriving appropriate quality criteria for humanities research. In order to achieve the first aim we use Repertory Grid interviews conducted with scholars in German literature studies, English literature studies, and art history, which capture both the scholars' tacit and explicit knowledge. For the second aim we focus exclusively on humanities disciplines and do not use cross-discipline category systems.

Method

George A. Kelly developed the Repertory Grid method based on his Psychology of Personal Constructs (Kelly 1955) to capture subjective conceptions (or *constructs*) that individuals use to interpret, structure, and evaluate the entities (*elements*) that constitute their lives (see Fransella, Bell and Bannister 2004; Fromm 2004; Walker and Winter 2007). Rosenberger und Freitag (2009) emphasise the flexibility of the technique because it allows an idiographic as well as a nomothetic approach. This versatility is what enables the scholars to describe their notions of research quality in their own words (i.e. idiographic dimension) and permits the summarisation of the individual perceptions for each discipline or sub-discipline, which allows for the development of discipline-specific propositions (i.e. nomothetic dimension).

Because of this flexibility the Repertory Grid is especially well-suited for exploratory purposes and applied problems, and it is used frequently in all kinds of areas of application (Fransella et al. 2004: 168-229; Walker and Winter 2007: 463-467). A great advantage is that by means of the Repertory Grid method, also *tacit knowledge* can be captured—that is, knowledge that can be put into words only with difficulty or not at all (Buessing et al. 2002: 3, 7-8; Jankowicz 2001: 64; Ryan and O'Connor 2009: 232).² Here, tacit and explicit knowledge are to be seen as the two poles of a continuous dimension (Nonaka 1991, 1994; Nonaka and von Krogh 2009; Tschannen-Moran and Nestor-Baker 2004). In this respect, the Repertory Grid is superior to methods that are usually used for the purpose of determining quality criteria, such as open-ended interviews and group discussions (McGeorge and Rugg 1992: 151-152; Winter 1992: 348-351).

Participants

For this study, we conducted personal interviews with 21 researchers (11 women, 10 men) using the Repertory Grid method. We selected the interview participants according to three

criteria: academic status, discipline, and University (Basel and Zurich). We contacted thirty-three academics, twelve of which were unable to participate because of sabbaticals, fellowships abroad, and other reasons. This resulted in a sample of nine professors, five senior researchers with a *Habilitation* qualification, and seven PhDs working at the University of Basel (a total of twelve academics) or University of Zurich (a total of nine academics). The three disciplines German literature studies, English literature studies, and art history were represented by seven interviewees each.

Repertory Grid interview

The thematic framework of the interview was made up of 17 entities and events in the participants' research lives (the *elements*); they were worked out by the project team under the direction of an expert in the Repertory Grid. For example, two of the elements³ were: *highly regarded peer* = a person in my discipline whose research I regard highly; *poor piece of research* = not particularly good piece of research in the last 20 years in my discipline. Table 1 shows all of the elements and their definitions. We took care to include as many opposites as possible that could shape the researchers' experience (for example, good vs. bad research; teaching vs. research; team research vs. individual research; self-perception vs. as perceived by others, and so on).

((Table 1))

To evoke and capture the individual conceptions (*constructs*), element pairs were presented to the interviewees on the computer using sci:vesco Repertory Grid software (version 3) (Rosenberger, Menzel and Buve 2008). The interviewees were asked to associate something very specific (such as a colleague) with the elements, without sharing this with other persons present. The participants had to rate the element pairs (for example, 'research - today' and 'research - tomorrow') on similarity or difference. If participants rated the two

elements as similar, they were asked to verbalize *how* they were similar (for example, ‘cooperation’). This set the *initial pole* of a construct. The participants were then asked about the *opposite pole*, or what they saw as the opposite of the initial pole (for example, ‘isolation’). The two poles ‘isolation’ and ‘cooperation’ constituted a construct that could be called ‘degree of cooperation’. But if the participants perceived the pair of elements to be different, the initial pole was drawn from the description of the one and the opposite pole was derived from the description of the other element. The participants were completely free to label the poles as they wished—that is, they were free to use a single word or whole phrases to describe the poles (for example, ‘small-scale studies that lack a sense of placement within a larger context’). This evoking procedure was repeated several times with other element pairs, to capture all of a participant’s conceptions decisive within the thematic framework of the interview. After evoking the constructs, the participants rated the 17 elements on the two-pole constructs that they had themselves constructed. The rating was done following Larsen et al.’s (2009) two-dimensional evaluative space grid, which allows the participants to rate the elements on the one pole independently of the other pole. The corners of this bivariate, interval-scaled evaluative space grid were the four reference points *initial pole* (for example, ‘cooperation’), *opposite pole* (for example, ‘isolation’), *neither initial pole nor opposite pole* (for example, neither ‘cooperation’ nor ‘isolation’), and *both initial and opposite pole* (for example, both ‘cooperation’ and ‘isolation’). In this evaluation space, the participants arranged the elements with regard to matching the reference points (0% = does not apply at all; 100% = does fully apply). Each construct forms its own answer space—that is, the interviewees placed all 17 elements into the evaluation space grid of all of the constructs that they had named. This scale has two advantages over the one-dimensional scale with initial and opposite pole as end anchors usually used in Repertory Grid interviews: (1) As a construct is always based on a particular pair of elements, there is in principle always the

possibility that a construct is too narrow and as such cannot be applied to the other elements (Fromm 2004: 80-83; Winter 1992: 25-26). This leads to answer distortions, if a construct that cannot be applied to certain elements is rated on a conventional rating scale, since the response alternative 'does not apply to either pole' is lacking; (2) Cacioppo, Gardner and Berntson's (1997) Evaluative Space Model postulated a two-dimensional structure of attitudes. But scales used up to now with the Repertory Grid interviews have a one-dimensional character and therefore are not able to capture a second dimension.

Statistical Analysis

The aim is to identify discipline-specific descriptions of researchers' conceptions of research and the quality criteria that can be derived from them. For this reason, we analysed data that was aggregated for each discipline. Repertory Grid interviews generate linguistic (construct statements) as well as numeric data (grid ratings). The linguistic response material is interpreted based on the numerical grouping by factor and cluster analysis. This makes it possible to discover implicit, discipline-specific structures of the elements and construct poles. For each of the three disciplines a principal component factor analysis on the 17 elements was calculated in Stata 10 to identify the dimensions with which each discipline structures its realm of experience. With the resulting factor values of the construct poles a cluster analysis (using Ward's fusion algorithm and cluster stop criteria by Calinski and Harabasz and Duda and Hart: see Milligan and Cooper, 1985) was conducted for each discipline to find discipline-specific conceptions. Here, the individual poles were the unit of analysis—that is, the initial poles and opposite poles were not viewed as belonging together, because in the bivariate evaluative space the elements could be rated on the one pole independently of the other pole. For the analysis, the mutual connection of the elements and constructs could be made visible in that elements (shown as squares) and constructs (shown

in clusters as circles) could be represented together in a three-dimensional space with a common zero point. Due to limitations of space, the results are illustrated by the example of German literature studies throughout this article (see Figure 1). As the factor loadings of the elements are scaled from -1 to $+1$ and the factor values of the constructs vary from -3.25 to 2.46 , the factor values were transformed such that their theoretical maximum value was 1 and their theoretical minimum value was -1 . In this three-dimensional space the distances between an element and another element, or between a cluster and another cluster, can be interpreted as similarity: The closer two elements are to each other, the more similar they are. However, as the elements and the clusters are scaled differently, interpretation of the distances between elements and clusters is accessible exclusively via their relative positioning. For example, if a cluster lies closer to an element than a second cluster does, there is greater similarity between the first cluster and the element than between the second cluster and the element (for example, cluster 11 'productive' is more similar to the element 'research with reception' than cluster 4 'self-focused' is). We simplified the graphical representations for this publication to increase their readability. The clusters were placed in the two-dimensional space schematically and the third dimension was divided into three groups: negative, neutral, and positive.

Results

The 21 interviewees generated a total of 167 constructs ($M = 8$, $range = 6-11$ constructs), whereby the number of generated constructs did not differ statistically significantly with regard to discipline ($\chi^2(2, N = 167) = 0.52, p > .77$) or academic status ($\chi^2(2, N = 167) = 1.8, p > .41$).

Factor analysis

The factor analysis was carried out on the elements using an oblique rotation procedure and applying the scree test and the eigenvalue criterion to determine the number of factors. In all

three disciplines a three-factor solution emerged, comprising a *quality*, *time*, and *success* dimension. The explained variance (*VA*) of the model is about 70% (German literature studies (GLit): $VA = 70\%$, English literature studies (ELit): $VA = 69\%$, art history (AH): $VA = 68\%$). Due to space restrictions, the results are illustrated by the example of German literature studies. Differences between the disciplines are then reported in a summarized form.

The first factor ($VA = 48\%^4$) divides the elements into a group having a positive valence (elements with $\lambda \geq 0.5$: ‘myself’, ‘myself – others’, ‘my teaching’, ‘way of thinking – mine’, ‘highly regarded peer’, ‘outstanding piece of research’, ‘scientific organization/institute’, and ‘misunderstood luminary’) and a group having a negative valence (elements with $\lambda \leq -0.5$: ‘way of thinking – other’, ‘lowly regarded peer’, ‘poor piece of research’, and ‘young generation of scientists not suited to be university professors’). This factor thus describes a *quality* dimension.

On the *time* dimension ($VA = 15\%$), which lies orthogonal to the other dimensions, the elements ‘third-party research’ ($\lambda = 0.7$), ‘research – today’ ($\lambda = 0.7$) and ‘research tomorrow’ ($\lambda = 0.9$) load very positively, and the element ‘research – yesterday’ loads very negatively ($\lambda = -0.6$).

The third dimension can be interpreted as *success* ($VA = 13\%$). The elements ‘research – yesterday’ and ‘research with reception’ load highly ($\lambda > 0.5$) on this dimension. It correlates moderately positively with the *quality* dimension ($r = 0.29$).

Figure 1 shows the exact positions of the elements. The elements are shown as squares. The grey shading indicates how strongly the element loads on the third dimension. For example, element ‘D’, ‘scientific organization/institute that provides excellent conditions for research in my field’, belongs to the elements having a positive valence in the right-hand side of the figure; this means that ‘scientific organization/institution’ was rated as positive. It

lies at the same time in the neutral area of the second dimension, *time*. This means that ‘scientific organization/institution’ was deemed equally important in the past, today, and also in the future. The dark shading of the element indicates that ‘scientific organization/institution’ has a high value on the third dimension, *success*. Thus, in the discipline German literature studies, the element ‘scientific organization/institution’ is characterized by a positive rating, independence of the *time* dimension, and by a connection with the *success* dimension.

In contrast to German literature studies, in English literature studies and in art history the *success* dimension explained more variance ($VA = 20\%$, respectively $VA = 23\%$) than the *time* dimension ($VA = 11\%$, respectively $VA = 7\%$). Further, the *success* dimension in English literature studies and in art history had slightly different connotations: In German literature studies *success* was expressed as *manifest success* in terms of the influence of already conducted research on current research (in addition to the element ‘research with reception’ common to all disciplines, the element ‘research – yesterday’ loads high on this dimension). In contrast, the other two disciplines put more emphasis on *prospective success* (along with ‘research with reception’, the elements ‘research – today’, ‘research – tomorrow’, ‘third-party research’ load high).

((Figure 1))

Cluster analysis

After obtaining the factor values of the construct poles through factor analysis, the second step was to conduct a cluster analysis. Due to space restrictions, we will again explain the results of the cluster analysis taking the example of German literature studies and focusing on the results that hold for all three disciplines. In the following, the cluster names are numbered, so that they can be found in the figures and tables in the appendix. Terms and phrases in quotation marks and italics are quotations from the interviewees on constructs.

To obtain detailed structuring of the construct poles, we aimed for the largest possible number of clusters and at the same time high discrimination between the clusters. According to the criteria by Calinski and Harabasz and Duda and Hart (see Milligan and Cooper 1985), for German literature studies, this is achieved with 13 clusters. Table A1 in the appendix shows the descriptions of the clusters. (Tables A2 and A3 can be used for comparison. They contain the cluster descriptions for English literature studies and art history.)

A look at clusters on the *quality* dimension shows that the clusters are positioned in three sections (see Figure 1): Cluster (CL) 1 to CL 6 are close to elements having a negative valence and describe research that is career-oriented (CL 1), normative (CL 2), simplifying (CL 3), self-focused (CL 4), socially incompetent and unoriginal (CL 5), and economic (CL 6). In contrast, CL 8 to CL 13 are close to elements having a positive valence and include research that is diversified and cooperative (CL 8), excellent (CL 9), individual and object-oriented (CL 10), productive (CL 11), brilliant (CL 12), and avant-garde (CL 13). The cluster research cooperation (CL 7) is not placed near either negative or positive elements and thus can be seen as neutral on the *quality* dimension.

There was also a clear spatial division on the *time* dimension. CL 1, 6, 7, 8, 9, and 11 are positioned in the upper two quadrants, whereas CL 2, 3, 4, 5, 10, 12, and 13 are in the lower two quadrants. Therefore, a contrast exists between research as it typically was in the past and research as it is typically expected in the near future. This translates to a ‘traditional’ and a ‘modern’ conception of research. Such a differentiation is a finding that has not received attention up to now. The constructs of the conception of modern research tend to be oriented towards the outside—that is, they include other researchers or society (for example, ‘*good exchange between professors and students*’, ‘*cooperative*’ on the positive side, or ‘*political, calculated (money and power)*’, ‘*seeking attention*’ on the negative side), whereas the conception of traditional research tends to be oriented towards the inside—that is,

towards the researchers themselves or towards the researchers' own field (for example, '*locked up in my study*', '*go your own way and not be very influenced by whatever happens to be "in"*' with a positive valence, and '*isolated*', '*lacking social competency*' with a negative valence).

A look at the localization of the clusters on the *quality* and the *time* dimension reveals a picture that is typical of all three disciplines: Four ideal-typical conceptions of research can be identified (see Figure 2). The first type can be described as positively connoted 'traditional' research; this is the type prevailing in the literature (Finkenstaedt 1990: 413; Hellqvist 2010: 314; Weingart et al. 1991: 145) of the humanities researcher as an individual who typically accomplishes some '*discipline-oriented*' individual effort working '*locked up in my study*'. This type is located in the bottom-right quadrant. The second type of research stands for positively connoted 'modern' research, which the interviewees described as '*cooperative*' and '*interdisciplinary*' and which emphasizes the '*relevance of literature in its capacity to tie in with society*'. It is in the upper-right quadrant in Figure 2. The third type describes 'traditional' research that has a negative connotation, because the introversion leads to '*monotheism*' and '*linear thinking that persists in fixed positions*' or to research that is '*isolated*' and '*reproductive*', as shown in the lower-left quadrant. The fourth type shows the negative aspects of the 'modern' conception of research. 'Modern' research has negative connotations, if '*political, calculated (money, power)*', '*epigonal*', '*frothy jargon*' and '*insubstantial interdisciplinarity*' predominate or if it is hindered by '*economization*' and '*packaged to fit certain trends*'. This type is in the upper-left quadrant in Figure 2. It was thus clearly revealed that in all of the disciplines examined, conceptions of positively connoted 'modern' and 'traditional' research were contrasted with negatively connoted 'modern' and 'traditional' research.

((Figure 2))

A look at the *success* dimension shows that two kinds of innovation can be distinguished: The innovation of currently successful research in accord with the *zeitgeist* can be characterized as ‘small-step’ innovation, i.e. a methodological innovation or an innovation that ties into current knowledge. In contrast, the innovation of currently less successful research was described as ‘ground-breaking’ innovation (for example, ‘*message in a bottle*’, ‘*lateral thinking*’) that may not yet have a specific addressee but can definitely bring about ‘*structural change*’. In addition, these different kinds of innovation can be assigned to the two conceptions of research: The ‘ground-breaking’ innovation from CL 13 (*avant-garde*) comes from conception of ‘traditional’ research and appears to be innovation in the sense of great advances that are ahead of their time and bring about great changes (such as a paradigm shift). This is contrasted with ‘small-step’ innovation that relies on current knowledge, which is inherent to the ‘modern’ understanding of research and is represented in CL 9 (*excellence*) and CL 11 (*productive*). It is noticeable that ‘ground-breaking’ innovation is associated with the element ‘misunderstood luminary’, which has a positive connotation in all three disciplines – despite low current success, whereas innovation that ties into current knowledge is positioned in direct proximity to ‘research with reception’ and appears to play a role especially in the current discourse.

Besides innovation, which is double-edged along the dimension of *success* (innovative and successful research versus innovative but unsuccessful research), constructs can be found that are double-edged along the dimension of *quality*: Interdisciplinarity (for example, ‘*very interdisciplinary*’) and disciplinarity (for example, ‘*philological (referring to texts)*’), cooperation (for example, ‘*cooperative*’, ‘*research collective*’) and individual research (for example, ‘*individual*’), public-oriented (for example, ‘*relevance of literature in its capacity to tie in with society*’), and autonomy (for example, ‘*time to study the research topic intensively*’) had both positive and negative sides. If, cooperation serves diversity, for

example, then cooperation was rated as positive. But if cooperation is an end in itself or even serves mainly someone's career, it was rated negatively. Similarly, individual research was rated as positive if it was an '*individual effort*' focusing on a research topic. An overly strong self-focus or even isolation characterized the negatively connoted side of individual research. At the same time, the opposites interdisciplinarity and disciplinarity, cooperation and individual research, public-orientation and autonomy run along the *time* axis. Interdisciplinarity, cooperation, and public-orientation were therefore not direct criteria for the quality of research but instead features of the conception of 'modern' research, whereas disciplinarity, individual research, and autonomy were features of the conception of 'traditional' research. All of these features have their advantages and disadvantages. Similarly, internationality, which was also a feature of the conception of 'modern' research, had positive and negative connotations. However, it was emphasized mainly in art history and did not appear in German literature studies.

Besides the description of the conceptions of research and the scholars' subjective notions of quality in the three disciplines (depicted using the example of German literature studies), the clusters also offered information on what constitutes 'good research' in the eyes of the scholars and, hence, revealed quality aspects for research. These quality aspects can be condensed to 15 quality criteria for German and English literature studies and art history. Table 2 lists the quality criteria and aspects in combination with the cluster(s) from which they were derived.

((Table 2))

Basically, the criteria and aspects are found in all three disciplines in one form or another—if not in clusters having a positive connotation, then in negating form in the clusters having a negative connotation. For example, in English literature studies the criterion 'inspiration' is found in the negatively connoted CL 8 and CL 11 in the mentions '*stuck in*

established knowledge' and *'boring*'. In Table 2, the appearance of a quality aspect in its negating form in a negatively connoted cluster is indicated by the cluster number in parentheses. Of 33 aspects, only eight cannot be found in all three disciplines: *intrinsic motivation, transmission of intrinsic motivation, societal orientation, reception by society, internationality, productivity, influence of research on teaching, and object and text based.*

Discussion

While newer approaches to evaluate humanities research focus on peculiarities of the humanities in citation and publication behaviour (e.g. Nederhof 2011; Zuccala 2012), we take a different approach by explicating the scholars' notions of quality. This exploratory study reveals conceptions of research and subjective notions of quality of 21 humanities scholars in the disciplines German literature studies, English literature studies, and art history. In addition, it addresses the question as to what constitutes 'good research' and what quality criteria can be inferred. The operationalization of the quality criteria, however, is beyond the scope of this article.

The factor and cluster analyses of the scholars' constructs, which were captured and rated using the Repertory Grid method, shows that two conceptions of humanities research can be distinguished: 'modern' and 'traditional' research. They can each have a positive or negative connotation. This results in four types of humanities research: (1) positively connoted 'traditional' research, which describes the individual researcher working with one discipline, who as a lateral thinker can trigger new ideas; (2) positively connoted 'modern' research characterized by internationality, interdisciplinarity, and societal orientation; (3) negatively connoted 'traditional' research that, due to strong introversion, can be described as monotheistic, too narrow, and uncritical; and finally (4) negatively connoted 'modern'

research that is characterized by pragmatism, career aspirations, economization, and pre-structuring.

In addition, it was discovered that some constructs commonly used as quality criteria are double-edged in nature: interdisciplinarity, cooperation, public orientation, and internationality are found in both the positively and negatively connoted conceptions of ‘modern’ research. At the same time, the opposites interdisciplinarity and disciplinarity, cooperation and individual research, public orientation and autonomy run along the *time* axis (‘traditional’ vs. ‘modern’). Whereas positively connoted ‘traditional’ research stands out with the individual researcher as the producer of great disciplinary works, positively connoted ‘modern’ research is realized through cooperation and interdisciplinarity. In the same way, two kinds of innovation along the *success* and also the *time* dimension can be distinguished: Innovation in the conception of traditional research is ‘ground-breaking’ innovation—that is, innovation that can cause structural change but under circumstances may not yet be crowned with success. In contrast, innovation in the conception of ‘modern’ research is ‘small-step’ innovation that finds strong reception. It is characterized by small steps of progress that start out from and tie into existing knowledge, for example through the use of new sources.

In sum, the following can be ascertained with regard to the six characteristics of humanities research that are found in the literature and were mentioned in the introduction above:

The first two points—namely, *focused on theory, source, and text* and *introducing new perspectives and reflections; criticism*, which several authors call features of humanities research (Furlong and Oancea 2007; Guetzkow et al. 2004; Hellqvist 2010; Hemlin 1993; 1996), are the common denominators of the conceptions of ‘traditional’ and ‘modern’ research having a positive connotation (see Table 2, quality criteria 3 ‘scientific character’

and 12 ‘scholarship’, respectively quality criteria 4 ‘reflection, criticism’ and 8 ‘diversity, variety’).

The results of this study also support Hemlin’s (1993) finding that in the humanities *influence from outside* is rated negative. This constitutes as it were the negatively connoted conception of ‘modern’ research (see Figure 2 and CL 6 and CL 7 in Appendix A1 and A2, and CL 7 and CL 8 in Appendix A3).

Based on the results of this study, the remaining characteristics of humanities research named in the literature (*individual research, productivity and success are not especially important, and societal orientation*) have to be differentiated. The results of this study do confirm that *individual research* is an important cornerstone of humanities research, as frequently portrayed in the literature (Cronin et al. 2003; Guetzkow et al. 2004; Hellqvist 2010; Hemlin 1993; Hemlin and Gustafsson 1996). But individual research corresponds to the conception of positively connoted ‘traditional’ research (see Table 2, quality criterion 11 ‘autonomy’). In addition to individual research, however, collaborative research appears to becoming established also in the humanities, as shown by the conception of positively connoted ‘modern’ research in which cooperation and interdisciplinarity are important (see Table 2, quality criterion 5 ‘scientific exchange’). Further, as Hemlin (1993) already ascertained, *successful research* cannot be equated with *quality* (the correlation of this study’s *success* and *quality* dimensions is moderate at best), but *success* is a conception that is also important for humanities scholars, since *success* is one of three dimensions of the realm of experience of researchers. Also productivity does not appear to be totally unimportant, as it is after all a part of the conception of positively connoted ‘modern’ research (see Table 2, quality criterion 15 ‘productivity’). Finally, in the literature it is often stated that humanities research is becoming more firmly anchored in our culture and that this finds expression in *societal orientation*. Regarding this point, based on the results of this

study some differentiation is necessary: connection to society is a feature of the conception of positively connoted ‘modern’ research (see Table 2, quality criteria 7 ‘connection to society’). Positively connoted ‘traditional’ research, in contrast, stands out precisely by *not being oriented to society* and by not having to have a direct addressee (see Table 2, quality criteria 11 ‘autonomy’).

In addition to these quality criteria already known from previous studies, this study was able to identify several further quality criteria: ‘continuity’, ‘inspiration’, ‘topicality’, ‘openness and integration’, ‘connection between teaching and research’, and ‘intrinsic motivation’. This study thus reveals a more differentiated picture than earlier studies, because using the Repertory Grid method it is possible to capture also tacit knowledge.

This study raises several points that should be considered more closely in the future. First, studies that aim to examine researchers’ conceptions of quality should collect not only researchers’ explicit knowledge but also experts’ tacit knowledge. The Repertory Grid technique has been shown to be well-suited for this purpose. Second, the results of this study show that in the humanities there are two conceptions of positively connoted research. Both of them should be taken into account in research funding. The current quality debate is strongly oriented towards acquiring third-party funding, which is associated with the excellence concept and based on the ideal of cooperative, productive, interdisciplinary, and internationally active researchers (Deutsche Forschungsgemeinschaft 2008; Higher Education Funding Council for England 2009). If only this ‘modern’ conception of research is supported, there is the danger that the only kind of innovation supported will be ‘small-step’ innovation, since ‘ground-breaking’ innovation is a characteristic of ‘traditional’ research. Opus magnum grants offered jointly by the Fritz Thyssen Stiftung and the Volkswagen Foundation in their ‘Focus on the Humanities’ funding programme could serve as a bridge builder between ‘modern’ and ‘traditional’ research, because although the funding

programme is tailored to characteristics of ‘traditional’ research, it still introduces a competitive factor into it. Third, during an evaluation it should be taken into account that many commonly employed quality criteria (e.g. interdisciplinarity, cooperation, relation to or impact on society) turn out to be double-edged swords and should not be used as quality indicators in their own right.

Similar to other studies on quality criteria in the humanities (see, for example, Furlong and Oancea 2007; Guetzkow et al. 2004; Hemlin 1993, 1996; Hemlin and Gustafsson 1996; Lamont 2009), a possible limitation of this study is the generalizability of the findings, for we surveyed only researchers at two universities in Switzerland in three disciplines. Therefore, more research based on a larger and international sample is needed to validate the quality criteria developed in this study. However, the fact that this study could confirm quality criteria already described by previous studies, despite different methods and national contexts, is an indication that the results may have validity also outside the two Swiss universities. Thanks to including tacit knowledge, it was even possible to complement and extend the existing criteria. This inclusion of tacit knowledge is of central importance, if the aim is to develop and use quality criteria and indicators that will find acceptance in the research community.

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Notes

¹ The study by Guetzkow, Lamont, and Mallard (2004) focused on the quality criterion ‘originality’, which they held to be one of the main criteria used to evaluate scholarship in the social sciences and humanities. In interviews, peer-review panellists mentioned ‘originality’ 240 times; other criteria were also named frequently—‘clarity’ (212 times), ‘social relevance’ (122), ‘interdisciplinarity’ (110), ‘feasibility’ (103), ‘importance’ (68), ‘breadth’ (62), ‘carefulness’ (46), ‘usefulness’ (35) und ‘exciting’ (32)—but not examined further.

Unfortunately, nothing can be said about the salience of these other criteria in the humanities or on differences to the social sciences, since the study does not analyse these criteria.

² The questioning method itself, which is playful and works with opposites, evokes constructs and already captures tacit knowledge (see Buessing et al., 2002). To a certain extent, tacit knowledge can also be elicited by conventional interview methods that focus on drawing boundaries (such as in Lamont, 2009). But with the structuring that results from the ratings of the constructs elicited with the Repertory Grid method, even deeper-lying knowledge can be brought to light that cannot be put into words and is not directly accessible to the interview participants.

³ The interviews were conducted in German and translated to English by a professional translator in consultation with the project team.

⁴ The explained variance of the model describes the proportion of variance explained by the three extracted factors. As we then conducted an oblique rotation and the individual factors thus can correlate with one another, the sum of the explained variance of the individual factors is larger than the explained variance of the model.

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Table 1. The elements of the Repertory Grid interview

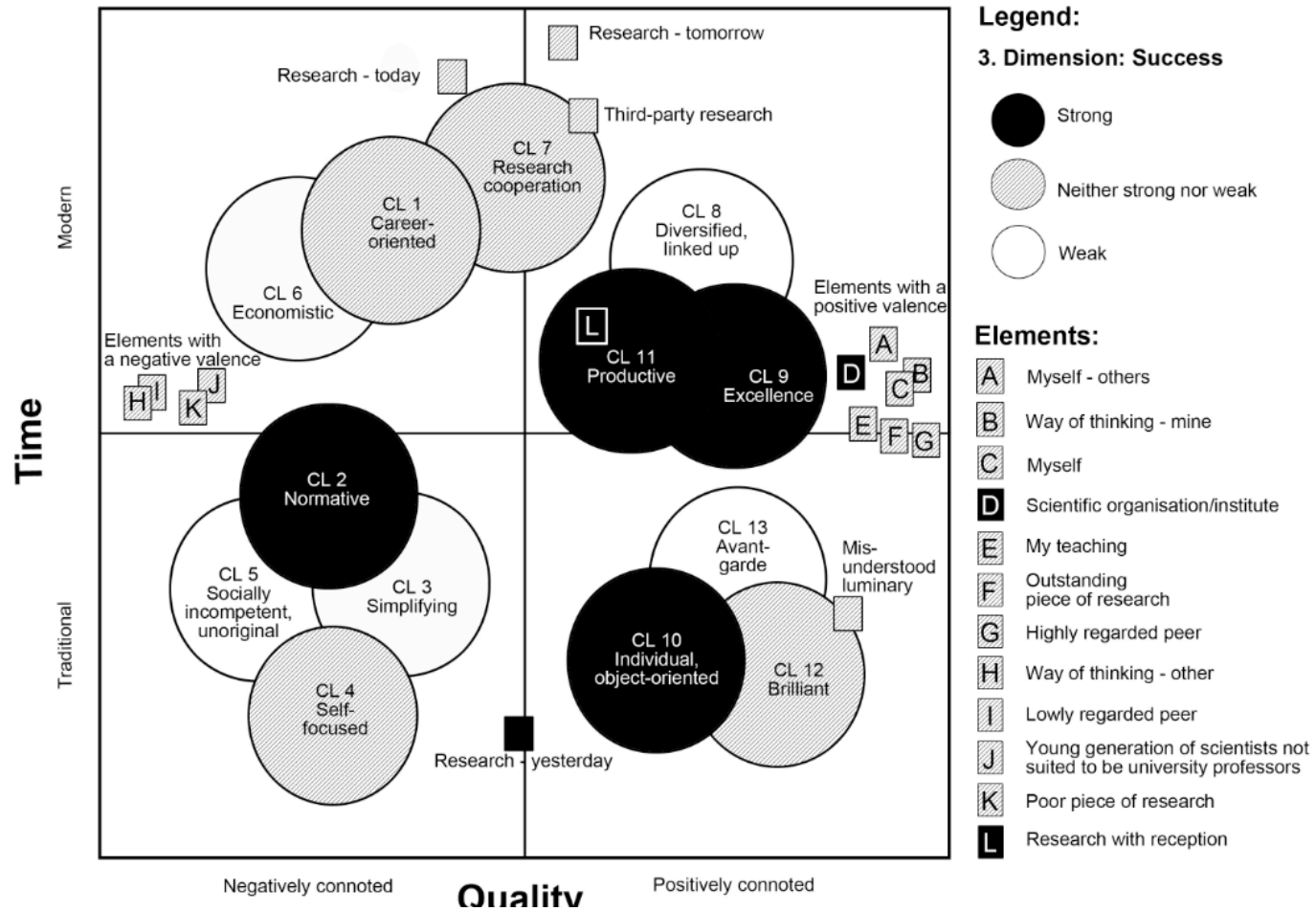
| Nr. | Element | Definition |
|-----|---|---|
| 1 | Myself | Myself, how I am as a researcher/scholar |
| 2 | Myself - others | Myself, how others in my scientific community probably perceive me |
| 3 | Highly regarded peer | A person in my discipline whose research I highly respect |
| 4 | Lowly regarded peer | A person in my discipline whose research I do not regard highly |
| 5 | Outstanding piece of research | Important, outstanding piece of research in the last 20 years in my discipline |
| 6 | Poor piece of research | Not particularly good piece of research in the last 20 years in my discipline |
| 7 | Scientific organization/institute | Scientific organization/institute that provides excellent conditions for research in my field |
| 8 | Way of thinking - mine | A way of thinking ('paradigm', 'school', line of research), with which I identify the most |
| 9 | Way of thinking - other | A way of thinking ('paradigm', 'school', line of research), with which I cannot identify |
| 10 | Young generation of scientists not suited to be university professors | Up-and-coming young scientists in my discipline who have little chance of becoming university professors |
| 11 | Research - yesterday | Research by the generation that trained me |
| 12 | Research - today | Research by my generation |
| 13 | Research - tomorrow | Research by the next generation |
| 14 | Research with reception | Research in my discipline that is discussed and influences subsequent research |
| 15 | Third-party research | Applied for and funded research in my discipline (for example, supported by the Swiss National Science Foundation (SNSF) or National Centre of Competence in Research (NCCR)) |
| 16 | My teaching | The teaching in my discipline |
| 17 | Misunderstood luminary | Poorly recognized expert in my discipline [German: 'verkannte Koryphäe'] |

Table 2. Quality criteria and constitutive aspects, drawn from the Repertory Grid interviews

| Nr. | Criterion | Aspects | CL Nr. Table A1 | CL Nr. Table A2 | CL Nr. TableA3 |
|-----|--|---|-----------------------|-----------------------|--------------------------|
| 1 | Continuity | a) continuity, continuation of tradition | 9 | 1 | 4 |
| 2 | Innovation, originality | a) innovation that ties in with existing b) ground-breaking innovation | 9 13 | 1 3 | 5 1, 4 |
| 3 | Rigour | a) comprehensibility b) exemplary way of proceeding (systematic, stringent, analytical) | 12 9 | 13 3, 4 | 5 1, 4, 5 |
| 4 | Reflection, criticism | a) self-reflection, ability to be critical b) Criticism (science and society) c) relativist understanding of science | (1) 9 (4, 2) | 3 (7) (12) | 4, 5 (10) 5 |
| 5 | Scientific exchange | a) exchange within the discipline b) interdisciplinarity c) internationality d) cooperation e) peer orientation | 7 8 - 8 9 | 1 2 2 5 4 | 1 5 1, 4 5 5 |
| 6 | Inspiration | a) inspiration to other researchers | 9 | (8, 11) | 1, 4 |
| 7 | Connection to society | a) societal orientation b) reception by society c) societal relevance of research performance | - - 9 | 5 5 5 | 5 5 5 |
| 8 | Diversity, variety | a) diversity (methodological and topics) | 8 | 2 | 1, 5 |
| 9 | Topicality | a) topicality b) engagement in ongoing research debates | (3) (5) | 2 4 | 1 (6, 3) |
| 10 | Openness, integration | a) openness to persons b) openness to ideas | 9 12 | 1 4, 5 | 4, 5 5 |
| 11 | Autonomy | a) individuality b) independence c) no particular addressee | 10, 12 12 13 | 13 13 13 | 2 4 4 |
| 12 | Scholarship | a) disciplinary orientation b) object and text based c) in-depth knowledge | 10 12 10, 12 | 1 2 3 | 2 - 4 |
| 13 | Connection between teaching and research | a) influence of research on teaching b) good exchange between professors and students | 11 9 | (11) (9) | - 5 |
| 14 | Intrinsic motivation | a) intrinsic motivation b) transmission of intrinsic motivation | 10, 12 12 | - - | (9) - |
| 15 | Productivity | a) productive research | 11 | (8) | - |

Note. The numbers indicate the numbers of the clusters having a positive connotation in Tables A1, A2, and A3 that contain mentions of the aspects. Numbers in parentheses refer to mentions of the opposite aspects in clusters having a negative connotation. A dash indicates that an aspect is missing for a discipline.

Example: The criterion productivity is defined by the aspect *productive research*. The aspect is found in German literature studies in Cluster (CL) 11. In English literature studies the opposite of productivity is mentioned in CL 8 as ‘spend little time on research’, which has a negative connotation. This aspect is not mentioned in art history.



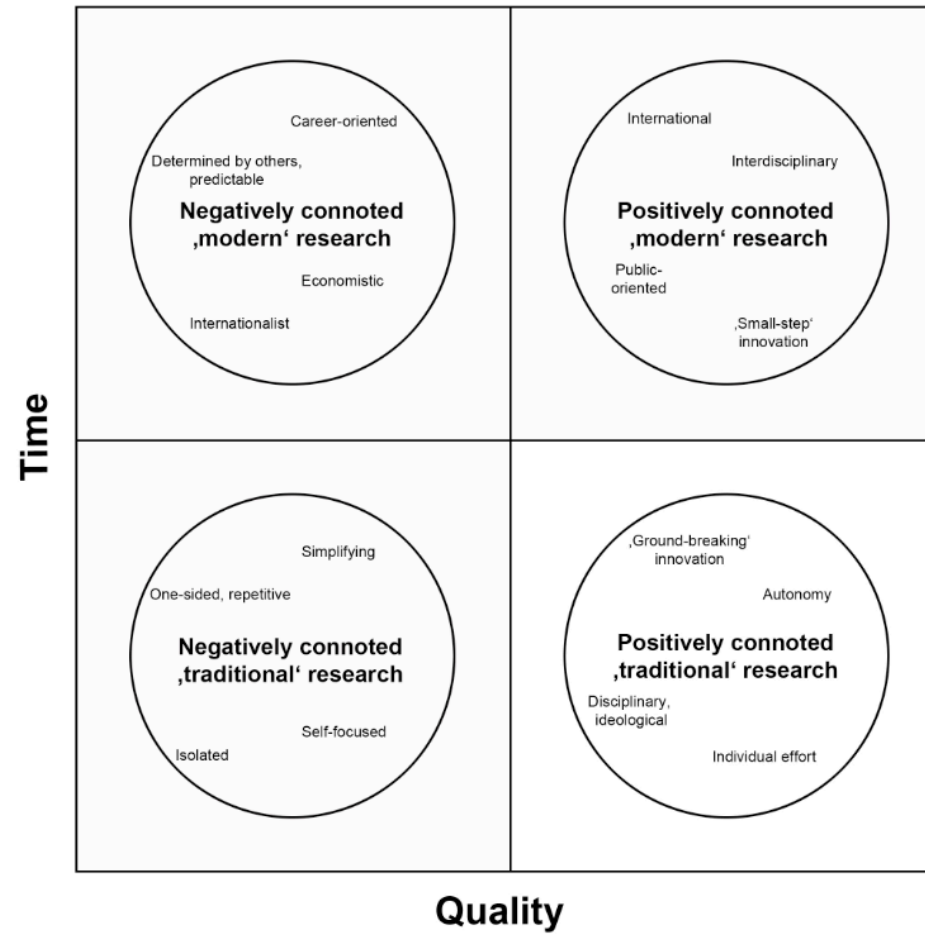


Figure 2. The four types of humanities research. Summarizing, two-dimensional representation (*quality* and *time* dimensions) of commonalities across the disciplines.

Appendix

Table A1. Cluster names and their characterizations for the discipline ‘German literature studies’

| Nr. | Cluster name | Characterization |
|-----|----------------------------------|---|
| 1 | Career-oriented | epigonal; not text based; calculated; fashionable; no reflection of one’s own superficiality; seeking attention; packaged to fit trends |
| 2 | Normative | normative; canonist; linear; one-sided way of working and thinking; isolated |
| 3 | Simplifying | either theory or text; small-scale study; stereotyping; philologically limited; conforming; quantification of research performance; lack of time, financial resources, institutional resources; out-of-date area of research |
| 4 | Self-focused | no cooperation with others; research without evaluation by specialists; monotheistic |
| 5 | Socially incompetent, unoriginal | lacking social competency; harmful for discourse culture; stagnating and unoriginal |
| 6 | Economistic | economization; short-lived; increasing quantification of research; insubstantial interdisciplinarity |
| 7 | Research cooperation | topic-centred research cooperation/network; specialization with ability to tie into existing research; differentiated and pluralistic; guided by efficiency and plannability; concerted action |
| 8 | Diversified, cooperative | diversified and pluralistic; interdisciplinary and cooperative; linked up |
| 9 | Excellence | Synthetic; reflective; hermeneutic; text-based; cultural-historical way of proceeding; innovative; peer-oriented; interdisciplinary; societal relevance; critical examination of societal tendencies; openness to persons; continuity; good exchange between professors and students; new impetus |
| 10 | Individual, object-oriented | Individual; intensive; intrinsically motivated; disciplinary; multifaceted |
| 11 | Productive | productive research that informs teaching |
| 12 | Brilliant | have and arouse interest; mature and independent ideas; independent; question openly; text-based; comprehensible; broad expertise; disciplinary |
| 13 | Avant-garde | Lateral thinking; ‘message in a bottle’; no particular addressee; structural change |

Table A2. Cluster names and their characterizations for the discipline ‘English literature studies’

| Nr. | Cluster name | Characterization |
|-----|---------------------------|---|
| 1 | Paradigm shift, helpful | innovation (new theories, perspectives, methods, topics); supportive of new participants; exchange of expertise; discipline-oriented; continuation of tradition |
| 2 | Interdisciplinary | interdisciplinarity; topicality; multiple perspectives; participation in international discourses; assertiveness; suitable subject matter |
| 3 | Innovative, expertise | innovation (new ideas, questions, thought patterns, original syntheses); expertise (up-to-date state of discussion, in-depth theory knowledge); development of critical categories |
| 4 | Theoretical, established | theoretical research with analytical way of proceeding; new relevant research questions; intervention in debates; recognize and acknowledge achievements of peers |
| 5 | Project, network | cooperative; research cooperation/network/project; societal relevance and utilizable; public impact; internal differentiation; including all media; tied in with discourse; empirical research; curiosity |
| 6 | Bureaucratic, pragmatic | pre-structured; one-dimensional; bureaucratic; numbers-oriented evaluation; applied research; pragmatic |
| 7 | Competitive thinking | conceited; seeking affirmation by peers, but at the same time giving others no respect or recognition; schematic organization; application language [German: ‘Antragsprosa’]; policy questions; lively exchange |
| 8 | Infertile | out-of-date way of proceeding, old-fashioned subject matter; stuck in established knowledge; no reflection; spend little time on research; isolated |
| 9 | Self-focused | maverick; no support of up-and-coming researchers; individual research; not topical |
| 10 | Unimaginative | Lack of openness; no reception of new findings; epigonal; one-dimensional; no new knowledge gain |
| 11 | Without reflection | uncritical, without reflection; epigonal, boring; lack of expertise; no carry-over from research to teaching |
| 12 | Disciplinary, ideological | discipline-oriented; specialized and eccentric; ideological |
| 13 | Individual effort | Original; comprehensible research that is not always recognized as such by peers; individual effort; knowledge not directly utilizable; independent content |

Table A3. Cluster names and their characterizations for the discipline ‘art history’

| Nr. | Cluster name | Characterization |
|-----|-----------------------------------|--|
| 1 | Research-oriented | up-to-date; innovative (new perspectives); inspiring; international; scientific exchange; variety in content; exemplary; methodology (reflection on methods, methodological grasp, versatile methodology) |
| 2 | Traditional | deductive; ideological; tied to disciplinary tradition; discipline-specific orientation; sluggish institutional structures; individual; creative |
| 3 | Ivory tower | stuck in existing research paradigms; ivory tower; lack of coherency |
| 4 | Autonomy | autonomous (self-determined by institute/researchers, unpredictable); continuity; innovative (theoretical speculation, experimental, synthesizing); inspiring; rigour (coherency, transparency); self-reflective; inductive; cosmopolitan, international; in-depth knowledge |
| 5 | Public-oriented | innovative (basic research); interdisciplinary; networked; integration of all researchers; public-oriented; relevant to the present day; finds reception by society; variety in methodology and content; open to criticism; problem-awareness; relativistic; rigour (systematic, consistent, comprehensible); good teacher; expanded horizon |
| 6 | Inexpressive | command of disciplinary language only; weak argumentation; inability to be visible outside of the discipline; epigonal; limited to local area; exclusive; outdated |
| 7 | Project research | in part determined by self; justification and economization pressure; boring; retreat into private life; not up-to-date; lacking transparency; lacking overview of discipline; internationalist |
| 8 | Determined by others, predictable | determined by others; predictable (measurable, controllable, manageable, portionable); unable to cope with theory and subject; elitist and overestimation of self |
| 9 | Disinterested | not interested in research |
| 10 | One-sided, repetitive | one-sided in methodology and topic; naive, not critical; not systematic; repetitive; research for research’s sake, research for a small circle of researchers |
| 11 | Simplifying | limited to one’s own field; narrowly defined research areas; not flexible; unimportant research questions; mere accumulation of material |