CLINICAL GUIDELINES AND THE TRANSLATION OF TEXTS INTO CARE: OVERCOMING PROFESSIONAL CONFLICTS CONCERNING EVIDENCE-BASED PRACTICE

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The difficulties of basing healthcare on literary warrant have been explained in different ways: busy practitioners have no time to read extensively, physical access is difficult, and adequate surrogates for texts like indexes, abstracts, systematic reviews are partial in their coverage. The author suggests that a deeper problem of domain conflict must be addressed. This paper reviews problems identified in previous research on evidence-based nursing practice, which indicates that there are conflicts between medical and nursing domains. EBM (evidence-based medicine, or 'text') poses challenges for nurses (proponents of '*caritas*'). An additional surrogate for the medical corpus, the clinical guideline, is discussed. When based on inclusive consultation, this may prove to be a hospitable epistemological bridge for groups whose domains are in conflict. Drawing on 'social studies of science' literature, the author explores the provenance and status of the clinical guideline as a 'translation artefact' or bridging mechanism, and presents a 'snapshot' case study of the Scottish Intercollegiate Guidelines Network in 1998. She suggests that the clinical guideline is a powerful documentary genre, which links several strands of information science: information retrieval, literary warrant and the politics of classification.

1. INTRODUCTION

The problem of translating texts into practice was succinctly described by de Solla Price [1]:

> In addition to … clinical research, there is supposedly another, perhaps even more numerous variety whose function is that it must be read and evaluated by practitioners who are guided and influenced thereby in their clinical practice. Though we have little direct or indirect evidence of this process, one can see that such use, turning knowledge directly into action must have special library problems. In particular, since the scientific and medical community is not giving rise to further literature in the course of turning clinical research papers into clinical practice, we do not have a process of validating and evaluation [*sic*] such research by its affected community. The heavy responsibility for proper reading and evaluating such clinical literature is a vital technique that must be learned (p. 8).

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The ‘heavy responsibility’ of closing what may be called ‘Price’s loop’ has been taken up in a number of ways. Foremost is the work of a dedicated cohort who prepare systematic reviews [2, 3], notably contributors to the Cochrane Collaboration (inspired by Cochrane’s 1972 plea [4] to consolidate the evidence on which care is based). By synthesising and evaluating evidence from clusters of randomised clinical trials, systematic reviews can support recommendations for practice that are based on evidence. Historically, the position of systematic reviews in the medical corpus has been ambiguous as major indexes have accommodated them differently [5], making retrieval by practitioners less than optimal, though cognate publications like the *Effective Care Bulletin* have emerged which address this problem. If the extraction of working knowledge from the literature is not always easy, practitioners face further problems when they attempt to work with knowledge that is held in patient records. Coding, for example, even where codes are designed by practitioners (like Clinical Terms (the READ codes) in the UK), can be inflexible [6] and there are incompatibilities across systems [7], though the recently established UK National Health Service (NHS) Information Authority may address these issues [8]. Some codes have not been accounted for in UMLS (Unified Medical Language System), the ‘universal’ index, and though work has been done on computer translation across coding schemes [9] these are not yet standard components of clinical systems. And there are inconsistencies in the indexing of the major databases. Attempts to make the medical corpus more searchable by busy practitioners can result in lost information unless an experienced searcher familiar with the limitations of different coding and indexing systems undertakes the retrieval task [10].

In addition to reading and evaluating the literature, representing it in terms which are pertinent to local practice is a further responsibility. Until recently, local habitats were of little interest to librarians, who aspire to create and maintain universal knowledge representation structures/schemata which transcend particular and ephemeral descriptions. It is easy to understand the ‘pressure for standardised classification’ [11], but the end result, in the case of medicine, is a complex literary apparatus that can produce arbitrary results in the hands of practitioners constrained by lack of time, supported by different resources and exhibiting varying degrees of searching skill in their attempts to find material that fits the framework of local needs. American dominance of coding and classification (SNOMED, MeSH) systems poses problems for areas where UK and US practices and cultures are quite distinct, with their own vocabulary, notably primary care. The vision of a computer in every ward that can act as an *in situ* search engine and local archive and thus integrate local and non-local knowledge may be realised in initiatives like the National Electronic Library for Health, proposed in a recent NHS information policy document [12], which is designed to ‘deliver better care by providing up-to-the-minute details of a patient’s clinical history and current treatment, and access to the latest clinical research and best practice’. But implementation cannot be effective where there is a lack of understanding of how local and non-local knowledge intersect in the workplace.

Conversely, clinicians and managers are faced with the problem of capturing local practice and representing it in terms that satisfy the criteria of evidence-based medicine. The desktop workstation can fix details of local work that were

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previously elusive. Such representations may make it easier for practitioners to identify areas of practice that are invisible in the current medical literature, though worthy of extension and recognition beyond the local habitat. In the world of clinical practice, such activity is often undertaken by nurses, and nursing practice has served as a ready context for a critique of evidence-based healthcare based on exploration of a number of ethical concepts: legitimacy, authority, recognition, translation. Such themes are raised in a body of text that emphasises the importance of domain expertise in categorising texts and work, and explores the possibilities of convergence between local schemes and those of the bibliographic canon. Several of these studies [13–16] analyse the political economy that underlies clinical classification schemes, like the Nursing Interventions Classification (NIC). Such US debates on the constituents of legitimate clinical knowledge overlap with concerns in the UK, and a number of studies have explored the application of different types of knowledge in different clinical situations and across the different sectors of primary and secondary care. Urquhart [17] warns against facile typologies in her discussion of the information-seeking habits of clinicians where different mixes of formal and personal knowledge are involved. Though there are observable differences in behaviour between novice and expert doctors, ‘for nurses, the identification of particular groups of “advanced practitioners” seems much more difficult … Local knowledge will be particularly important for any information professional wishing to contact the formal and informal “gatekeepers” among nursing staff’ (p. 436). A general area of contention is the status of ‘nursing knowledge’: the nursing profession has claimed that it is marginalised by guidelines, which make systematic reviews the basis of healthcare. Nursing interventions, it is claimed, are not amenable to assessment in terms of the randomised clinical trial, a medical yardstick, and other types of ‘evidence’ must be considered. This view is summarised in Berragan’s [18] equation of ‘the move towards evidence based practice’ with ‘potential denial of personal ways of knowing such as intuition’ (p. 212). The text which follows discusses the implications of claims that nursing knowledge is a distinct domain, and considers the role of clinical guidelines as a bridging mechanism which may align conflicting points of view and help medical and nursing practitioners to achieve their common objective of improved patient care.

2. BACKGROUND: NURSING IN THE UK

In the UK, the nursing profession has been challenged by two major developments. The first challenge is a shift from the ‘Nightingale model’ of apprenticeship in the wards (backed up in the college classroom) to training in the higher education sector, either at the level of a first undergraduate degree, or, in the case of experienced practitioners, at masters level. The process of migration was completed in 1992 [19]. Recent government initiatives have consolidated the pedagogic shift. Both the Post Registration Education Programme (PREP) and the ‘Year 2000’ programme will contribute to a level graduate playing field where practitioners continuously update their skills and knowledge base [20]. In addition, evidence-based medicine (EBM) will drive fiscal and professional practice in NHS institutions. Medical, clinical and paramedical staff are encouraged to base treatment on the results of studies of previous outcomes, not simply on historical precedent or personal bias [21–24].

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For experienced nursing practitioners who undergo continuing professional training, access to the corpus of evidence may prove problematic, as firstly, they may not have access to databases and secondly, they may not know how to navigate the ‘grand structures’ offered by major suppliers of data such as *MEDLINE*, *BIOSIS* and *Embase* [25]. Both of these issues have been raised as inhibitors for practitioners who must work with ‘evidence’, and, since they are construed as technical problems, training is considered to offer a solution. Underlying these, however, is a third problem: practitioners may find it difficult to reconcile their structural understanding of the canonical textual domain with their understanding of practice [26, 18]. Bridging mechanisms are required which can capture nurses’ perceptions of the component parts of their work, and their understanding of where these fit into frameworks offered by the medical literature.

The topic of ‘translating texts into care’ was explored with the help of a group of experienced nurses acquiring masters level degrees in Queen Margaret College (QMC) in Edinburgh (now Queen Margaret University College). QMC has trained nurses for many years, before and after the migration to the higher education sector, and is talked of in the profession as offering the ‘QMC model’, which emphasises understanding of context and quality of life as important factors in effective intervention. Volunteers were sought in the early stages of a spring semester research methods class (1998) who would help the author explore evidence-based healthcare as a classification and retrieval problem; but as discussion of this topic developed, it became clear that indexing structures and the role of nursing indexes in the retrieval apparatus were not of primary concern to the practitioners in the class. The recent and ongoing publication of mandatory clinical guidelines was a more pressing challenge, as these were primarily based on randomised clinical trials (RCTs), perceived by many participants as biased by medical (‘doctor’) input and excluding ‘nursing knowledge’. The focus of the project shifted to clinical guidelines, the assumptions and politics that underlie them, and nurses’ perceptions of their pertinence to nursing practice and the nursing profession. The text which follows reviews literature on the information habits of nurses, discusses nursing knowledge and a nursing ‘point of view’ which may inhibit nurses from embracing evidence-based healthcare (or ‘translating texts into practice’), and concludes with an analysis of clinical guidelines in the Scottish Health Service and their likely role as mechanisms for bridging different kinds of knowledge.

3. TEXTUAL INHIBITIONS

To support the claim that a clinical guideline can remedy conflicts between the medical and nursing domains, evidence that problems exist must be supplied: the brief review of the information habits of nurses which follows attempts to do this. In the UK, these issues have been discussed from the standpoint of librarians and information professionals perplexed by lack of engagement, and determined to find a technical solution to the problem [27, 28]. A much cited review of nursing information habits in 1994 [29] revealed that one third of nurses did not engage with the literature at all; that one third consulted a few trusted sources not involving searching (trade literature and word of mouth); and that only one third exploited the

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apparatus of biomedical indexes. The main indexes consulted were *CINAHL* and *MEDLINE*. Bawden and Robinson [28] indicate that the situation had changed little at the time of their survey and that librarians' knowledge of the literature was deficient, with five out of eight librarians surveyed unaware of key resources. The library profession perceives these habits as correctable by improved access (proposed solutions include in-ward libraries, bookclubs and so on) and by training, which will improve the underdeveloped search skills of nurses [27]. Cullum and her colleagues [30], in an article promoting a new journal (*Evidence-based Nursing*) published jointly by the British Medical Association and the Royal College of Nursing, observe that 'studies' show that research-based nursing care is more effective, though nurses do not inform their practice with research. They construe this as an access problem: relevant research is not always reported in nursing journals and nurses are not trained to 'find and appraise'. The EVINCE project [31] has explored the potential role of library and information services in an educational process which may improve the integration of practice and codified knowledge. The authors note that the 'specific barriers are cultural and structural', and there is a divide between the researcher, the practitioner and the educator (p. 93).

Recent work on itinerant practitioners (midwives, health visitors) has looked at the World Wide Web as a way of overcoming physical access problems [25]. For the QMC group, travel from remote workplaces to access points (nearest university, nursing or public library) makes physical remoteness an issue. The scope of what could be accessed is also problematic, as resources are scattered across different specialist libraries – a point confirmed in the literature [19]. In addition, the QMC group described navigation and searching difficulties: trained by library staff, they were only aware of simple keyword searches and found the process of iterative sifting that followed badly constructed strategies too time-consuming: they thus did not rank the biomedical literary apparatus highly as a resource.

Though nursing practitioners may well understand how the world of scientific evidence is constructed and is to be navigated, there is a deeper issue: a suspicion of the medical evidence that they are required to access, which emerges from the particular model of patient care on which their professional training is based [26, 32]. The accommodation of detail is a significant problem area: the randomised clinical trial, which is the most highly ranked standard for evidence-based medicine, has been designed to occlude detail in the interests of generalisable outcomes, and the nursing models currently presented to students in UK higher education institutions are heavily qualitative. If many of those who write for publication are garrulous when reporting on patients, they appear reticent when asked to explain or account for the interventions that constitute practice. Cutliff [33], in a discussion of nursing development units to foster best practice observes that experienced practitioners are often 'unable to put into words why they have behaved in a particular way' (p. 329). This point is developed further by Berragan [18], who describes the difficulties often faced by practising nurses 'in defining what they do and hence what it is that constitutes nursing practice' (p. 211). She is sympathetic to this predicament, claiming that 'tradition and folklore still abound in nursing practice and are powerful sources of knowledge embedded in nursing culture' (p. 212).

4. DOMAINS IN CONFLICT

As explained above, a migration to the university sector has been a major driver of ‘professionalisation’ of nursing in the UK. An important part of this process, as of any professionalisation programme, is the establishment of a distinct body of knowledge. In the case of nurses, this involves a conscious dissociation of their practice from that of the medical domain. In the early years of separatism, models of the nursing process focused on distinct sets of tasks which defined the work of the nurse [34]. More recently, an ‘ethic of care’ has been proposed as the distinguishing feature of the domain [35, 32]. Cutliff [33] describes this as ‘a particular philosophy or set of attitudes, a philosophy which sees them (nurses) as caring, committed, self-aware, individuals who view their clients in a holistic manner and seek to empower them’ (p. 328). He draws on Benner’s work [36] to posit power sharing within the therapeutic relationship as the objective of care – expert interventions, suffused with ‘warmth and unconditional positive regard’ [32] will induce hope, a sense of control and an improved quality of life. The ‘new nursing professional’ [37] focuses on nurse-patient empathy as much as technique or medical knowledge: ‘the psychological and subjective nature of the body’ is the focus, and narrative and subjective testimony are accepted as sources of knowledge. The QMC mature students, like many other university-trained nurses in the UK, use the Roper model [38] to structure clinical practice in the ward. This focuses on lifestyle and lifecycle analysis to provide a holistic profile of the patient, which will extend the frame of reference of therapy beyond the immediate locus of clinical intervention.

Concomitant with this approach to practice is a research bias towards methodologies (largely phenomenological) that embrace affect and intuition as primary dimensions of therapy. Making the same point as McCloskey and Bulechek [13] in relation to the Nursing Interventions Classification in the US, Hicks and Hennessy [26], in a discussion of the shift to EBM, comment that ‘emphasis on RCTs with relative marginalization of alternative, more qualitative forms of research, may seriously limit the nursing research database because of its inappropriateness for many nursing interventions’ (p. 595). They suggest that the problem is structural – qualitative research is not favoured at either the funding or dissemination stages of the construction of the medical knowledge base in the UK. As a result, there is a lack of confidence among nursing professionals that they can conduct and evaluate research, and a lack of management commitment to nursing research. They claim that over-emphasis on RCT-based research has been counterproductive: in spite of heavy promotion, many in the nursing profession choose to ignore the texts – there is ‘an entrenched disinclination … towards any role responsibilities which are not firmly embedded in direct caring activities’ (p. 596). Positing ‘mutual regard and respect, intuition and caritas’ (p. 598) as the value system that underlies nursing practice, Hicks and Hennessy [26] describe the RCT as ‘a methodology that conflicts with the nursing tradition, relegating it to an inferior position which by implication, has neither the right nor the might to make any real difference to clinical practice’ (p. 599).

Taking a less strident line, Kitson [39] suggests that a key criterion of professional intervention whether initiated by a doctor, nurse, or physiotherapist is ‘does it do what it is intended to do?’, and that this can only be judged on the basis

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of evidence from clinical experience, or, at best, research evidence. There is a difference between weighing an intervention against the scientific evidence and taking a critical approach to work, and evaluating expected patient outcomes against implicit standards based on clinical experience and judgement; but, if a discipline is ‘young’, the former may not be easy to do. She reviews the literature on effective intervention and finds little to support the claims that individual relationships are critical to positive outcome, though educating patients is. Kitson questions the dominance of disease classification categories based on RCTs of pharmacological interventions and makes a plea for the inclusion of alternative approaches to diagnosis, which recognise the complementary tradition of ‘clinical experience’. This, says Benoliel [40], should not be interpreted in too narrow a way. While sympathetic to qualitative research, specifically the grounded theory approach, she states that there is ‘a need within nursing to broaden current definitions of nursing practice beyond the narrow confines of the nurse-patient relationship as a one-to-one enterprise … [since] in the real world of healthcare delivery, care-giving is offered by multiple nurses, not one … [T]he larger environment of the work setting influences how nurses practice as individuals, how they work as colleagues, and what happens to patients and families’ (p. 418). Though there is a case for knowledge acquired by qualitative means to be included in the canon of practice, much of this work has not been rigorous or particularly persuasive [41] in ensuring that nursing knowledge *per se* is recognised as a powerful professional corpus, and there is dissent in the nursing profession as to how to strengthen the position of ‘nursing knowledge’ as a clinical warrant. Walsh [42], for example, dismisses the ‘empathic turn’ and states that accountability in law is a key criterion of professional practice: ‘Appeals to nebulous concepts of intuition and knowing in the doing will not impress the NHS trust or GP conscious of litigation and risk management. The nurse must be able to justify his or her actions with reference to an objective evidence base if he or she is to earn the authority that will make for truly accountable practice’ (p. 41).

5. ALIGNING DOMAINS: A SOCIAL STUDIES OF SCIENCE APPROACH

The text so far has outlined a scenario where two domains, one well established (medical) and one newly professionalised (nursing), may be in conflict. Though both share clinical practice as an arena, and wish to attain common outcomes within that arena, there appears to be little common ground in terms of the understanding and identity that drive practice: the two domains are in a state of non-alignment. External directives, however, require them to overcome their differences in the interests of accountable service. Since nursing, as a newly professionalised domain, is unlikely to abandon the traditions (in ethics, research and practice) on which it bases its claim to separate status, some means of accommodating difference must be found. In the sections which follow, the role of the clinical practice guideline as a means of accommodation is explored. The exploration draws on a body of work on the politics of classification undertaken in the discipline of the social studies of science. This work suggests that classification is a political act, which can be subjected to sociological inquiry.

In 1989, Star and Griesemer [43] addressed the problem of how organisations reconcile the diverse interests of employees with the need to co-operate. They

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suggested that this is achieved in many organisations by means of shared artefacts (tangible and intangible). These objects help employees to accommodate divergent trends by providing a focus of attention for negotiations on controversial issues. Such ‘boundary objects’ provide common ground for heterogeneous social actors to work together. They may be artefacts, texts, prescriptions, classification systems: they are to some extent protean – ‘plastic enough to adapt to local needs, and the constraints of the several parties employing them, yet robust enough to maintain common identity across sites’ (p. 393). As they ‘inhabit several intersecting social worlds and satisfy the informational requirements of each of them’ (p. 393), boundary objects are essential components of information infrastructure. The creation and maintenance of boundary objects is a political process. Organisational actors who engage with them will seek to promote their own concerns, and enlist allies with this end in view. In the museum case study which provided Star and Griesemer with a context for their discussion, boundary objects were a way of ‘translating the concerns of the non-scientist into those of the scientist’ (p. 404). The term ‘translation’, in this lexicon, denotes a political process. Translation happens through a process of ‘inscription’; artefacts embody the interests of those who engage with them, and carry, as Star and Griesemer indicated, ‘at every stage the traces of multiple viewpoints, translations and incomplete battles’ (p. 413). This point is reinforced in the work of Suchman [44] who suggested that categorisation devices are sites where internal and external claims to organisational territory are contested. From this perspective, a clinical guideline may be seen as a kind of manifesto, with greater or lesser authority conferred by the *gravitas* of the committee responsible for its production. As we shall see below, UK clinical guidelines may be seen as both weak (with local applications only) and strong inscriptions (which carry weight in wider constituencies). At the time of the study, there were many local variants, published under a number of different auspices, which makes it hard to talk in terms of a political centre with some guidelines (those endorsed by the NHS, for example) conferring considerable authority on certain interventions. As noted above, the recent formation of the NHS Information Authority [8] will consolidate the position of a number of recommended interventions.

Bowker and Star and their colleagues [14–16] have analysed a number of classification systems, drawing on, *inter alia*, the boundary object framework. Points in common between their analysis and what may be observed in the development of clinical guidelines in the UK suggest that clinical guidelines may also be described as classification objects. Bowker et al. [14] describe a ‘quiet politics of voice and values in information infrastructure’ (p. 345) and illustrate this process with a case study of the NIC. This scheme inscribes a ‘vision of what nursing is and should be’, and it co-ordinates ‘bodies, impairments, charts, reimbursement systems, vocabularies, patients and health care professionals’ (p. 349). It has contributed to the strengthening of the political position of the nursing profession, as it has been included in a number of major domain resources, including UMLS, ‘a major victory for the development group’. The effectiveness of the NIC (or, as is claimed here, any classificatory inscription) may be judged, say Bowker and his colleagues, in terms of three dimensions: comparability (equivalence across sites which is based on ‘regularity’ in semantics and objects), visibility (or ability to accommodate what is ‘wrongly invisible’), and control, or hospitality to

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appropriation by users (p. 347). These criteria are applied to Scottish clinical guidelines in a later section of the text.

In addition to the boundary work of Bowker, Star and their colleagues, work by Berkenkotter [45] on ‘boundary rhetoric’ is relevant to claims being made here for clinical guidelines as bridging mechanisms or translation artefacts. Berkenkotter, drawing on work by Fuller [46] on ‘interdisciplinary interpenetration’, ‘trading zones’ and ‘boundary rhetoric’, describes disciplines as ‘contingent groupings of practitioners situated in multiple networks determined by such factors as objects of study, theories, methodologies, epistemological alliances, institutional sites and funding arrangements’ (p. 177). Boundary rhetoric, says Berkenkotter, is primarily designed to accommodate disciplinary differences, though it may, over time, alter practice; it rallies support in a number of different fields ‘through the creation of a heteroglossic text’ (p. 179). Key informants, trusted authorities in a number of fields, can play an important role in enlisting and enrolling allies to support emerging rhetorics. The transdisciplinary or ‘heteroglossic’ mix offered by the clinical guideline is potent: as indicated above, it embodies the filtering expertise of the searcher, the relevance judgements of clinicians, and the feasibility assessments of management staff in a practical guide to action.

6. CLINICAL GUIDELINES AS ‘TRANSLATION’ ARTEFACTS

The brief case study which follows presents an analysis of the development of clinical guidelines in Scotland and attempts to evaluate them as translation artefacts, as boundary objects and as inscriptions. It is to be seen as a ‘snapshot’, and reflects the status quo in June 1998. Clinical guidelines were defined at that time by the Scottish Intercollegiate Guideline Network (SIGN) as ‘evidence-based national recommendations … that are translated by local practitioners into protocols which reflect particular local circumstances and styles of practice … the available evidence is correctly synthesized and weighted within a guideline, so that, when followed, the guideline leads to improvements in health’ [47]. The SIGN secretariat is a network of clinicians and healthcare professionals that includes representatives of all the UK Royal Medical Colleges (the professional bodies which validate practitioners) as well as nursing, pharmacy, dentistry and professions allied to medicine. Patients’ views are represented on SIGN through the Scottish Association of Health Councils. SIGN works closely with other national groups and government agencies active in the National Health Service in Scotland.

The theoretical work of Bowker, Star, Timmermans and Berkenkotter, outlined above can contribute to understanding of how clinical guidelines developed in Scotland are bridging devices which are formed in a political context. In the first part of the paper, the intractability of the medical corpus as a source of clinical practice or ‘care’ was discussed in terms of three problem areas: structural inefficiency, epistemological dissonance and ethical conflict. Structural inefficiency was described in terms of the medical literary apparatus and the different transformations or surrogates that allow access to the archive: abstracts, indexes, codes which may appear inconsistent to a practitioner. Clinical guidelines can overcome the problems of structural inefficiency by delegating searches to a cohort of motivated clinical domain specialists. This adds to the number of removes at which practice draws on literary warrant, but facilitates practice that fulfils Price's desideratum of turning knowledge into action on the basis of validation and evaluation 'by its affected community' [1, p. 8]. The transformation process, which underlies clinical guidelines, has, in the UK at least, been relatively transparent [48]: details are provided of a number of sources and search strategies involved. By classifying the literature in terms of recommendations for action, in a process endorsed by groups of named stakeholders who constitute the development team in any given case, the guideline cuts several epistemological knots. At the time of the study, however, the diffusion of guidelines was rather arbitrary. As indicated above, they were indexed inconsistently in the major databases: *Embase* admitted any articles dealing with good clinical practice and clinical protocols for indexing as types of practice guidelines. *MEDLINE* made a clear distinction between clinical protocol and practice guidelines with no hierarchical relation between them, though a document type field existed that could be used. UK health librarians, not surprisingly, were reportedly unsure of where to look when clients asked for guideline information; guidelines were, and are, however, well represented on the web [49].

In its role as a broker between the dissonant worldviews of different professional domains, the guideline can be seen to function as a boundary object. Measured in terms of Bowker's criteria for an effective classification schema, it offers comparability. The recommendations that all local developers work on the basis of national and regional guidelines (as that is the level where expertise is likely to be available to carry out systematic reviews) is likely to be heeded, and the guidelines which have the backing of the NHS or professional bodies (as is the case of SIGN) will have larger reach, as they have greater validating power in funding allocations. In terms of enhancing visibility, the ranking system allows guidelines to be hospitable to the description of non RCT-based, non drug-driven treatment, and though such descriptions may not be highly ranked, the fact that they are listed is evidence of the inclusiveness of the project. An early SIGN report on epilepsy, for example, includes 'numerous examples of patient leaflets and booklets' gathered by the clinical nurse specialist with help from the Epilepsy Association for Scotland, ranked as Grade C material. ('Grade C' indicates either absence of directly applicable clinical studies of good quality or an extrapolation of level 1, 2 or 3 evidence). Weak warrant aside, the role of the clinical nurse is foregrounded in this guideline: she 'would act as educator and trainer for staff and patients, audit co-ordinator, and facilitator in the implementation of local protocols' [50, p. 26].

In terms of control, or openness to user adaptation, Bowker's third criterion, the UK clinical guidelines score highly. SIGN's participative philosophy is typical of groups that develop clinical guidelines:

> It is expected that this guideline will be adopted after local discussion involving clinical staff and provider and purchaser management. The Area Clinical Audit committee should be fully involved. Local arrangement will then be made for the derivation of specific local protocols to implement the national guideline in individual hospitals, units and practices and for securing compliance with them. This will be done by a variety of means including patient specific reminders, continuing education and training,

> and clinical audit. Service contracts will reflect the arrangements fully along with their related costs [50].

Though local developers may deviate from national guidelines, they should document any significant departures, explain the reasons for the differences and document these in patients' notes.

As an 'inscription' device, the clinical guideline captures the political dynamic of those involved in its construction. In terms of aligning different stakeholders, the major work has been done behind the scenes by government, the invisible hand, which has made the randomised clinical trial (RCT) the ultimate standard for care and indicated that only RCT evidence should be invoked in contracts for the purchase of health care: what is being inscribed is the medical point of view. In a very British compromise, however, those who promote other 'ways of knowing' are invited to contribute. This can be compared with the situation in France at the time of the study [51], where doctors were fined for non-compliance with RCT-based guidelines. In the UK, a key group 'do' the inscription, allied in different ways according to the therapeutic focus of the guidelines, with other practitioners. A crude measure of the balance of power within a guidelines consortium is the membership list for each development team: medical staff are predominant. The 'how' of the inscription is its most compelling dimension: as suggested above, the guideline offers a powerful inter-domain mix, which may offer comprehensive solutions to problems and consolidate points of view.

7. CONCLUSION

The paper has reviewed problems that arise when texts are translated into healthcare: unwieldy literature structures, difficulties in access and conflicts in the worldviews of different professional domains, which may inhibit the uptake of evidence-based practice. It has explored the role and status of the clinical guideline in overcoming such barriers. Clinical guidelines are an interesting hybrid, combining retrieval (with peer assessment) and prescriptive classification (a merging of clinical with organisational assessment) in a novel mix of literary, clinical and administrative warrants. The paper has also explored the force of political guidelines as political instruments, using a 'social shaping of technology' framework. Guidelines secretariats can amplify the political force of the texts they produce by activating networks of strong and weak ties. This may be done in a number of ways: SIGN recommends certain weblinks to readers of its web page (weak ties); it also works closely with other local agencies, like the Scottish Health Purchasing Information Group (strong tie). By combining political clout with a non-exclusive approach to recommendations for practice, clinical guidelines may indeed bridge professional domains. Sceptics may claim that unless guidelines are tied specifically to audit, nursing practitioners will continue to work with the knowledge base that is familiar to them. Optimists (or those who may wish to engage strategically with the inscription process) visualise them as a forum to present a nursing point of view, sharpened by improved quality of research. Attempts to have qualitative nursing research included in the UK DARE database (one of the sources of systematic review at the time of the study reported here) might be interpreted as a move of this sort.

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The clinical guideline is a powerful textual artefact. It is produced by a network of agents with different interests and experience, linked in a socio-technical 'production lattice' [52] that combines political, material and cognitive resources. Several studies [53–55] have shown that certain guidelines (and certain evidence-based interventions) work and certain do not. Grimshaw and Russell [54] note that the successful implementation of guidelines depends on a number of factors, including 'the clinical content and the methods of developing, disseminating and implementing … those guidelines … Studies that reflect small improvements or none, may reflect failure at any stage during the introduction or evaluation of the guidelines' (p. 1321). Bero et al. [55] identify an additional problem where those who develop systematic reviews fail to justify the criteria for selection and validation of the cases that are described, though they note that recent reviews appear to be of better quality (p. 466). Sociological probing of the sort attempted here may help to overcome such difficulties, by uncovering conflicts among different stakeholders, which need to be addressed if interventions are to be effective.

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