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2 **Stability and change in disease prestige: A comparative analysis of three surveys**
3 **spanning a quarter of a century**

4

5

6 **Abstract**

7 In this paper, we present a comparative analysis of three survey studies of disease prestige in
8 medical culture. The studies were conducted in 1990, 2002 and 2014 using the same research
9 design. In each of the three rounds, a sample of Norwegian physicians was asked to rate a set of
10 38 diseases on a scale from 1 to 9 according to the prestige they believed health personnel in
11 general would award them. The results show a remarkable stability in the prestige rank order
12 over 25 years. The top three diseases in all three surveys were leukaemia, brain tumour and
13 myocardial infarction. The four lowest ranked were fibromyalgia, depressive neurosis, anxiety
14 neurosis and hepatocirrhosis. The most notable change concerns apoplexy (brain stroke), which
15 moved from a rank of 33 to 29 and then to 23 over the three rounds. We argue that the stable
16 pattern, as well as this change, substantiate the interpretation of previous research, i.e. that the
17 prestige of a disease is affected by the localization of the affected organ or body part, the effect
18 and style of its typical treatment, and the social attributes of the typical patient. Analysing
19 physicians' shared evaluations of different diseases, the paper contributes to the cultural
20 understanding of disease conceptions in medicine. Understanding these conceptions is important
21 because disease prestige may influence decision-making in the healthcare sector.

22

23 **Keywords**

24 Norway

25 Disease prestige

26 Cultural analysis of disease

27 Medical culture

1 Social construction of medical knowledge
2 Sociology of valuation and evaluation
3 Comparative analysis
4

5 1.

6 **1. Introduction**

7 Medical professionals rank disease categories in a prestige hierarchy (Album, 1991; Album
8 and Westin, 2008), which is an order of regard or esteem (Nørredam and Album, 2007). The
9 disease prestige hierarchy in medicine, therefore, expresses the unequal standing of diseases
10 among physicians. Disease categories ranked at the top, such as myocardial infarction, brain
11 tumour and leukaemia, are held in high regard, while those at the bottom, such as fibromyalgia
12 and anxiety neurosis, are held in low regard. Notions of what is prestigious and what is not
13 influence the aspirations of social agents (Bourdieu and Wacquant, 1992). Therefore, patterned
14 differences in disease prestige are a significant aspect of medical culture, with likely effects on
15 decision-making in the health services.

16 Systematic and comparative analysis in the related field of occupational prestige has shown
17 patterns of valorisation to be very stable over time (cf. Treiman, 1977). To our knowledge, there
18 has been no systematic analysis of the stability of disease prestige hierarchies. Revealing the
19 trends of stability and change in the rank order of disease categories will enhance our
20 understanding of disease prestige in particular, and of evaluative patterns in medical culture in
21 general. The aim of the present paper is a contribution to that end.

22 Our research question is: Does the disease prestige hierarchy change over time? To address
23 this question, we compare survey data elicited at three different times (1990, 2002, 2014)
24 spanning a quarter of a century. All three surveys were conducted using the same research design
25 (sampling, data collection, questionnaire). Although data from the 1990 and 2002 surveys have

1 been used in research publications (e.g. Album and Westin, 2008), they have not been
2 systematically compared. The 2014 survey was conducted for the purpose of comparison across
3 three rounds. Together, our data constitute a solid foundation for comparing temporal patterns of
4 disease prestige.

5 In the remainder of the paper, we present the concepts of prestige and disease prestige,
6 describe our method of study, and review and discuss the results.

7

8 **2. Concepts**

9 *2.1. Prestige*

10 Prestige is a measure of regard or esteem (Nørredam and Album, 2007: 655). Together
11 with power and economic resources, prestige is one of the three basic forms of social inequality,
12 a concept that originated with Max Weber (1978). A related concept is stigma (Goffman, 1968;
13 Link and Phelan, 2001; Scambler, 2009), which covers the lower end of the prestige scale.
14 Today, prestige research can be seen as part of the emerging sociological subfield of valuation
15 and evaluation (Lamont, 2012).

16 The prestige concept has five defining characteristics (Nørredam and Album, 2007;
17 Johannessen, 2014). (1) Prestige is an evaluative concept. (2) It is cultural, depending on
18 consensus, i.e. shared views (Zhou, 2005: 97–8), and “shared norms and values regarding the
19 relative position of attributes in a hierarchy of value” (Treiman, 1977: 20). (3) It is relational: a
20 category can only be evaluated in (implicit or explicit) comparison with other categories. (4) It is
21 an autonomous principle of stratification, irreducible to the two other forms of social inequality
22 (although they empirically affect each other) (Hatch, 1989), and (5) the prestige concept applies
23 to all meaningful objects. Although this last characteristic has long been acknowledged at a

1 theoretical level (Parsons, 1954: 386–92; Treiman, 1977: 19–20; Shils, 1968: 104–5), empirical
2 research has hitherto focused almost exclusively on human agents (e.g. individuals or groups) as
3 the unit of analysis, leaving the prestige of other objects, such as scientific journals and
4 universities, to other media. The same tendency is found in research on social differences in
5 medical attention and treatment – research on “good and bad patients”, predominantly focusing
6 on individuals and their traits (Becker, 1993; Dingwall and Murray, 1983; Dodier and Camus,
7 1998; Jeffery 1979; Kelly and May, 1982; Lorber, 1975; Roth, 1972; Sudnow, 1967;
8 Timmermans, 1998, 1999; Vassy, 2001). The notion of disease prestige runs counter to this
9 analytical trend.

10

11 2.2. *Disease prestige*

12 Analysing the prestige of diseases, this paper treats diseases as cultural categories. As such,
13 diseases convey connotations in the form of stories, images and identities. To talk about the
14 meaning of diseases is, therefore, to talk about the associations that thinking about them can
15 bring to the fore. For instance, talking about AIDS can make people think about a person’s
16 sexual practices and moral fibre, not just the state of his or her immune system (see Sontag,
17 1988). In other words, diagnoses are meaningful, and their meanings are not restricted to the
18 “strictly medical”, neither for lay people nor for medical professionals. Disease categories can be
19 ranked according to their prestige, because they have various and frame (Goffman, 1974)
20 dependent meanings.

21 The idea that any object – ideational or material – can be more or less prestigious dates
22 back to at least 1954, when Parsons wrote that “Stratification in its valuational aspect (...) is the
23 ranking of units in a social system in accordance with the standards of the common value

1 system” (1954: 388). Although he was preoccupied with the status of occupations, Parsons
2 underlined that “care has been taken to use the very general term ‘unit’ as the ‘that which’ to
3 which ranking evaluation is applied” (1954: 388). Parsons (1954: 386–92) therefore maintained
4 that in principle, all units – including concepts and categories – can be stratified according to
5 cultural value and meaning (Treiman 1977: 19–22).

6 Later, Parsons (1958: 170) explicated, “Health and illness are not only ‘conditions’ or
7 ‘states’ of the human individual (...). They are also states evaluated and institutionally
8 recognized in the culture and social structure of societies”. In line with this, Canguilhem
9 proposed that diseases are ordered in a “vulgar hierarchy (...) based on the extent to which
10 symptoms can – or cannot – be readily localized (...)”, and that diseases at the top of such a
11 hierarchy were “more of a disease” (1991/1966: 39).

12 Hierarchies of disease categories have been studied empirically using the concept of
13 *disease prestige* as a lens (Album, 1991; Album and Westin, 2008; Johannessen, 2014; Grue,
14 Johannessen and Rasmussen, 2015; Haldar et. al., 2016). The concept was coined by Album
15 (1991). During the course of fieldwork, he noted implicit evaluations in physicians’ talk of
16 diseases. Moreover, he discovered that, when asked, physicians could rate disease categories
17 according to prestige. Inspired by the long-standing tradition of research on occupational prestige
18 (Treiman, 1977) and medical specialty prestige (Matteson and Smith, 1977; Schwartzbaum et al.,
19 1973; Shortell, 1974), Album conducted a survey in which he asked physicians to rate 38 disease
20 categories according to the prestige they believed health personnel would in general award them.

21 The results showed that physicians were able to rate all 38 disease categories consistently,
22 placing myocardial infarction, leukaemia and brain tumour at the top, and fibromyalgia,

1 hepatocirrhosis, depressive neurosis and anxiety neurosis at the bottom. The same survey was
2 repeated in 2002 (Album and Westin, 2008).

3 Based on interpretation of the survey results, extensive reading of the literature, qualitative
4 interviews and informal conversations with physicians from several specialties in connection
5 with ethnographic field work in a gastro-surgical ward, Album and Westin (2008: 186–7),
6 suggested three sets of prestige criteria – or “deference entitlements” (Shils, 1968: 106) – that
7 seem to structure disease rankings. The first is related to the disease and its typical trajectory.
8 Non-self-inflicted, acute and lethal diseases with clear diagnostic signs, located in the upper part
9 of the body, preferably the brain or the heart, are typically awarded high prestige. The second set
10 of criteria is related to the typical treatment of the disease. Disease categories associated with
11 active, risky and high technology treatment leading to a speedy and effective recovery are
12 awarded high prestige. The third set of criteria is related to the typical patient with the disease.
13 Disease categories associated with young patients, patients who accept the physician’s
14 understanding of the disease, and whose treatment results do not involve disfigurement,
15 helplessness or other heavy burdens, are awarded high prestige (see Album and Westin, 2008;
16 Johannessen, 2014 for more in-depth discussions).

17 Patients’ illness concepts have long been conceptualized as cultural, as more or less shared
18 understandings of bodily and social experiences. In our investigation of disease prestige, we treat
19 physicians’ disease concepts as cultural in exactly the same sense. In this, we follow Freidson
20 (1970: 209), who remarked, “biological deviance or disease is defined socially and is surrounded
21 by social acts that condition it”. Therefore, “The disease side of the disease/illness conceptual
22 distinction is also ripe for social constructionist analysis, insofar as what gets labeled a disease or
23 qualifies as biological is often socially negotiated” (Conrad and Barker, 2010: S68). Our study

1 thus relies on a social constructionist view of medical knowledge (Armstrong, 2002; Arksey,
2 1994; Jordanova, 1995; Löwy, 1988; Nicolson and McLaughlin, 1987; Wright and Treacher,
3 1982), and of disease categories in particular (Aronowitz, 1991; Atkinson, 1995; Mol, 2002;
4 Nicolson and McLaughlin, 1988).

5

6 **3. Methods**

7 *3.1. Questionnaire*

8 We use data from three rounds of questionnaire studies (conducted in 1990, 2002 and
9 2014) of how physicians rate disease categories according to prestige. All rounds employed the
10 same questionnaire and the same principles of sample selection. All studies were conducted in
11 accordance with national guidelines for social science research. Respondents were asked to rate
12 an identical set of 38 disease categories on a scale from 1 (lowest) to 9 (highest) according to the
13 prestige they believed most health personnel would award them. Arguably, some of the items on
14 the list might conventionally be termed symptoms or syndromes; we use the term “disease” for
15 convenience; it signifies that our focus is on medical – not lay – perspectives on health
16 conditions. The set of 38 disease categories was selected with the help of a group of physicians
17 representing different specialties. They aimed to vary the age and sex of a typical patient of the
18 disease, the localization of the affected organ, the likely use of technology in treating the disease,
19 the disease’s curability and objectivity of diagnostic criteria, and whether the disease is chronic
20 or acute. Only disease categories that (in some form) might lead to hospitalization were included.
21 These characteristics were taken into consideration in the selection of diseases to be measured
22 because the medical advisors in the 1990 study hypothesised that they might have a bearing on
23 the prestige of the diseases.

1 The English translation of the original wording of the question is: “Below you will find a
2 list of 38 diseases or disease categories. Please give each disease a number based on the prestige
3 you imagine it has among health personnel.” The expression “among health personnel” was
4 chosen to elicit respondents’ general opinions about disease prestige, which is preferable because
5 respondents tend to be self-policing when voicing their own opinions. Moreover, such phrasing
6 more accurately reflects the nature of the prestige phenomenon, which by definition refers to
7 shared, consensual views. Besides, the phrasing invites respondents to see the disease categories
8 in question from a position at some distance from the particularities of their own clinical work
9 By identifying a reference group, the phrasing also increases the likelihood that our respondents
10 had similar representations in mind when rating; ranking as health personnel in general
11 encourages physicians to consider more general representations of the disease categories (e.g.
12 “lung cancer”), rather than one of several varieties (e.g. “adenocarcinoma” or “large cell
13 carcinoma”). The respondents were explicitly asked to fill out the questionnaire quickly, to
14 follow their immediate thoughts rather than try to approach the questions analytically.

15 The project was approved by the Norwegian Data Protection Official for Research (NSD).

16

17 *3.2. Samples*

18 The sample was recruited in the same way in all three studies. Former and present students
19 from a continuing education programme for health personnel seeking roles as administrators or
20 leaders received the same questionnaire on paper, with a stamped return envelope. This
21 constitutes a sample with long and varied experience in the health sector. In this article, we focus
22 on the physicians in the sample. The physicians work in a variety of positions in the Norwegian
23 health services, including as hospital doctors, general practitioners, administrators and

1 professors. They come from places throughout the country. However, because the teaching site is
2 located in the central part of Norway, this area may be slightly over-represented. The
3 respondents in these three samples are older than Norwegian physicians are in general; most of
4 them have several years of practice behind them. In addition, quite a number are leaders or
5 entering leadership roles in the branches of the health services where they are employed.

6 The response rates were 87 per cent (N = 98) in 1990, 79 per cent (N = 241) in 2002, and
7 66 per cent (N = 291) in 2014.

8 The samples partially overlap, in the sense that some individuals were respondents in more
9 than one round. The 2002 survey was sent to all living students who had followed the continuing
10 education program, including those who were asked to participate in the 1990 survey. Likewise,
11 students from all years of the program received the questionnaire in 2014, including those who
12 had received it in 1990 and 2002 and were still alive. Therefore, the samples have grown with
13 time.

14 Table 1 shows the age and sex of the respondents in the two later samples (The
15 questionnaire results from the first round were never digitized; therefore, contextual information
16 not published by Album (1991) has been lost). The 2002 and 2014 samples are somewhat
17 different with regard to sex and age. The percentage of women was higher in 2014 than in 2002,
18 as was the percentage of respondents aged 55 years and over.

19

20

Table 1 about here

21

22 **4. Results**

1 We present the results as the mean scores of the rankings of the disease categories (Table 2) for
2 all three samples. Diseases are ranked from the most to the least prestigious, using the 2014
3 sample as the standard. The distribution of mean scores ranges from 2.3 to 7.1. The standard
4 deviations range from 1.5 to 1.6. Leukaemia, brain tumour and myocardial infarction
5 consistently hold the top three ranks, although the rank order differs across the three samples.
6 Likewise, depressive neurosis, hepatocirrhosis, anxiety neurosis and fibromyalgia are ranked as
7 the bottom four, with fibromyalgia holding the lowest rank across all samples.

8 In general, the variation in mean scores and rank is relatively small in the three studies.
9 The lowest correlation between the 1990 and 2014 mean scores is 0.95. In other words, the
10 prestige scores of disease categories are quite stable over time. Only six diseases have a
11 difference of 0.5 points or greater between their highest and lowest scores. In Fig. 1, we show
12 their prestige trajectories. The most dramatic change is found for apoplexy (brain stroke) for
13 which the mean score rose from 3.5 in 1990 to 4.0 in 2002 and to 4.9 in 2014, moving from rank
14 33 (of 38) in the first study to 23 in 2014. Angina pectoris has the largest drop in prestige rating,
15 from 6.4 in 1990 to 5.8 in 2014. Analyses for age and sex differences in scores show only
16 insignificant differences.

17

18 Table 2 about here

19

20 Fig. 1 about here

21

22 **5. Discussion**

1 We examined whether the disease prestige hierarchy in medicine changes over time. The
2 results show that basically, it does not. Systematic comparison of the three identical surveys
3 spanning a quarter of a century reveals that there is a stable rank order of disease categories
4 among physicians. This is consistent with results from research on occupational prestige, which
5 finds prestige hierarchies to be highly stable (cf. Treiman, 1977), although not invariant (cf.
6 Goyder, 2005).

7 The most significant change in prestige is that of the rise of apoplexy. In an editorial in
8 *The Journal of the Norwegian Medical Association*, Brean (2011) attempted to explain why
9 apoplexy had been given a 0.5-point increase in prestige in the 2002 survey compared to that of
10 1990. He argued that advances in research, technology and treatment had turned apoplexy into an
11 acute disease. He further described how the main tasks of stroke units had gone “from
12 monitoring and mobilization to active medicinal and endovascular intervention” (Brean, 2011:
13 799; authors’ translation). Brean’s suggestions are in line with the prestige criteria noted by
14 Album and Westin (2008). Thus, the increased regard for apoplexy does not imply a change in
15 prestige criteria; it is more plausibly explained by publicly acknowledged changes regarding the
16 disease and its treatment. Thus, the likely reason behind the most significant change in
17 assessment for a single disease category since 1990 only strengthens our argument concerning
18 stability. This suggests that the overall stability of the hierarchy rests on the stability of the
19 prestige criteria; individual disease categories are reassessed, but according to the same
20 principles, indicating the continued relevance of the prestige criteria as discussed by Album and
21 Westin (2008), related to the (1) disease and its typical course; (2) its typical treatment, and (3)
22 its typical patient.

1 The relevance of these criteria is exemplified by the three top ranked and the four bottom
2 ranked disease categories. The first of these are all localized in the upper part of the body, in the
3 “sacred” organs brain and heart. They are all lethal. Their diagnostic signs are objective. The
4 treatment of myocardial infarction is active, speedy and effective. Surgical treatment of brain
5 tumour involves opening of the skull, and is risky. Leukemia involves several therapeutic
6 elements. Most of them are drug based, but stem cell treatment, which is judged as medically
7 even more advanced, is used in some cases. Quite a few children are hit by leukemia, and in
8 general diseases typical for the younger, gain high prestige.

9 Three of four categories consistently ranked at the bottom are not organ specific and do not
10 give off objective diagnostic signs. The fourth is hepatocirrhosis. This disease is, on the other
11 hand, generally considered as self-inflicted, the result of excessive alcohol use. The introduction
12 of liver transplant as a treatment may in the future result in a raise in prestige, because the
13 treatment is esteemed in itself, and because it may be effective. Fibromyalgia is lower ranked
14 than all others in all three surveys. Diffuse bodily complaints are more problematic in medicine
15 than the “pure” psychological ailments (Bringedal and Tufte, 2012). Besides, most of the
16 fibromyalgia patients maintain understandings of their condition quite different from that of their
17 doctors. Fibromyalgia is much more common among women than among men. A question is,
18 whether this in itself result in low prestige. Those we have interviewed, say the other traits are
19 the reason for the low prestige of this disease category.

20 There is much support for the criteria we have brought forward in the broader literature
21 pertaining to medical valuation. For instance, criteria related to agency, skills and curing are
22 reflected in the notion of “medical responsibility” proposed by Becker et al. (1961: 316–7):

1 The concept of medical responsibility pictures a world in which patients may be in danger of
2 losing their lives and identifies the true work of the physician as saving those endangered lives.
3 Further, where the physician’s work does not afford (at least in some symbolic sense) the
4 possibility of saving a life or restoring health through skilful practice or losing them through
5 ineptness, the physician himself lacks some of the essence of physicianhood. This perspective,
6 which we believe to be an important one in medical culture generally, furnishes a basis for
7 classifying and evaluating patients; those patients who can be cured are better than those who
8 cannot. Furthermore, those patients who cannot be cured because they are not sick in the first
9 place are worst of all.

10 Although this argument pertains to the ranking of patients, it can easily be transferred to
11 other categories, such as diseases. Moreover, this concept of “medical responsibility” hints at
12 more abstract evaluative principles underlying the more concrete criteria proposed in Album and
13 Westin (2008). In addition to Becker et al., the prestige criteria also correspond to more abstract
14 patterns of social worth (cf. Sudnow, 1967), and research into shame and blame (cf. Scambler,
15 2009).

16 A particularly relevant attempt at deconstructing the logic of physicians’ evaluations has
17 been made by Johannessen (2014), who based on a case study of the teaching of neurosurgery
18 argues that disease prestige must be understood in relation to the disease narratives that are
19 communicated in medical education and other settings. Disease narratives “involve causally
20 ordered patterns of disease-related events, with some characters (doctors) acting against the
21 disease and other characters (patients) being acted upon by the disease” (Johannessen, 2014: 85).
22 Johannessen shows how physicians value narratives in which they are portrayed as “masculine
23 and extraordinary lifesavers”, reflecting deep-rooted heroic tales of Western culture. Connecting
24 prestige criteria to physicians’ roles in disease narratives highlights the interlinking of prestige

1 and physicians' identity, which facilitates understanding of why physicians value disease
2 categories associated with acuteness and drama over those considered chronic and mundane. In
3 short, the former offers physicians a role in which they can achieve deeply embedded ideals in
4 medicine, whereas the latter does not.

5 It is worth noting that Johannessen (2014: 89) highlights gender as a prestige criterion,
6 claiming that categories at the top of the disease prestige hierarchy offer physicians the most
7 masculine identity, associated with traditional masculine values such as being strong, active,
8 brave and competent. Malterud (2012) has claimed that a patient's sex has explanatory value for
9 disease prestige, but has not offered empirical support for this interpretation. In support of both
10 sex and gender interpretations, Hinze (1999) has shown that physicians value medical specialties
11 that are both predominantly occupied by men, and fraught with masculine metaphors. The
12 relevance of sex and gender for disease prestige is clearly a topic worthy of further research.

13 When interpreting the results of the present study, it is important to remember that prestige
14 is a public matter. From the perspective of social theory, it does not make sense to talk about
15 prestige as private. When we ask physicians to assess the prestige of disease categories, we ask
16 them to assess the standing of each within the public sphere of medicine. Privately, our
17 respondents may hold, say, fibromyalgia in high regard, and believe others should too. However,
18 for this study physicians were asked to rank diseases according to the prestige that they imagine
19 each disease has among health personnel in general. Regardless of their personal opinion, as
20 members of a somewhat homogeneous culture (with all its variations and peculiarities) they
21 know that fibromyalgia is generally held in low regard. Our aim has been to investigate
22 physicians' shared beliefs about disease prestige and the shared criteria that appear to structure
23 their valuation. As noted by Ridgeway (2014: 5), the nature of these cultural elements makes

1 them forceful because “individuals expect others to judge them according to these beliefs” and
2 “take status beliefs into account in their own behaviour, whether or not they personally endorse
3 them.”

4 We see the prestige criteria as part of medicine’s “cultural toolkit” (Swidler, 1986, 2001),
5 i.e. as physicians’ shared evaluative resources. However, we caution against viewing the
6 respondents’ rankings in excessively analytical terms, for example as based on an “index” in
7 which each criterion systematically contributes to a total score, thus determining the prestige of
8 each disease. As our informants were encouraged to “think fast” (Kahneman, 2011) while rating,
9 we believe that they have drawn upon the prestige criteria in an intuitive manner, without
10 systematically considering each and every one of the abovementioned (or other) criteria.

11 We believe that this is how disease prestige enters into physicians’ reasoning more
12 generally. When considered explicitly, few physicians regard disease prestige as relevant to
13 medical decision making. Instead, as demonstrated thoroughly in heuristics and bias research
14 (Fiske and Taylor, 2013: 281–338; Kahneman, 2011), notions about the worth of disease
15 categories are more likely to enter physicians’ reasoning in an unreflective manner, for instance
16 as an intuitive conviction that a particular disease must (not) be treated right away.

17 Moreover, we propose that these prestige evaluations follow a situated logic (Blumer,
18 1969; Jerolmack and Kahn, 2014). The “definition of the situation” (Thomas and Thomas, 1928:
19 572) and associated “generalised others” (Mead, 1934: 154ff) will prompt the choice of specific
20 relevant criteria. In other words, different settings, such as the auditorium, the bedside, the
21 boardroom or the laboratory, are likely to prime somewhat different criteria for evaluation. In the
22 same way, the list of 38 disease categories and the instructions given to our respondents
23 constituted a particular evaluative setting. The elicited disease prestige hierarchy must, therefore,

1 be understood in light of our research methodology. Had we asked physicians about a different
2 set of diseases, or about the prestige of disease categories in their own specialty, in their own
3 department or among the managers of their hospital, the resulting hierarchy might have been
4 different; for this reason, we should speak of prestige heterarchies rather than a single prestige
5 hierarchy (Johannessen, 2014: 90; Lamont, 2012). Such prestige heterarchies should be a topic
6 for further research.

7

8 *5.1. Confounded stability?*

9 One possible limitation of the results presented here is the overlap between samples. The
10 similarities in prestige scoring over time might be due to the stability of respondents' personal
11 view of the medical culture rather than stability in the medical culture itself. Therefore, we split
12 the 2014 sample into two subsamples: those who attended the course after 2001 – and who
13 therefore could not have taken part in the 2002 survey – and those who attended the course prior
14 to the 2002 survey, and therefore could have participated in it. We then compared the disease
15 prestige ratings in the two subsamples. If there were differences in the answers between the two,
16 this might indicate an effect of previous engagement with the same study. Comparing the results
17 of 2014 with those two subsamples, we found very small differences. For those 55 years of age
18 and over, for whom we have the best comparable data, the two disease categories with the largest
19 differences in scores between the two subsamples – depressive neurosis and femoral neck
20 fracture – had a mean score difference of 0.28 and 0.26, respectively, which must be considered
21 to be small.

22 Another possible limitation is that the findings of the 1990 and 2002 surveys attracted
23 attention from the Norwegian health services as well as the general public. Moreover, the term

1 “disease prestige” to some extent has become a formal concept, in the sense that it has been
2 subject to some debate both in the medical field and in the broader public sphere. This may have
3 cemented the prestige hierarchy in the minds of future and present physicians, but not to the
4 extent that it can explain the stability found in this study.

5 The stability of prestige evaluations could also be seen as a result of a “cultural lag”
6 (Ogburn, 1957) in medicine, i.e. where alterations in one aspect of the health services (e.g.
7 reorganization of medical work or new principles for prioritization) take time to affect other
8 aspects (e.g. the disease prestige hierarchy). However, we find this explanation implausible as it
9 cannot account for prestige trajectories such as that of apoplexy. Clearly, this condition has been
10 re-evaluated, and we see no good reason why one disease category should be exempt from
11 cultural inertia but not others. A case could be made that prestige criteria are subject to cultural
12 lag, while particular evaluations are not. Nevertheless, we believe this rather reflects the overtly
13 general character of such explanations: “Once a theory includes such concepts as ‘lags’... it
14 becomes so labile and so indistinct that it can be reconciled with virtually any configuration of
15 data” (Merton, 1968: 533).

16 We, therefore, believe that the observed stability reflects a genuine continuity in the
17 evaluative culture of medicine. If we consider the broader historical narrative of medicine, from
18 Galen to the present, this stability is perhaps not so remarkable. Nevertheless, the past quarter
19 century has seen some substantial changes to medicine, public health, and to the health care
20 services. Changes include the human genome project, increasingly sophisticated imaging
21 technologies, increased use of laparoscopic surgery, stem cell research, targeted cancer therapies,
22 an older population and an altered disease panorama, and the institutionalisation of evidence-
23 based medicine. The fact that all these changes have not significantly altered the cultural logic of

1 the disease prestige hierarchy tells us, at the very least, that those factors are not crucial to
2 understanding how physicians rank disease categories.

3

4 *5.2. Disease prestige and medical culture*

5 We believe our findings have implications beyond the evaluation of disease categories.
6 Prestige criteria such as acuteness, lethality and curability are likely to influence how physicians
7 evaluate other elements of their profession, such as colleagues, departments, hospitals, patients,
8 procedures, specialties, technologies or wards. In other research, we have seen a clear similarity
9 between the ranking of diseases and specialties (Album and Westin, 2008). This suggests that the
10 disease prestige hierarchy illustrates fundamental evaluative tendencies in medical culture.

11 These evaluative tendencies are likely to have widespread ramifications in medicine. For
12 instance, prestige has been shown to be a relevant factor for students' choices of medical
13 specialty (Aasland et al., 2008; Azizzadeh et al., 2003; Creed et al., 2010) and for informal
14 priority setting in intensive care units (Halvorsen et al., 2009). More generally, we should pay
15 more attention to how disease prestige can exert subtle, symbolic influence on physicians.
16 Durkheim (2008/1912) has shown that symbols can exert a significant emotional force on those
17 holding them to be sacred, and we can hypothesise similar effects resulting from shared and
18 taken-for-granted ideas about the “importance” of a particular disease category – not only in the
19 clinic but also in boardrooms and budget meetings. Further research into the connections
20 between disease prestige and decision-making is strongly encouraged.

21 Finally, it is worth asking how “medical” these evaluations are. Would laypeople produce
22 the same hierarchy of diseases? A similar survey was distributed to professionals working in
23 disability NGOs and it produced strikingly similar results (Grue et al., 2015). This implies that

1 “medical” evaluative tendencies are present in fields other than medicine. This might be the
2 result of other fields being medicalized (Illich, 1975), or it might suggest that the disease prestige
3 criteria are drawn from a common culture. Regarding the disability field, Grue et al., (2015) lean
4 towards the former argument. However, in defence of the common culture interpretation
5 suggestion, we point out that it is certainly not exclusively medical to equate the prestigious with
6 action, vigour and drama (cf. Van Maanen, 2011: 110), and that the highly valued narratives of
7 medicine seem to reflect more general evaluative stories (Johannessen, 2014).

8

9 **6. Conclusion**

10 Three identical surveys spanning a quarter of a century reveal a stable rank order of disease
11 categories in the medical community. The top three diseases in all three surveys were leukaemia,
12 brain tumours and myocardial infarction. The four lowest ranked were fibromyalgia, depressive
13 neurosis, anxiety neurosis and hepatocirrhosis. Even though individual conditions are reassessed
14 over time, this reassessment is structured by highly stable criteria.

15

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Table 1

Percentages of respondents in 2002 and 2014 by age group and sex.

Year	2002			2014		
	Men	Women	Total	Men	Women	Total
Age:						
< 55 years	52	77	57	19	38	25
≥ 55 years	48	23	43	82	62	75
All ages	100	100	100	101	100	100
N	188	53	241	200	91	291

1

Table 2

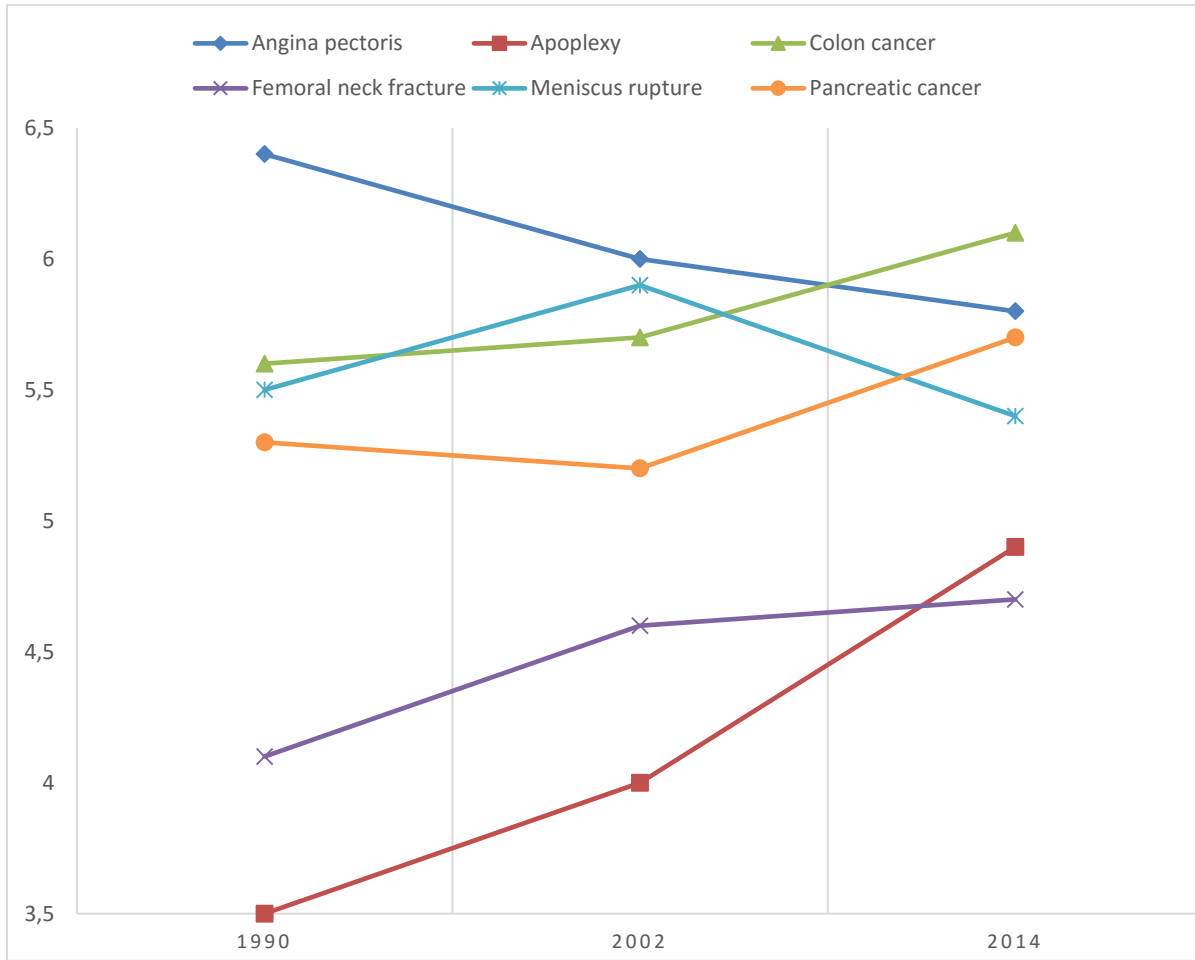
Disease prestige. Rank and mean scores (SDs) in 1990, 2002 and 2014 samples, sorted after the 2014 sample

Samples		1990		2002		2014
N		98		241		291
Leukaemia	2	6.8 (1.5)	1	6.9 (1.4)	1	6.9 (1.5)
Brain tumour	3	6.6 (1.6)	3	6.6 (1.7)	2	6.7 (1.7)
Myocardial infarction	1	7.1 (1.2)	1	6.9 (1.4)	2	6.7 (1.6)
Testicle cancer	5	6.3 (1.6)	5	6.5 (1.5)	4	6.6 (1.6)
Spleen rupture	5	6.3 (1.7)	3	6.6 (1.5)	5	6.4 (1.5)
Pulmonary embolism	7	6.2 (1.5)	6	6.3 (1.5)	5	6.4 (1.5)
Colon cancer	11	5.6 (1.5)	11	5.7 (1.4)	7	6.1 (1.5)
Extra-uterine pregnancy	8	6.1 (1.8)	7	6.1 (1.6)	8	6.0 (1.7)
Ovarian cancer	13	5.5 (1.5)	11	5.7 (1.5)	9	5.9 (1.5)
Thyroid cancer	9	6.0 (1.5)	9	5.9 (1.5)	9	5.9 (1.6)
Angina pectoris	4	6.4 (1.3)	8	6.0 (1.4)	11	5.8 (1.5)
Pancreatic cancer	16	5.3 (1.9)	18	5.2 (1.7)	12	5.7 (1.7)
Appendicitis	16	5.3 (2.1)	14	5.5 (1.7)	13	5.6 (1.7)
Kidney stone	13	5.5 (1.5)	13	5.6 (1.6)	14	5.4 (1.4)
Meniscus rupture	13	5.5 (2.0)	9	5.9 (1.6)	14	5.4 (1.7)
Lung cancer	19	5.2 (1.7)	21	5.1 (1.7)	16	5.3 (1.9)
Kidney failure	11	5.6 (1.6)	15	5.4 (1.6)	16	5.3 (1.6)
Ulcerative colitis	10	5.7 (1.4)	15	5.4 (1.4)	16	5.3 (1.4)
Cataract	21	5.1 (1.8)	17	5.3 (1.7)	19	5.2 (1.7)
Ankle fracture	21	5.1 (1.9)	21	5.1 (1.7)	20	5.1 (1.6)
Asthma	16	5.3 (1.3)	18	5.2 (1.3)	21	5.0 (1.3)
Duodenal ulcer	19	5.2 (1.5)	18	5.2 (1.4)	21	5.0 (1.3)
Apoplexy	33	3.5 (1.5)	29	4.0 (1.4)	23	4.9 (1.6)
Multiple sclerosis	26	4.5 (1.7)	26	4.5 (1.5)	23	4.9 (1.6)
Sciatica	23	4.9 (1.5)	23	4.9 (1.4)	23	4.9 (1.3)

Bechterew's disease	23	4.9 (1.6)	23	4.9 (1.5)	26	4.8 (1.4)
Femoral neck fracture	27	4.1 (1.5)	25	4.6 (1.5)	27	4.7 (1.5)
Arthritis	25	4.6 (1.6)	27	4.4 (1.3)	28	4.6 (1.3)
Inguinal hernia	28	3.9 (1.8)	28	4.2 (1.5)	29	4.2 (1.5)
Psoriasis	31	3.7 (1.4)	30	3.8 (1.2)	30	3.9 (1.3)
Cerebral palsy	32	3.6 (1.6)	31	3.6 (1.4)	30	3.9 (1.5)
Schizophrenia	34	3.2 (1.8)	34	3.2 (1.4)	32	3.5 (1.6)
AIDS	29	3.8 (2.8)	32	3.5 (2.1)	33	3.4 (1.9)
Anorexia	29	3.8 (2.0)	32	3.5 (1.5)	33	3.4 (1.5)
Depressive neurosis	35	2.9 (1.2)	35	3.1 (1.3)	35	3.2 (1.3)
Hepatocirrhosis	37	2.8 (1.4)	35	3.1 (1.5)	35	3.2 (1.6)
Anxiety neurosis	35	2.9 (1.2)	37	2.8 (1.4)	37	2.9 (1.4)
Fibromyalgia	38	2.4 (1.3)	38	2.3 (1.2)	38	2.4 (1.3)
All diseases		4.9 (1.6)		5.0 (1.5)		5.0 (1.5)
Mean SDs		1.2		1.2		1.2

1

1 **Fig. 1.** Prestige trajectories. Diseases with a difference of 0.5 points or greater between their highest and lowest scores (1990,
2 2002 and 2014). Mean scores in Y-axis.



3