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Article:

Benzer, M. orcid.org/0000-0003-3399-5545 (2020) NICE and society: Health technology appraisal and the cultivation of social relations. Sociological Research Online, 25 (2). pp. 165-183. ISSN 1360-7804

https://doi.org/10.1177/1360780419860857

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NICE and Society

Health technology appraisal and the cultivation of social relations

Matthias Benzer

Abstract: This article presents a sociological inquiry into the politics of the UK National Institute for Health and Care Excellence's approach to health technology appraisals. It is based on analyses of documents published by NICE and of a 2005-2008 interdisciplinary debate about the ethics of its activities. Simultaneously, the article brings further perspectives to this debate by clarifying that NICE, through the comparisons central to its approach, arranges a competition in producing health between different treatments applied to their respective particular patient groups. In fostering competition for differentiation, NICE's approach resembles objectives for shaping social relationships often attributed to neoliberal politics. Yet closer scrutiny reveals that NICE's creation of positions for, and relations between, patients is simultaneously more problematic. A comparison between NICE's work and longstanding sociological conceptions of the social relationship offers insight into the quality of the social relations NICE's approach supports in more general terms.

Keywords: National Institute for Health and Care Excellence, comparison, competition, neoliberalism, social relations

Introduction

The National Institute for Health and Care Excellence (NICE) in the British National Health Service (NHS) is tasked with producing "evidence-based guidance on health and social care" (NICE, 2018). Its work programme comprises developing, *inter alia*, guidelines (for example, clinical and public health guidelines) (2019c), appraisals of health technologies (such as drugs, devices, or procedures), diagnostics guidance, and recommendations regarding highly specialised technologies (2019b). NICE guidance is aimed at the NHS, healthcare commissioners and providers, local authorities, and charities, among others (2018). NICE is currently a non-departmental public body "accountable to…the Department of Health and Social Care" (2019e). Yet its "products are developed independently of government influence" (2018).

NICE's health technology appraisals confront a major problem in the UK health system. The British health service is tax-funded (NHS, nd). Its resources, NICE asserts, are limited (2008: 9, 2013: 28, 50, 90; see also Claxton and Culyer, 2007: 463; Harris, 2005a: 373; Quigley, 2007: 466; Rawlins and Dillon, 2005: 683). A key "proposition" in NICE's thinking is that funding an intervention for one patient group comes at the price of "health benefits" thus unavoidably kept from others (Claxton and Culyer, 2006: 373). A conflict between different patient groups' demands on healthcare funding can be seen to arise. The situation is one of "limited resources and competing healthcare interests" (Quigley, 2007: 466). NICE technology appraisals involve making recommendations regarding which procedures the NHS should and should not resource for patients (NICE, 2013: 66-67). NHS England and commissioning groups must "comply with" appraisal recommendations (2019b, see also 2019d). NHS "patients have the right to drugs and treatments…recommended by NICE for use in the NHS", provided their doctor finds them "clinically appropriate" (2018).

The limitation of healthcare resources poses the problem of how they ought to be allocated (Rawlins and Dillon, 2005: 683). NICE considers optimising population health from the fixed NHS budget one of its guiding objectives (2008: 9, 2013: 28, 31-32, 50, 65-66, 90;

Claxton and Culyer, 2008: 599, 601). Health means QALYs, quality-adjusted life years, lifetime weighted correspondingly to quality of life (2013: 32-33, 38-40, 89). A well-known essential component of NICE's (2013: 28-55) mode of developing recommendations is the assessment of different treatments for patients with various conditions in view of their cost-effectiveness: of how much health – how many QALYs – per amount of health expenditure they yield.

In 2005, when he was Chairman of NICE, Michael Rawlins described the question "How, as a society, should we set priorities for the medicines we use?" as a contemporary "pharmacopolitical problem" (2005: 471). This paper contributes a sociological inquiry to the literature on the politics of NICE's activities. It draws upon analyses of documents published by NICE and of interventions by critics and defenders of the Institute in a debate on the ethics of its work. As key components of NICE appraisal are thus clarified, the terms of that debate are simultaneously extended. On this basis, it is shown how NICE's appraisal approach fosters relations of competition for the purpose of differentiation. At the same time, though, its approach creates a position for the people involved in this competition that differs from what many sociologists regard as the position of agents of competition. Finally, the way in which NICE's activities shape social relations between people is elucidated in more general sociological terms.

Technology appraisal under scrutiny

This paper extends the sociological scholarship on technology appraisal in four domains. In studies of the politics of health technology assessment and related activities, the politics of evidence has been a persistent concern. May's study of UK telehealthcare development and evaluation documents doubts about evidence produced through approaches associated with health technology assessment, notably clinical trials. It reports NHS and social care managers' calls for alternative modes of generating evidence (2006: 521-528). This, May argues, has implications for the notions of an emerging "evidence-based policy" and of a "'post-ideological' politics" in Great Britain (2006: 529). Milewa and Barry analyse the politics of evidence focusing on NICE. They highlight an overall "primacy of arguments based on quantitatively oriented, experimentally derived data" in the Institute's appraisal, "but also…a discursive hegemony of clinicians and health economists in mediating, including or debarring more qualitative, experientially based evidence" (2005: 506). Milewa and Barry elucidate their findings with reference to "a discursive appropriation of the 'common good'" (2005: 510). Investigating the politics of governance in turn, Milewa has observed that discussion in appraisal was affected by, *inter alia*, a "preference for 'expert judgement'" and the view that patients and carers lack objectivity in evaluating interventions (2006: 3110, see also 3107-3108). These observations underscore the importance of distinguishing "democratic deliberation", such as in NICE, from "deliberative democracy" (2006: 3110). Not only in Britain have such issues been framed in political terms, though. Lopes and colleagues (2015), for instance, draw on Foucault's work to scrutinise patient involvement in healthcare funding decisions in Australia. Patient representatives and members of the committee advising Australia's Department of Health, they report, disagree on what kinds of evidence should play a role (2015: 87-88). This reflects diverging "epistemological standpoints" (2015: 90). Simultaneously, stakeholders forge alliances for submitting information and shaping policy more profoundly (2015: 88-90). Whilst these studies have generated important insights into the politics of evidence, governance, and involvement, one problem has largely escaped their focus, namely how appraisal shapes social relationships between patients. But this is a problem that has gravity beyond sociology, too. Notably, NICE itself has thematised, though by no means exhaustively examined, the potential of its work to affect relationships between people. The 2010 Equality Act's Public Sector Equality Duty, NICE highlights for instance, demands that, "in carrying out its functions…", it "have due regard to the need to…foster good relations in relation to people who share…protected characteristics" (e.g. race or disability) (2016: 2). Moreover, NICE's activities have, for many years, been assisted by its Citizens Council. Comprising "thirty members of the

British public", the Council offers NICE "advice on challenging social and moral issues" that arise when "guidance" is being developed (2014: 1). The 2014 session's aims included, for example, "to record…specific instances that justify a much greater emphasis being placed on achieving either equity or efficiency" (2014: 9). In the following inquiry into the politics of NICE's health technology appraisal approach, the way in which it shapes social relations is examined in detail.

Of note for this inquiry, previous investigations have raised the question of neoliberal politics. Crinson presents a case study of NICE's appraisal of beta interferon and the agreement of a risk-sharing scheme between the Department of Health and pharmaceutical companies (2004: 33-41). He denies that a "postmodernist reading of a shift towards a neo-liberal 'post-welfarism'" can capture the early 2000s developments in the UK health system (2004: 41). Dew and Davis's analysis of the establishment and work of, and challenges to, New Zealand's Pharmaceutical Management Agency (2014: 140-147) is also pertinent in this regard. PHARMAC, they accentuate, was created during "efforts…to ground health sector reforms in a neoliberal ideology", although its "activities interfere with values prized by supporters of neoliberalism…" (2014: 147). The Agency's creation is seen in connection with tensions between demands on the state (2014: 148). Moreira mentions that several sociologists have, in different ways, examined "health care reforms" of recent decades specifically as reforms "in the neo-liberal era" (2012b: 22), indicating the importance of the question of neoliberalism to sociological discussions of healthcare generally. The following inquiry into how NICE's appraisal approach shapes social relations is entwined with a detailed discussion of the consonances and dissonances between this approach and neoliberal thinking. It thus yields a further nuanced response to that question.

Among the most multifaceted sociological studies of NICE appraisal are Moreira's inquiries from an STS perspective. Moreira (2016) has investigated the confrontations over NICE's 2005 disapproval of NHS funding for dementia drugs. He traces clinicians' criticisms of the uncertainties and the political presuppositions in NICE's economic assessments (2016: 86-7, 88-92, 98) as well as NICE's production of new economic evaluations and advice (2016: 92-3). In subsequent discussions, clinicians showed their preference for "mechanical…objectivity", NICE its proximity to "regulatory objectivity" (2016: 95). In a closely related paper, Moreira (2012a) provides an intricate, far-reaching analysis of cases and human interest stories in further instances of opposition to NICE's draft guidance. Finally, Moreira demonstrates that the Appeal Hearings concerning NICE's 2006 recommendation on dementia drugs constituted a decisive moment in the controversy (2011: 1336-1337). He elucidates this with reference to the appeals procedure's particular "institutional format" and by drawing attention to the way in which "knowledge claims" were connected with "conceptions of justice and fairness" (2011: 1337-1338). But in the mid-2000s developed also another controversy over NICE's appraisals, an interdisciplinary debate on the ethics of its activities, namely, in which, moreover, NICE's 2005 statements on dementia drugs were once again addressed. Whilst this dispute has not yet undergone sustained sociological scrutiny, analysing it closely is indispensable to the following inquiry into the politics of NICE appraisal, especially regarding the cultivation of social relations.

Lastly, sociologists have interrogated the QALY method central to health technology assessment. Moreira (2012b) and Wahlberg and Rose (2015), for instance, offer different perspectives on the QALY's history. More significant for the present explorations, though, is Sjögren and Helgesson's investigation of the work of the Swedish Pharmaceutical Benefits Board. They highlight, among other issues, the part health economic instruments play in "economizing health care". A focal point of their discussion is the application of "calculative tools and metrics" for "comparisons" between drugs regarding "cost-effectiveness" (2007: 216). Formulating "effectiveness" with one single "metric" enables analyses of this kind to "compar[e] treatments of *different illnesses*" (2007: 219, emphases added). The QALY devised by health economists is such a "metric". It revolves around conceptualising "effectiveness" as "*quantity*…and *quality* of life". Sjögren and Helgesson ascribe "a universal vocation" to QALYs.

The QALY "proposes a criterion that permits…comparison between the most diverse (therapeutic) alternatives". Comparisons of "cost per QALY" promote a relatively "advanced economization" of healthcare (2007: 220). QALY-based analyses, Arnesen and Norheim also mention, aim "to compare the costs and…benefits of alternative health programmes": "all kinds of health gains" are to be rendered "comparable on a numeric level". They emphasise that using "a common 'currency'", e.g. the QALY, "for all health outcomes" bears both the "potential" and the "controversy" of this type of analysis (2003: 81). Incidentally, Faulkner and Mahalatchimy's study of debates on valuation and reimbursement regarding regenerative medicine in the UK describes recent challenges to the QALY as "an epistemic valuation technology" (2018: 230) and "the potential use of alternative valuation pathways". Nonetheless, and "its history of controversy", too, notwithstanding, the QALY is proving somewhat "resilient" (2018: 242). Crucially, the aforementioned dispute about NICE indicates that in appraisal the £/QALY comparison of health technologies is closely interlinked with the problem of competition. The second element has received much less attention in sociological discussions in this context, but clarifying both elements is essential for proceeding to discuss the politics of the Institute's work.

Approaching NICE

For this purpose, two sets of documents have been analysed. NICE's website (2019d), especially its *Guide to the Methods of Technology Appraisal* (2013), details its approach to making recommendations for allocating NHS resources. The social value judgements statement (2008), the equality objectives (2016), and work by NICE's Citizens Council (2019a) also illuminate relevant dimensions. NICE's charter (2018) and further website material (2019b, 2019c, 2019e) convey the wider context in which appraisal takes place. But of course, NICE's publications do not contain everything there is to say about its activities. The second set makes this apparent.

In the middle of the last decade, NICE's work became the topic of a long, complex debate in the *Journal of Medical Ethics*. This fiery exchange was unusual in that it was conducted across the widely bemoaned boundaries of academic disciplines and across the almost universally anathemised boundaries of university research. It involved a philosopher, John Harris (2005a, 2005b, 2006, 2007), supported by ethicist and former medic Mureann Quigley (2007), and, on the other side, people variously linked to NICE, notably health economists Karl Claxton and Anthony Culyer (2006, 2007, 2008) as well as, initially, Rawlins and NICE's Chief Executive Andrew Dillon (2005).

A vital dimension of this debate was the disputants' disagreement about evaluation and worth. In 2005, Harris castigated NICE's deployment of QALYs in its already mentioned provisional recommendation that dementia drugs not be NHS funded, which would, he stressed, entail denying "thousands of Alzheimer's patients…the only treatment available". Based on the finding that the drugs' costs exceeded "'…the range of cost effectiveness that might be considered appropriate for the NHS'", NICE's recommendation, charged Harris, contained the "condemn[ation]" of "the patients…as…not cost effective to treat". This implied the determination that these people were "not worth helping" (2005a: 373, see also 2005b: 685). The Institute, he argued, should refrain from "evaluating patients rather than treatments" (2005a: 375). In reply, Claxton and Culyer acknowledged the distinction between saying "'the drugs are not worth it'" and saying "'the patients are not worth it'". Yet "the methods of cost-effectiveness analysis", they insisted, "do not evaluate patients (nor assess their worth…), but…'procedures'…" (2006: 374; see also Quigley, 2007: 465-466).

Quigley defended Harris's accusation that the Institute was "'…evaluating patients rather than treatments'". The "camp" she belonged to, emphasised Quigley, held that employing QALYs in choices between "*different* treatments for *different* patients" involved "value judgements about people's lives". Resolving, by means of QALYs, whether to treat one patient or another entails, she noted, "balancing the improvement…in the quality of [the former's] life" times the "life-years [the former] gains…against the same calculation for [the latter]". The higher "score" decides who is more "cost effective to treat from…limited resources". Such computations, Quigley remonstrated, amount to "value judgements about the kind of people who have worthwhile lives" (2007: 465). In response, Claxton and Culyer again negated that the Institute examined "the 'worth' of people rather than the effectiveness of technologies". NICE, they asserted, considers "all individuals" – severely ill, perfectly healthy, "young", "old" etc. – of "the same inherent worth". It does not recommend technologies "according to people's 'worth', whether 'worth' be their current health,…past health,…moral deservingness,…wealth or…productivity" (2008: 598-599).

This issue of evaluation and worth alone is not decisive for the following discussion. However, it is entangled with two further – pivotal – matters: the disputants also address the comparisons central to NICE's approach and, more explicitly than the Institute's own publications, raise the problem of competition. Informed by their contentions in addition to NICE's documents, the next section highlights these two matters and casts them into sharper relief. That said, the contributions to the debate on NICE contain some inexact formulations. Together with the analysis of NICE's own statements regarding its appraisal approach, the analysis of the debate thus simultaneously supports the attempt, in the subsequent section, to offer a more precise characterisation not just of the comparisons in appraisal but also of the competition associated with them. In other words, on the basis of those analyses further perspectives are also brought to that debate.

The inquiry into the politics of NICE's work proceeds from this characterisation. First, a comparison between NICE's approach and efforts to foster competition often associated with neoliberalism is conducted. Foucault (2010), scholars drawing on his work, and, more recently, Davies (2014) have detailed this domain of neoliberal politics. This is followed by a comparison between NICE's approach and Simmel's and Weber's influential conceptions of social relationships, which focus on reciprocity and action respectively. NICE's own way of shaping social relations and of creating positions for people through technology appraisal is thus illuminated.

Comparison and competition

NICE's procedure for making recommendations about whether scarce NHS resources should be spent on new treatments is comparative (Claxton and Culyer, 2006: 373-376; Harris, 2005a: 373; Quigley, 2007: 465; Rawlins and Dillon, 2005: 683). Contentiously among the disputants, NICE's aim of "serving the whole of society" requires it not only to ascertain the additional health for the particular patient group from, and extra cost of, a new technology. NICE must also consider the QALY yield for other patient groups in the NHS from other interventions that need to be discontinued to free up funds for the new technology. The "rationale of cost-effectiveness analysis" turns on comparing "health gained and health forgone" (Claxton and Culyer, 2006: 373-374)[1]. The "health" that must be "forgone" – because the interventions providing it to "other patients" must be given up for funding the new technology – is decisive: it determines if "the cost per QALY gained" by resourcing the new technology "is worthwhile" (Claxton and Culyer, 2006: 375-376). The extra "health benefits" a patient group receives from a new drug, for instance, may be smaller than the health benefit "other patients" must sacrifice as "other procedures" have to be abandoned to pay for that new drug. The latter is then "'…not worth it'", i.e. cost-ineffective (Claxton and Culyer, 2006: 373; see also Harris, 2006: 378-379, 2007: 467; NICE, 2013: 10, 63-67).

Crucially, these comparisons central to NICE guidance development have been associated with a competition. Whilst the term competition is scarcely used in the Institute's documents about appraisal, NICE's appraisal methods guide explicitly addresses the issue of "costs and QALYs from…competing healthcare programmes" (2013: 66). In a contribution to the debate on NICE, Claxton and Culyer refer to a "competition…between interventions…", adding: "success in it depends on what the interventions can do for people's health…". A new technology may be seen to offer "little health gain" to its patients but at great "expense", and these funds may be "judged to have a higher yield" for another group when invested in another treatment. That technology will then, "other considerations" aside, probably be deemed "cost-ineffective" (2008: 599)[2]. The comparison informing NICE appraisal, it is suggested, is also a competition, namely in generating QALYs/£, between two technologies for two groups with different conditions. The new technology for the one group could emerge as "'… not worth it'", as "'not cost-effective'", as Claxton and Culyer (2006: 373-374) put it, as defeated. This helps NICE decide which procedures should be offered (Claxon and Culyer, 2008: 600). In drawing comparisons, NICE, one might say, arranges a competition *between* different interventions for different patients *in* the production of QALYs/£ – in which some succeed, and others are defeated – *for* scarce NHS resources.

Upon closer inspection, though, the dispute about NICE reveals disagreement about this competition. The disputants' disagreement is consistent with their aforementioned differences regarding the issue of worth, with which that of competition is intertwined. In full, Claxon and Culyer's assertion just cited reads: "The competition is between *interventions, not people,* and success in it depends on what the interventions can do for people's health, irrespective of [people's] 'worth'" (2008: 599, emphases added). Harris, by contrast, speaks of "competitors for treatment", suggesting the competition is between people (2005a: 373). Quigley similarly mentions "patients competing for healthcare resources" (2007: 466).

Comparison and competition: treatments and patients

This part of NICE's work can be characterised more precisely. Clarifying the evaluation of health technologies, Claxton and Culyer underline that technologies are for treating "patients with particular indications and characteristics". A medication, for instance, "may be safe and effective for one group…but…ineffective or…dangerous for another". So technologies are licensed "for use on particular patients" but "not for others". They "can be evaluated only when…used for particular patients" (2006: 374-375, see also 2008: 598). An appraisal's assessment phase, states NICE, involves "assess[ing] a technology's clinical and cost effectiveness for a specific indication…" (2013: 9, see also 87, 91)[3]. Whenever NICE appraises a technology, it appraises it for patients with a particular indication or specific characteristics.

Thus NICE, having to consider both the technology under inspection and "alternative" purposes to which the funds could be allocated (Claxton and Culyer, 2006: 373-374), considers the cost-effectiveness ratios of different technologies used on the respective patient groups, each of which has particular attributes. Several contributions to the dispute thematise this element of NICE's work and indicate its implications.

Rawlins and Dillon report the finding that alendronate for the secondary treatment of osteoporosis scores roughly £33,000/QALY for patients aged 50 and £12,000/QALY for patients aged 70. The "risk of complications of osteoporosis", they explain, is higher in the second group, which therefore gains more (2005: 683). Harris replies that to the Institute's QA-*LY* "'…measure of health gain'" lifetime is vital. A procedure is "more 'effective'" if it delivers "more life years". So QALYs "'prefer' more lifetime" whosoever has it. Yet normally, emphasises Harris, the young receive more lifetime from being treated. When QALYs play a part "in choosing between patients", they are likely to influence decisions in favour of "greater life expectancy (usually…) possessed by the younger candidates for treatment" (2005b: 686).

Claxton and Culyer warn against presuming a procedure "more cost-effective for those with a longer life". Less life expectancy means a shorter duration of "benefit", but also of expenditure. Moreover, Claxton and Culyer present an example of two populations, one with a higher "risk of an event carrying some risk of death", one with a lower risk and higher "life expectancy". They propose imagining a treatment of a given cost which reduces exclusively "the relative risk" of that event. "With the same relative effect", they note, "the risk reduction will normally be greater in high-risk populations". This will often entail more added lifetime for these populations, hence a better cost-effectiveness ratio, although they may have less "life expectancy". Finally, Claxton and Culyer mention that oftentimes it is "quite difficult" – they appear to mean costly – "to achieve significant improvements in the health of people with already good health". So procedures for already quite healthy groups might have poor "cost-effectiveness" (2008: 599).

These examples illustrate a conception of different cost-effectiveness ratios as outcomes not just of different treatments, but of different treatments applied to particular patient groups. Both a technology's distinct properties and the corresponding patient group's particular attributes shape a technology's QALYs/£ value. As mentioned, crucial to the "rationale of cost-effectiveness analysis" is the "comparison" between "health gained" – thanks to funding a new technology for a patient group – and "health forgone" – because another technology for another group would thereby need to be dropped (Claxton and Culyer, 2006: 373-374, see also 375-376). This comparison can now be specified. NICE compares different treatments applied to particular patient groups; it compares one procedure in the treatment of the relevant patients, who have their own specific attributes, with another such combination. They are compared in view of their cost-effectiveness ratios, the number of QALYs per unit of health expenditure they produce. Funding a new technology beneficial to the corresponding patients when used to treat them requires abandoning another technology that, applied to its own specific patient group, produces health for this group. The health for the latter group is thus lost. The lost QALYs determine if the benefit from resourcing the new technology for treating its patients is worthwhile. They determine whether the new technology used on its corresponding particular patients is cost-effective (see Claxton and Culyer, 2006: 373-376; Harris, 2007: 467). As Claxton and Culyer report, "patients with Alzheimer's disease are (probably) not cost effective to treat with these drugs, because other patients would (probably) get greater benefits from the use of the resources spent…to acquire the drugs to treat Alzheimer's disease" (2006: 374; see also Harris 2005a: 373; Quigley, 2007: 465).

These considerations, to indicate this briefly, have implications that stretch beyond key formulations about evaluation and worth on both sides of the dispute about the ethics of NICE's activities. Claxton and Culyer accept that "comparing treatments for different people" requires "value judgements". NICE, they underscore, takes costs into account and counts "having more" of "'health' and 'health gain'" as "a good thing". Moreover, "interpersonal comparisons of the value of health" are intrinsic to assessing both the consequences of procedures for certain groups' health and, precisely, "the opportunity cost" – *qua* "health…forgone" – "of actions on other groups" (2008: 598). However, vis-à-vis such matters precision is vital. NICE, Claxton and Culyer's 2006 contribution notes, "compare[s] the worth of alternative procedures" in respect of their application's "consequences…for patients". This may be viewed as "evaluating one group's ability to benefit" from the procedures' application "compared with that of another". Yet they negate that it constitutes "evaluating the worth…of different patients" (2006: 375, see also 2008: 598-599). Harris, by contrast, charges NICE with judging that the "patients…are not worth helping" (2005a: 373). Quigley, as indicated, associates the use of QALYs under discussion with "accepting that…patients with a better quality of life and who live longer have more worthwhile lives" and with "value judgements about the kind of people…worth the expenditure of public resources" (2007: 466). What can be interjected in reply to the assertions on both sides is this: NICE judges that the QALY (quality and quantity of life) gain for one patient group of one treatment applied to them – and hence this combination – is not worth as much as the financial support it requires, because financial help of that magnitude enables another treatment in another group to generate a greater gain of just such QALYs for this other group. The "methods of cost-effectiveness analysis", Claxton and Culyer hold, "…evaluate treatments", "not…patients" (2006: 374). Harris (2005a: 375) and Quigley see NICE "'evaluating patients rather than treatments'" (2007: 465). In fact, NICE each time evaluates a treatment with distinct properties specifically as it is applied to the relevant patient group with its particular attributes, namely in that it evaluates the QALYs/£ that combination offers this group.

More importantly in this context, NICE mentioning "competing healthcare programmes" (2013: 66), it appears that its drawing comparisons between different technologies for different patient groups (see Quigley, 2007: 465) must be understood as arranging competition. Indeed, insofar as QALYs/£ ratios are considered results of different treatments used in the respectively relevant particular patient groups, the competition Claxton and Culyer identify within appraisal can be characterised more precisely. They describe a "competition…between interventions, not people", in which "success…depends on what the interventions can do for people's health" (2008: 599). What must be interjected here is that the competition of healthcare programmes unfolds between one procedure with distinct properties specifically as it is used on the relevant patient group with its own particular attributes and another such combination. Success hinges on the contribution of a combination to its patient group's health. It is a competition in generating health for expenditure between one intervention applied to a patient group with one specific condition and another applied to a patient group with another. From this competition, one intervention applied to its relevant group may emerge as cost-ineffective (see Claxton and Culyer, 2006: 373-374) or defeated. This aids NICE in developing funding recommendations. NICE seems, through comparison, to arrange a competition *between* different treatments used on the respectively relevant specific patient group *in* generating QALYs/£ for these patients – whereby some combinations succeed, and others do not – *for* limited NHS resources. From these considerations it is possible to proceed to a sociological inquiry into the politics of NICE's appraisal activities.

Competition and differentiation

Since, as the contributions to the debate revisited above suggest, NICE's approach to producing funding recommendations turns not just on comparison but also on competition, such an inquiry seems *prima facie* to promise a straightforward outcome. The neoliberal "political project" involves viewing "competition" as "the basis of social relations" and efforts to "foste[r]" these very relationships (Read, 2009: 30; see also Davies, 2014: 76). And certainly, the Institute's approach resembles in many respects the way relations between people are said to be shaped in neoliberalism. However, a finer-grained comparison between NICE's mode of procedure and what sociologists have pinpointed as concerns of neoliberalism ultimately shows the politics of NICE's work to be more complex, perhaps more problematic.

The neoliberal concern with competition is the subject of a sizeable literature, in which Foucault's (2010) lectures on neoliberalism are frequently invoked. It is often emphasised that from neoliberalism's standpoint "competition" is the "essence of the market" (Gudmand-Høyer and Lopdrup Hjorth, 2009: 118; see also Davies, 2014: 48). Neoliberalism proposes as a political objective that markets be established and cultivated. Opposing interventions in markets, it encourages the creation and promotion of an environment that helps markets operate. In other words, neoliberalism encourages the establishment and cultivation of competition. The "necessary preconditions for the flourishing of *competition*" are to be created and promoted (Gudmand-Høyer and Lopdrup Hjorth, 2009: 118, see also 126; Davies, 2014: 40-44, 75-77, 199; Foucault, 2010: 140; Hamann, 2009: 41-42; Read, 2009: 28). The "early neoliberals", Davies specifies, saw "open, decentralized markets" buttressed by the "rule of law" as the optimal means of ensuring a "competitive society". Meanwhile, though, it has been asked if "*non-market* institutions, policies and interventions" can also bring the advantages of "competitive practices" (2014: 43-44).

Referring to Davies (2014) among others, Mehrpouya and Samiolo examine "regulatory capitalism" as the context of the "re-regulation of…societies through markets". Regulation of this kind, they argue, sometimes revolves around "mobilizing foundational market processes such as competition and benchmarking to move organizations" towards a "…collective goal". A central topic of their investigation is the operation of "performance metrics and ranking" in endeavours "to regulate issues considered of public interest" through "competition and benchmarking" (2016: 14). Mehrpouya and Samiolo focus on the Access to Medicine Index, a ranking of pharmaceutical companies meant to activate "[m]arket-making and competition" for the purpose of "regulat[ing]…health" (2016: 15, see also 13, 25-28). They scrutinise "commensuration" as a prerequisite of "ranking" (2016: 15, see also 23-25), highlighting, *inter alia*, the "comparative" dimension as well as the importance of establishing "the 'variability' of companies' performance" and of ensuring "differentiation" between them (2016: 23-24, see also 13, 26-28).

Discussing the Swedish Pharmaceutical Benefits Board, Sjögren and Helgesson, as mentioned, accentuate that computing QALYs supports costs/QALY comparisons between a wide variety of health interventions – including between different interventions for different illnesses (2007: 219-220; see also Arnesen and Norheim, 2003: 81). Of note here, Sjögren and Helgesson seek to investigate how certain – especially economists' – devices facilitate "configuring elements of markets" (2007: 215, see also 236). Moreover, they mention that in the specific setting they have explored "economization…also meant reflecting on…the importance of maintaining competition among firms" and establishing "the costs and advantages of diversity" (2007: 229), before proceeding to illustrate briefly how these problems were addressed in that setting (2007: 230-231).

The problem of competition has also crystallised in connection with the comparisons central to NICE appraisal, albeit in a distinct way, too, and with implications worth spelling out in detail. NICE similarly assesses different procedures for patients with different conditions regarding how many QALYs per amount of expenditure they yield. NICE then compares the extra QALYs a new treatment would give its particular patient group with the QALY benefit "other patients" would have to sacrifice because other treatments would need to be relinquished to buy the new one (Claxton and Culyer, 2006: 373-374). The comparison can be described as one between the £/QALY ratio of a procedure with distinct properties used on the corresponding patient group with its own particular attributes and the £/QALY ratio of another such combination. In NICE's work, it has been said, making these comparisons of health technologies means arranging precisely a competition – thus a competition between different procedures applied to the respectively relevant particular patient group in the generation of

QALYs/£ for these patients. It is in this sense that NICE's modus operandi resembles political objectives neoliberalism is held to support.

In fact, it simultaneously does so in a narrower sense. In "an organized competition…", Davies highlights, "contestants" are "*formally equal*" in the beginning but *"empirically unequal"* at the end. A twofold demand on every competition is some "formal equality guaranteed at its outset" and some "contingent inequality…produced as its outcome" (2014: 41-42, see also 37, 199; Mehrpouya and Samiolo, 2016: 23-28). Neoliberals have a "normative" notion according to which "inequality" should "be actively generated" (Davies, 2014: 37). Notably, "the neoliberal promise of competitive forms of organization is that they will periodically produce clearly distinguishable 'winners' and 'losers'…" (2014: 56-57).

From NICE's viewpoint, to speak with Claxton and Culyer again, every person, whatever their current health, age, etc., has equal "inherent worth" (2008: 598). They underscore the "consequentialist" orientation of the Institute's approach: it deems important "changes in [someone's health]…attributable to a technology" (2008: 599) applied to that person. But one QALY is generally judged to be "of equal social value" no matter who gets it (Claxton and Culyer, 2006: 376; see also NICE, 2013: 40-41; Shah et al., 2013).

In turn, the competition in producing QALYs/£ arranged at the core of NICE appraisal is meant to "differentiate", to render "unequal", to speak with Mehrpouya and Samiolo (2016: 24) and Davies (2014: 41, italics removed) respectively. From it, some treatments in their corresponding particular patients emerge as cost-effective, as successful, others in their patients as cost-ineffective, as unsuccessful. Through the comparison in NICE's work, "some may…gain and some may…lose", as Claxton and Culyer put it (2008: 599). Additional considerations aside, the winning combination receives NHS funding. For the patients within it, this means receiving extra health from being treated. The resonances with the neoliberal cultivation of competition are sustained.

Competing creatures

At the same time, NICE's appraisal approach diverges from what is often considered a vital strand of neoliberal thinking. The politics of the Institute's work turns out to be more multifaceted and, arguably, problematic than it initially appears. In particular, it has been noted that neoliberal conceptions of competition tend to be intertwined with conceptions of the subjects competing with one another (e.g. Read, 2009: 27-28). "Neoliberalism…is…produced by strategies…and policies that create subjects of interest, locked in competition" (Read, 2009: 30, see also 34-35). Reading Foucault (2010), Gudmand-Høyer and Lopdrup Hjorth mention that the "idealized figure" of German ordoliberalism, for example, is a "competitive and productive creature of enterprise". Cultivating the "enterprise form" involves "mobiliz[ing]…a…social *êthos"* which delimits a "competitive and enterprising" mode of conduct "in terms of personal plans and projects and with…objectives, tactics and agendas" (2009: 119-120, see also 126; Davies, 2014: 20-21, 75; Foucault, 2010: 241). US neoliberal thinkers similarly conceptualise *"homo œconomicus"* as the "creature of competition": every person "embodies…assets and productivity", manages their "consumption", generates their "satisfaction", and earns their "own wages" (Gudmand-Høyer and Lopdrup Hjorth, 2009: 120-121; see also Hamann, 2009: 54; Read, 2009: 27-29). Specifically, wages are produced through spending "'human capital'": one's "genetic qualities" and one's "acquired" attributes like skills or knowledge (Hamann, 2009: 42-43). According to Foucault's lectures on neoliberalism, which form a common reference point here, too, US neoliberals demand that economics spotlight "the strategic programming of individuals' activity", the "calculation" whereby somebody decides to utilise their means for particular purposes (2010: 223, see also 268-269; Davies, 2014: 85-86). As Hamann clarifies, neoliberal thinkers seek to unearth the "reasoning" that makes a person devote their "life's finite capacities" to "pursuing one goal or agenda rather than another" (2009: 43). Workers and work, especially, are framed in these ways (Foucault, 2010: 223-226).

Such "calculated, competitive and strategic" conduct, adds Davies, cannot be taken for granted anymore (2014: 159, see also 152, 166-167). Conceptions of the "rational economic actor" are increasingly operating as *"norms"* of conduct. The economic human being is now often *"nurtured into existence"*. People are thought to require support in recognising and "act[ing] in their own interests" (2014: 152, see also 166-168). They must "be taught and nudged to decide…in a certain utility-maximizing way" (2014: 195). Hamann points out that "neoliberal governmentality" seeks to generate "social conditions" favourable to this type of individual (2009: 39, see also 58-59). According to Read, the "subjects" of neoliberalism require the "freedom" to select among "strategies". This human being conceived of as an economic being is, he specifies, understood as "a creature whose tendency to compete must be fostered" (2009: 28-29). In Gudmand-Høyer and Lopdrup Hjorth's terms, in neoliberalism it is "the freedom of liberated competitiveness" that is seen as demanding "security" (2009: 120).

These discussions illuminate an important dimension of the neoliberal idea of competition as a mode of differentiation and of generating distinct winners and losers (Davies, 2014). Neoliberal thinking involves thinking everyone "'equally unequal'" and understanding everyone's "social condition" as a result of "his or her own choices and investments" (Hamann, 2009: 43; see also Davies, 2014: 41; Foucault, 2010: 143). "Social divisions…exist", that is, yet "neoliberalism attributes those divisions to failures of *individual* choice and responsibility" (Hamann, 2009: 50). Indeed, the discussions of neoliberal conceptions of subjects in competition indicate that competition is generally understood to unfold between agents with specific means, notably capacities, who decide to use these possibly following calculation, certainly following thought and strategising[4]. From this angle, the differentiation and distinction between winners and losers ensuing from competition would to a great extent be determined by a contest between subjects who make considered choices to act in their respective ways. The intricacies of the politics of NICE's work surface here.

Capturing such intricacies need not mean focusing on patients. NICE appraisal is a response to the problem of limited healthcare resources. Research on clinical effectiveness, the application of the QALY, the quantification of cost-effectiveness – the ratio of which is deemed a result of different treatments offered by different manufacturers and applied to particular patient groups – and comparison all contribute to the arrangement of competition. Technology appraisal thus presents many relevant focal points for sociological inquiry. Still, in this context highlighting the patients' situation is legitimate. One of the "Principles that guide the NHS" according to the Service's constitution is that the "patient will be at the heart of everything the NHS does" (Department of Health, 2015). Yet certain formulations in defence of NICE in the debate explored earlier potentially obscure precisely the patients' role in the competition at the heart of NICE appraisal (Claxton and Culyer, 2008: 599). NICE's documents do not render it particularly explicit either. This justifies the attempt – evocative of some of Harris's (2005a) and Quigley's (2007) formulations – to scrutinise the patient's position created by NICE appraisal.

In appraisal, patient groups, by virtue of their specific properties, have a key part in their respective treatments' production of QALYs/£. Thus they are embroiled in the competition in generating QALYs/£. Crucially, though, the situation NICE's approach constructs for patients contrasts sharply with that of the "creature of competition" (Gudmand-Høyer and Lopdrup Hjorth, 2009: 120) found to be conceptualised in neoliberalism. Notably, whilst the patient embodies factors influential on the generation of QALYs/£, the patient does not allocate or utilise those attributes for health production following her or his own considerations or calculations and strategic decision making. The extent of the production of QALYs/£ of each competitor depends on the patient group's specific attributes as corresponding particular treatments are made to operate upon them, not as patients, reasoning, choose strategically to employ them. That is, whilst patients are involved in the competition in producing health/£, they never assume the position of subjects taking considered decisions to act in that contest. They are, perhaps, creatures of competition after all, more so, namely, than they are its agents, notwithstanding that the competition can have major consequences precisely for patients. For it plays an important role in differentiating, with regards to £/QALY produced, between treatments used on their respectively relevant specific patient groups and in separating the cost-effective from the cost-ineffective. This informs funding recommendations in the manner already specified.

NICE and social relations

It can also be shown – albeit here necessarily only concisely – how NICE's work shapes relationships between people in terms more general than those of competition. Comparing NICE's approach with conceptions of the social relationship that have been seminal in sociological thought renders this apparent. The view that NICE's work facilitates certain social relations is instantly further corroborated in light of a basic element of Simmel's notion of social relations. To Simmel, as is well known, studying social relations means studying "reciprocal effect" or "interaction" (Frisby, 2002: xiv, see also xxvi, 49-52, 59-63, 1981: 40-44, 96; Simmel, 1909: 292-298). "Society is composed of the ceaseless interaction of its individual elements – groups as well as individuals – which impels Simmel's sociology towards a concern for social *relationships*, i.e. towards the study of social interaction" (Frisby, 2002: 50). Humans, writes Simmel, "influence one another,…the one does or suffers something, manifests a being or a becoming, because others are there and express themselves, act, or feel…" (1909: 315; see also Frisby, 2002: 99). NICE's approach can be said to shape relationships between patient groups in the direction of reciprocal effects. For the number of QALYs per given amount of spending generated when a particular patient group is treated with a specific procedure is meant to influence whether the NHS ought to fund other interventions used in their respective other patients – given their QALY/£ values – for these other patients. And the QALYs/£ produced when other patient groups are treated with their respective interventions is supposed to be a factor for whether the Service should resource a specific procedure used on a particular patient group – given its QALY/£ value – for this group.

However, Simmel continues that various "impulses", for instance "[e]rotic" or "religious" ones, and "purposes", for instance "of defense" or "gain", lead somebody to "exercise…influence upon", and be "influenced by", others (1909: 296; see also Frisby, 1981: 43, 52-54, 61-65, 2002: 51-52, 61-62). Moreover, as Frisby, referring to Simmel's essay on the possibility of society, phrases it, Simmel's conception of social life places emphasis on "the commitment of empirical subjects to interaction" (1981: 64, see also 2002: 121). From this angle, "society presupposes 'consciousness of sociating or being sociated'" (Frisby, 2002: xvi, see also 61, 121-123, 1981: 64-67). Bearing this in mind urges a specification of the qualities of the social relations NICE's work is helping to foster.

These qualities can, in actual fact, be sketched more sharply still by briefly comparing NICE's approach with Weber's concept of the social relationship. According to Weber, "'social relationship'" means "…behavior of…actors insofar as, in its meaningful content, the action of each takes account of that of the others and is oriented in these terms" (1978: 26-27; see also Albrow, 1990: 159; Käsler, 1988: 154-155; Ringer, 1997: 158-159). "The social relationship", Weber underlines, "*consists*…exclusively…in the *chance* that actions have taken, are taking, or will take place which, in their meaning content, are…adjusted to each other" (1980: 13, cited in English in Ringer, 1997: 159, whose translation, superior to Weber, 1978: 27, has been modified here; see also Albrow, 1990: 160-162; Käsler, 1988: 154-155). It is cultivating this kind of relationships between patients that NICE's approach is unconducive to – notwithstanding its shaping patients' relations towards reciprocal effect. In particular, the production of QALYs/£ when a specific patient group receives a specific procedure influences whether the NHS should invest in other interventions used in their respective other patients. Yet the production of health/£ of that specific group when treated with its procedure is not in any dimension meant to be oriented by the patients' adjustment of any part of health production, in its meaning content, with regards to its impact on other patients in the NHS. This may be unsurprising thanks to the foregoing discussion. But the point is sociologically decisive: each patient group is here involved in exercising influence on others, whilst the patients' attitude towards, or consideration of, other people and the influence they potentially have on others are not supposed to give any direction to how that influence is exercised. Just like it fosters only a very specific form of competition, NICE's approach fosters social relations in a very particular and restricted sense. During the dispute on the ethics of NICE's activities, from which this exploration set out, Harris accused the Institute of employing a "metric of cost-effectiveness that lacks compassion" (2005a: 375). The politics of NICE's work deserves sustained critical attention from sociologists, by contrast, because it supports the cultivation of social relations without spirit.

Conclusion

As noted at the outset, NICE explicitly thematises technology appraisals' potential to shape relationships between people, for instance by emphasising its "commit[ment] to…fostering good relations, as required by the Equality Act 2010" (2016: 1). It is also worth reiterating the NICE Citizens Council's function to advise the Institute "on challenging social…issues" that emerge during "guidance" production (2014: 1). Participants in the aforementioned 2014 session expressly considered "what ['a good society'] would look like" and "consist of" (2014: 15). To orientate the present paper's discussions, it needed to be clarified that NICE, in making QALY/£ comparisons, arranges a competition which involves patient groups. This made it possible to specify and scrutinise the competition and the social relations more generally speaking that NICE appraisal helps foster. Given its attention to social issues, these would be highly pertinent topics for the Council's deliberations. Neither NICE's documents nor the mid-2000s dispute – conducted chiefly in health economic and ethical terms – have fully unlocked the issue of competition associated with NICE's comparisons. However, the sociological conceptions that have guided the inquiry above could inform, extend, and enhance the Council's work. In this precise sense, the relevance of such inquiries transcends sociology's boundaries. Better supported in pursuing the problem of the good society, Council deliberations, in turn, could transcend those of the health system.

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[1] NICE has defined a threshold "range" of £20,000-30,000/QALY and inspects treatments under appraisal "in relation to" it (2013: 66). The figure is controversial in the debate in focus here (Claxton and Culyer, 2006: 374, 2007: 462; Harris, 2005a: 373, 2006: 378-379, 2007: 467) and elsewhere (see e.g. Appleby, 2016).

[2] Regarding a related matter, Harris mentions "rival therapies" (2005a: 373). ("Of or relating to a rival; that is a rival or rivals; competing" (*Oxford English Dictionary*, 2018: s.v. "rival")). Claxon and Culyer mention "rivals" (2006: 375-376).

[3] The foregoing "scoping" phase involves specifying NICE's "'question'", e.g. "for which condition" and "in which patient (sub)group" a "technology will be appraised" (Soares, 2012: 19).

[4] Though focused on quite specific materials, Davies's (2014: 35-69) exploration of theories of competitive agency is worth mentioning in this context.