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# Exercising the nursing imagination: putting values and scholarship back into research

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## Abstract

The number of published nursing research papers has increased exponentially over the past 20 years, partly due to the pressures placed on academics by universities to ‘publish or perish’. Nursing research has become an end in itself, largely divorced from the aims of theory building and practice development, and research findings are accumulating at an alarming and unwieldy rate. This discussion paper explores some of the possible reasons for this shift in the focus of the academic role and calls for a return to scholarship and a far broader understanding of the purpose and practice of research as a form of intellectual craftsmanship. In order to gain a fuller and deeper understanding of the human condition and human suffering necessary for compassionate care, nurse researchers, practitioners and academics need to develop the ‘nursing imagination’ through reflective writing, collaborative inquiry, the arts, humanities, novels and poetry. We should be guided in our research according to the demands of nursing practice and patient care and work towards creating an academic discipline where our work is valued according to the good it does rather than simply responding to the demands of our higher education employers.

## Keywords

clinical research, culture, ethical issues, innovation and improvement, intellectual craftsmanship, practice development, research impact, research policy, values-based research

## Chaos in the Brickyard

In a letter to the journal *Science*, entitled ‘Chaos in the Brickyard’, the eminent bioscientist Bernard Forscher compared scientists to builders, researchers to brickmakers and research projects to bricks. Whereas brickmakers were at one time in the service of builders and made specific bricks of the precise shape and size required for particular building projects,

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Forscher claimed that they now churn out more or less random bricks without any particular purpose in mind. As he put it:

The brickmakers became obsessed with the making of bricks. When reminded that the ultimate goal was edifices, not bricks, they replied that, if enough bricks were available, the builders would be able to select what was necessary and still continue to construct edifices. (Forscher, 1963: 339)

He continued:

And so it happened that the land became flooded with bricks. It became necessary to organize more and more storage places, called journals, and more and more elaborate systems of bookkeeping to record the inventory. (Forscher, 1963: 339)

Brickmakers began to compete with one another, and so they mostly produced bricks that were easy or quick to make. He concluded:

Unfortunately, the builders were almost destroyed. It became difficult to find the proper bricks for a task because one had to hunt among so many. It became difficult to find a suitable plot for construction of an edifice because the ground was covered with loose bricks. It became difficult to complete a useful edifice because, as soon as the foundations were discernable, they were buried under an avalanche of random bricks. And, saddest of all, sometimes no effort was made even to maintain the distinction between a pile of bricks and a true edifice. (Forscher, 1963: 339)

This letter was, of course, an extended metaphor, but if we change a few words its meaning becomes clear. Scientists were originally builders of knowledge, theories, explanations and laws which were constructed from the bricks of research findings. After a while, research came to be valued as an end in itself, and when reminded that the role of the researcher was to produce specific findings – or evidence as it came to be called – in order to test out particular theories, the researchers claimed that if they continued to generate as much evidence as they could, theorists and practitioners could pick and choose what was useful to them.

As research findings piled up, more and more journals were published in order to accommodate them. Because research findings were no longer produced to order, the subject matter and research methodologies employed by researchers were chosen according to current fashions, ease of production, and external pressures such as the demand placed on academics by funding bodies and promotions panels. In all of this, theory and theorists became devalued. The prestigious term ‘scientist’ became attached to researchers, to the producers of information, rather than theorists, the builders of knowledge. And saddest of all, as Forscher concludes, often no effort is made to distinguish between information and knowledge; between a pile of facts and a well-constructed theory.

This letter was written over 50 years ago, at a time when nursing could hardly have been described as a research-based profession. Nursing knowledge, such as it was, was based largely on anecdote rather than evidence. However, much has changed over the last half century, including the move of nurse education into the university sector and a strong and growing emphasis on evidence-based practice. In order to illustrate the effects of these changes on nursing research, I will focus on a single topic area: the effects of listening to music on stress, anxiety and pain relief.

Several years ago, I became aware of a noticeable increase in the number of published research papers on this topic. There appeared to be no clear reason for the sudden interest in the subject, and the research studies did not seem to form a planned and coherent programme of research. In fact, many of them more or less replicate one another with more or less the same findings. However, it started me thinking about the accumulation of research findings generally, and prompted me to examine this particular phenomenon more closely. A search of PubMed using the terms ‘music’ and ‘nurs\*’ revealed that the very first paper on the topic, entitled ‘Music and the mentally ill’, was published in the *Trained Nurse Hospital Review* in 1947, followed by three more papers in the 1950s. The early 1960s saw a flurry of papers on the topic of music therapy in mental ill health, and in the 53 years since the publication of Forscher’s letter in 1963, PubMed identified 1628 papers on the topic of music and nursing. As Figure 1 shows, the annual publication rate started very low and only really began to increase during the 1990s. The spike that I noticed around 2010 can be seen quite clearly.

Not all of these are research studies, but an examination of the abstracts reveals that the proportion of empirical research to non-empirical papers has grown significantly since the 1960s, and continues to do so. And this was precisely Forscher’s point: we have too many bricks and too few edifices; too much data and too little knowledge.

A systematic review of the effects of music interventions in perioperative settings identified 42 randomised controlled trials (RCTs) conducted between 1995 and 2006 (Nilsson, 2008). The findings were somewhat equivocal and Nilsson was critical of the quality of some of the studies. She concluded that:

During perioperative care, soothing and relaxing music can be used as audioanalgesia, audioanxiolytic, or audiorelaxation as an integral part of the multimodal regimen administered to patients. Providing music to patients is an inexpensive technique that does not require extra staff members or expensive equipment. (Nilsson, 2008: 805)

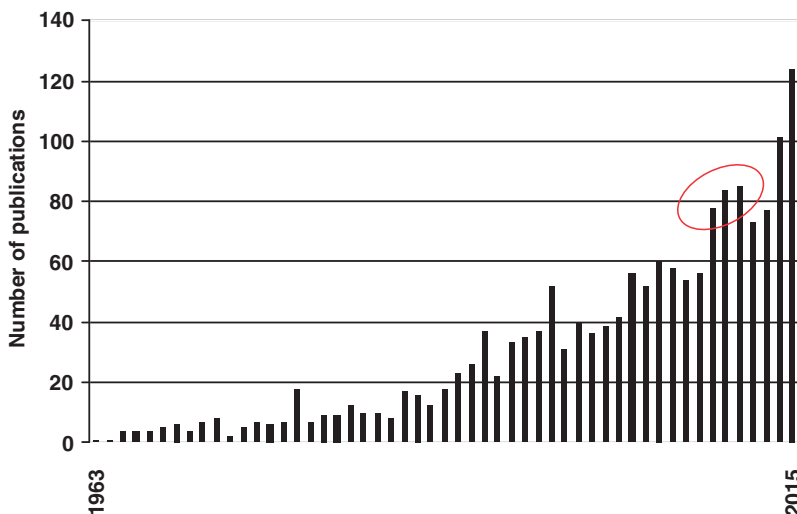


Figure 1. Number of publications by year using the terms ‘music’ and ‘nurs\*’.

However, she added that:

The effect of music on pain and stress for surgical patients is not well understood. A number of methodological limitations are evident in the reviewed research. Further research and research of higher quality is needed on the ability of music to affect patients' perioperative pain, anxiety, and stress. (Nilsson, 2008: 804)

Table 1 briefly summarises the findings from four further studies on the effects of music on postoperative pain in the 5 years following Nilsson's call for further research.

We can see from Table 1 that listening to music makes no significant difference to perception of pain (Kelly et al., 2010); *or* it leads to a decrease in pain in the first 24 hours (Sen et al., 2010); *or* it makes no difference during the first 24 hours but makes a significant difference on day 2 (Vaajoki et al., 2012); and, as we might expect, there is a recommendation that yet more research should be undertaken (Özer et al., 2013). After 69 years, 44 RCTs and over a thousand other studies, it appears that we are no closer to understanding the mechanisms at play and the effects they are producing. As Forscher pointed out, researchers have created huge amounts of information and findings, but no one seems to be building very much knowledge or theory from it, let alone practice interventions.

This is, of course, only one example from a vast field of nursing research. However, it is quite a significant one. Here is a therapeutic intervention that nurses could make their own, that could be applied across a broad spectrum of nursing fields and specialisms, that appears to have demonstrable benefits to patient wellbeing, and that is amenable to investigation through a wide range of qualitative and quantitative methodologies, including RCTs. Yet a huge investment of time and resources appears to have yielded very little useful knowledge and theory, and no one seems to be terribly bothered. There have already been several dozen more research studies into the effects of music on pain and anxiety this year and no doubt many more will follow. The call is always for 'more evidence', but are we really building an evidence-based discipline or simply burying good practice under a pile of old bricks? If that is indeed the case, it is important to explore the reasons for this gross over-production of research findings at the expense of theorising and implementation.

**Table 1.** Summary of four studies on the effects of music on postoperative pain.

Kelly et al., 2010	RCT <i>n</i> = 56	Music vs 'quiet rest'	No significant difference between the groups. Both reported a decrease in pain over time.
Sen et al., 2010	RCT <i>n</i> = 70	Listened to music for 1 hour vs did not listen to music	Decrease in pain in the first 24 hours in the experimental group.
Vaajoki et al., 2012	Prospective clinical study <i>n</i> = 168	Music vs no music	No difference between the groups on day 1. Significant difference on day 2. No difference on day 3.
Özer et al., 2013	Quasi-experiment <i>n</i> = 87	Music vs rest	Significant difference on day 1. 'Further research should be undertaken'.

RCT: randomised controlled trial.

## The scholar disappears

Forscher called attention to the separation of researchers from theorists in the biosciences in the early 1960s, leading to what we might call the theory–research gap. However, its full effect in nursing has only really been felt in the last 20 years. In the UK, this rise in the importance of empirical data collection at the expense of theoretical work coincided with the wholesale move of nurse education and training into the higher education sector. Not only was doing a research degree suddenly important for career progression, but the emerging Research Assessment Exercise (RAE), later the Research Excellence Framework (REF), placed huge pressure on all academic staff to publish or perish.

The first RAE took place in 1992, and in the subsequent exercises standards have been tightened and raised to the point where there is now a widespread perception in nursing that only quantitative, preferably funded, multi-authored data papers published in high impact journals have a realistic chance of achieving the coveted 4\* status. This perception is probably inaccurate, but nevertheless research output in many university departments is driven by this imagined gold standard. Thus, the content of academic nursing journals increasingly reflects the career trajectories of aspiring researchers and the promotion criteria of academic departments rather than the professional and practical concerns of nurse theorists and practitioners. Journals are becoming stuffed with research reports, not necessarily because practising nurses are asking for more evidence, and not because academics are requesting more data to inform their teaching, but because promotion panels and pro-vice chancellors are asking for more 4\* papers. Consequently, we can detect a distinct change in what is being published in some of the top academic journals.

I will focus here on the *Journal of Advanced Nursing (JAN)* as one of the top and longest-running UK academic nursing journals. Table 2 compares the topic headings from the contents pages for the March 2016 issue with those from 10 years earlier.

The headings from 2016 focus solely on research: how to do it, what the findings were, and how to synthesise research evidence. In contrast, the March 2006 issue categorised its content in terms of issues and innovations for practice and education, integrative literature reviews, and theory and concept development and analysis. This issue included a number of research papers, but the fact that they *were* research papers was considered to be secondary to their academic and practice focus.

Going back a further 10 years, the March 1996 issue simply provided a list of contents with no categorisation of the papers at all. However, if we look back to 1976, James Smith,

**Table 2.** Content of *JAN* by topic heading.

March 2016	March 2006	1976
Topic heading, %	Topic heading, %	Topic heading, %
Original research, 55	Issues and innovations in nursing practice, 46	Nursing and midwifery practice, 46
Research protocol, 15	Issues and innovations in nursing education, 27	Nursing education, 26
Research methodology, 15	Integrative literature reviews and meta-analyses, 18	'About nurses', 18
Evidence synthesis, 15	Nursing theory and concept development or analysis, 9	Research reports, 10

the founding editor, calculated that 46% of papers published during the first year of the journal were related to nursing or midwifery practice, 26% to nurse education, 18% were, as he put it, 'about nurses' and 10% were research reports (Smith, 2016). Interestingly, we can see from Table 2 that the proportion of the journal dedicated to the two leading topics of nursing practice and nursing education remained more or less unchanged over the 30-year period from 1976 to 2006.

It was only in 2007 that the then editor introduced the current format of research reviews, original research, research methodology and theoretical papers, arguing that the journal was responding to changes in what was being submitted. The category of theoretical papers was a catch-all heading for everything that was not research, and the editor commented at the time that:

It was *JAN's* mission at the outset to publish research *and scholarship*. Some of the other top-ranked international nursing journals do not publish non-research papers, so *JAN's* continuing commitment to publish scholarly work is one of its distinguishing hallmarks. (Tierney, 2007: 2, italics in original)

The 24 issues of *JAN* published in 2007 contained a total of 254 papers, of which 232 were research papers and 22, or 8.7%, were classified as theoretical. In 2013, the 'Theory' section was subsumed under the 'Evidence synthesis' category, and in 2015, this sub-category accounted for only 14 out of the 250 published papers, or 5.6%.

I am making these observations about the decline of scholarly writing in our journals not as a criticism, but simply to illustrate how the academic focus of nursing has changed during the lifetime of one particular journal. As the editor pointed out back in 2007, this shift in the journal away from a forum for sharing and discussing substantive issues and innovations in practice, to a vehicle for disseminating research findings, was partly a response to what academics were submitting for publication. However, whether what nurses are writing is also influenced by what they think that journals are likely to publish is a moot point. Certainly, many academic journals have become very prescriptive about the style and content of what they are prepared to publish, and while this might in part be due to changes in academic fashion, it is likely also to be influenced by economic and commercial considerations.

At a time when more and more journal titles are being published, most academic libraries are severely cutting the numbers of journals that they stock, and generally favour those with high impact factors. Therefore, sales are at stake, and publishers are employing various strategies to play what the current editor of *JAN* has called 'the impact factor game'. Pressure is placed on editors and reviewers to select papers which are most likely to attract citations in other journals and since, as we have seen, most academic journals nowadays focus on empirical research reports, the papers most likely to be cited are other empirical research reviews and reports. And so it goes on: more bricks, fewer edifices; more information, less understanding.

I will conclude this section with two observations, written 75 years apart, but which make much the same point. The first is from Martin Heidegger, written in 1938 at a point in history when the horrors of what he called 'machine technology' were about to be felt across the world:

The scholar disappears. He is succeeded by the research man who is engaged in research projects. These, rather than the cultivation of erudition, lend to his work its atmosphere of incisiveness.

The research man no longer needs a library at home. Moreover, he is constantly on the move. He negotiates at meetings and collects information at congresses. *He contracts for commissions with publishers. The latter now determine along with him which books must be written.* (Heidegger, 1938: 125, my emphasis)

At this time, Heidegger was writing approvingly of the recent emergence of the ‘research man’ and his relationship with the book publishing industry, adding that publishers not only ‘have the best ear for the needs of the public’ but that their business plan ‘coincides with the aims of researchers’ (Heidegger, 1938). Following the Second World War, he would publish a series of essays condemning so-called technological thinking in favour of a gentler, more meditative mode of thought.

Nowadays, books have been replaced by journals as the most influential publications in many disciplines, including nursing. Here, then, is the editor of *JAN*, writing in 2013 about the so-called ‘impact factor game’ played by journal publishers and editors, but making much the same point as Heidegger:

Publishers monitor citations carefully and editorial boards and journal management teams debate and decide on what kinds of papers to encourage, and which to discourage or discontinue. *Some publishers may exert pressure on the editorial team to improve or at least maintain the impact factor of the journals* and to select articles that will contribute to the 2-year citation window. (Watson et al., 2013: e30, my emphasis)

I will leave the reader to draw her or his own conclusions about the influence that this might have on the future of nursing research and scholarship.

## Reclaiming the nursing imagination

Heidegger complained in 1938 that the scholar had disappeared, to be replaced by the ‘research man’. Two decades later, the sociologist C. Wright Mills made a similar observation, referring to the trend towards doing research as an end in itself as ‘abstracted empiricism’ (Mills, 1959). Unlike Heidegger, however, Mills had a manifesto for the return of the scholar in the guise of the intellectual craftsman. In an appendix to his classic text *The Sociological Imagination*, Mills advocated intellectual craftsmanship in the form of academic writing as the true vocation of the social scientist. Mills was rather dismissive of empirical research, at least in his own discipline of sociology, claiming that ‘There is no more virtue in empirical inquiry as such than in reading as such’ (Mills, 1959). In other words, the knowledge and understanding about the social world that comes from doing research is no more or less valuable than what can be obtained from literary and other library sources. For Mills, most empirical research is:

... thin and uninteresting... suitable only for beginning students, and sometimes a useful pursuit for those who are not able to handle the more substantive problems of social science. (Mills, 1959: 226)

This assertion needs to be set in the context of the state of sociology in the late 1950s. Mills was railing against the rise of industrial-scale social research and the early days of ‘big data’ brought about by developments in computer technology. He was particularly concerned about the growing perception that social knowledge could only be acquired through large-scale empirical research, that to be a sociologist is to be a researcher.

Mills regarded sociology as an intensely interpersonal pursuit and felt that the social world could only properly be understood from within; that any attempt to step outside of society in order to study it objectively was foolish and misguided. He believed that sociologists do not come to understand the social world by counting or measuring, but by observing and writing; not through large-scale empirical research, but through individual scholarship. What makes sociology unique is that the sociologist is constantly immersed in her or his subject matter, which is immediately available at all times. Thus, for Mills, 'The most admirable thinkers within the scholarly community... do not split their work from their lives'. They are constantly at work, looking, thinking, speculating, writing, and exercising what he called the sociological imagination. Being a sociologist is a full-time occupation, and so 'Scholarship is a choice of how to live as well as a choice of career' (Mills, 1959).

Mills was writing about sociology, but nursing is arguably not so very different. Nurse academics are not *completely* immersed in what they are studying to the same extent as sociologists. It is, of course, possible to step outside of the nursing world and observe it more or less objectively should we wish to; to measure, to count and to compare. But there are, as Mills tells us, other ways of knowing and other things to be known that formal empirical data collection can never tell us.

I have argued in this paper that nursing scholarship has, over the past 10 or 20 years, come to be more and more dominated by a single pursuit – scientific, empirical data collection and dissemination. I have also suggested that the academic nursing agenda is being set and driven to a large extent by institutions and organisations with little interest in the goals, values and aspirations of nurses and nursing. I believe that nurse scholars and researchers need to reassert their professional goals, values and integrity and to reclaim the academic agenda from university directors of research who may know or care little about nursing and whose first and often only priority is research income and REF star ratings; and from publishing companies whose first instinct is to drive up impact factor scores.

So, what can be done to reassert the nursing imagination in the face of corporate pressure to conform to a narrow model of scholarship which, I suggest, is detrimental to the practice and profession of nursing? A moratorium on all new empirical research projects is clearly unrealistic and unworkable. There may or may not already be too many bricks lying around – too many data to know what to do with – but we should at least be trying to do something *creative* with them. I suggest that what is needed is not just more literature reviews in search of a gap in the wall that we can fill with yet another brick; not just more quantitative meta-analysis or qualitative meta-synthesis that attempts to make larger bricks out of many small ones.

What nursing needs is more scholarship; more *analysis* in the true meaning of the word, pulling research findings apart through discussion, debate and dissent; more journals which encourage dialogue between theorists, researchers, practitioners and service users. Fewer balanced reviews that claim to present all sides of the argument but end up representing none, and more polemic that forcefully states a particular point of view and invites responses, refutations and dialogue; more conferences and symposia where no new findings are presented, but where we can argue and debate about practice. Better yet, where practitioners and service users give the keynote presentations and academics sit in the audience making notes. More imaginative allocation of research grants: grants for library work and practice development rather than empirical data collection; less research-based practice and more practice-based research. Most importantly, we need to exercise the



nursing imagination in order to think differently about research and particularly about the *value* and the *values* of research.

As things stand, research is given value largely according to the amount of funding it attracts and the number of publications in high impact journals that it produces. However, funding and impact are the currency of the university, not the profession of nursing. I suggest that we pay less attention to the *academic value* of our research and more to the *nursing values* which underpin it. We should remind ourselves that many of us are qualified, registered nurses, and that our code of professional conduct instructs us to 'put the interests of people using or needing nursing or midwifery services first' and to 'make their care and safety your main concern' (Nursing & Midwifery Council, 2016). This, I suggest, applies as much to nurse academics as to managers and practising clinical nurses. It applies to what we do as teachers, writers and researchers. It means making choices about research projects and publications based on the interests, care and safety of service users rather than on which projects are likely to improve the REF score of the university.

Some might argue that there is no difference between the two; that the topics, methods, methodologies and findings favoured by funders and REF panels are those that do most good out in the real world. However, there are others, including myself, who sometimes feel pressured into doing work that they believe is not necessarily in the best interests of people using or needing nursing or midwifery services, whose gold standard is not the RCT, nor even the rigorously conducted qualitative study.

Nursing is, at times, a technical procedure that requires rigorously produced generalisable information about which treatment is most effective for most people in most cases. But it is also a deeply human activity that demands an intensely interpersonal therapeutic relationship. In order to care *for* someone, particularly when we are tired, stressed and under-resourced, it is helpful if we also care *about* them, and to care about them, it is necessary to understand their suffering and to imagine ourselves in their position. Arguably, it was partly a failure of understanding and imagination that resulted in the neglect and cruelty at Stafford Hospital and elsewhere that has recently scandalised the nursing profession in the UK; the unwillingness or inability of nurses to imagine themselves or their family members in their patients' positions that enabled them to ignore or deny the obvious distress happening around them. By seeing patients as objects rather than persons, they become an obstacle to getting the job done rather than the whole point of the job.

## **Conclusion: more poetry is needed**

If we are seriously to address the challenges posed by Mid Staffordshire NHS Foundation Trust and highlighted by Francis (2013), we need to blur the distinction between research and scholarship, between scholarship and practice, and between practice and research. We particularly need to start exercising the *nursing imagination*. Empirical data collection spans a broad range of methods and methodologies from 'hard' biomedical approaches through to the 'softer' more humanistic techniques of the social sciences. It is important, however, that nurses recognise and value knowledge from other forms of scholarly practice including reflective writing, practice development, collaborative inquiry and various attempts to understand the human condition through hermeneutics, philosophy, the humanities, art, novels and poetry. As Mills noted, reading has as much virtue as a data collection method as empirical inquiry.

I have mentioned Mills's call for intellectual craftsmanship. The Greek philosophers associated craftsmanship with *poesis*, creativity, from which we get the word 'poetry'. Mills himself called for a style of academic writing which focuses as much on revealing human meaning as on reporting facts, stating 'Maybe we could call it sociological poetry' (Mills, 1948). More poetry is needed, and it is up to nurse academics to take the lead in asserting its value and in developing a scholarly environment where poetic, creative and imaginative approaches to knowledge acquisition and presentation are tangibly rewarded.

I will conclude with a final quote from Mills, and ask the reader to excuse his rather anachronistic gender-specific language. As you will see, I have changed the word 'sociological' to 'nursing' and 'man and society' to 'nurses and nursing':

Be a good craftsman: avoid any rigid set of procedures. Above all, seek to develop and to use the [nursing] imagination. Avoid the fetishism of method and technique. Urge the rehabilitation of the unpretentious intellectual craftsman, and try to become such a craftsman yourself. Let every man be his own methodologist; let every man be his own theorist; let theory and method again become part of the practice of a craft. Stand for the primacy of the individual scholar; stand opposed to the ascendancy of research teams of technicians. Be one mind that is on its own confronting the problems of [nurses and nursing]. (Mills, 1959: 245–246)

Research, in the broader understanding of the term, is the lifeblood of any professional discipline, and we must all be researchers whether we are practitioners, academics, teachers or administrators. But that does not mean that we should all be involved in empirical data collection. The scope and practice of research is far wider than that. We should determine our research areas, topics and methodologies according to the demands of nursing practice and patient care, and work towards creating an academic discipline where our work is valued according to the good it does rather than the REF and impact factor scores that it attracts.

### **Key points for policy, practice and/or research**

- As nurse academics fully embrace the aims and aspirations of the higher education sector, the research and scholarship agenda is being driven increasingly by issues that have little relevance to the nursing profession, such as journal impact factor scores and academic promotion criteria.
- Nursing scholarship has therefore come to be dominated by the activities of empirical data collection and dissemination, which has become an end in itself, divorced from building theory and developing practice. In addition to the research practice gap, there is a growing research-theory gap.
- If we are to address the challenges raised by the Francis Report and other critiques of nursing practice, then academics, practitioners and service users need to work together to develop a greater understanding of the human condition and human suffering through a broad range of scholarly activities including the study of philosophy, poetry, art and literature.
- I have referred to this endeavour as 'exercising the nursing imagination'.

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## References

- Forscher BK (1963) Letter: 'Chaos in the Brickyard'. *Science* 142(3590): 339.
- Francis R (2013) *Report of the Mid Staffordshire NHS Foundation Trust Public Inquiry*. Available at: <http://www.midstaffspublicinquiry.com/report> (accessed 18 April 2016).
- Heidegger M (1938) The age of the world picture. In: Heidegger M (1977) *The Question Concerning Technology and Other Essays* (Trans. W. Lovitt). New York: Garland Publishing, pp. 115–154.
- Kelly D, Byers JF and Sole ML (2010) The effect of music on postoperative pain and anxiety. *Pain Management Nursing* 11(1): 15–25.
- Mills CW (1948) Sociological poetry. In: Mills CW (2008) *The Politics of Truth: Selected Writings of C. Wright Mills*. Oxford: Oxford University Press, pp. 33–36.
- Mills CW (1959) On Intellectual craftsmanship. In: Mills CW (1970) *The Sociological Imagination*. Harmondsworth: Penguin Books, pp. 215–248.
- Nilsson U (2008) The anxiety- and pain-reducing effects of music interventions: A systematic review. *AORN Journal* 87(4): 780–807.
- Nursing & Midwifery Council (2016) *The Code: Professional standards of practice and behaviour for nurses and midwives*. Available at: <https://www.nmc.org.uk/globalassets/site/documents/nmc-publications/nmc-code.pdf> (accessed 18 April 2016).
- Özer N, Ozlu ZK, Arslan S, et al. (2013) Effect of music on postoperative pain and physiologic parameters of patients after open heart surgery. *Pain Management Nursing* 14(1): 20–28.
- Sen H, Yanarates O, Sızlan A, et al. (2010) The efficiency and duration of the analgesic effects of musical therapy on postoperative pain. *The Journal of the Turkish Society of Algology* 22(4): 145–150.
- Smith JP (2016) Looking back on 40 years of JAN. *Journal of Advanced Nursing* 72(5): 967.
- Tierney A (2007) New format for JAN. *Journal of Advanced Nursing* 57(1): 1–2.
- Vaajoki A, Pietilä AM, Kankkunen P, et al. (2012) Effects of listening to music on pain intensity and pain distress after surgery: An intervention. *Journal of Clinical Nursing* 21(5–6): 708–717.
- Watson R, Cleary M and Hunt G (2013) Editorial: What gets highly cited in JAN? Can editors pick which articles will contribute to a journal's impact factor? *Journal of Advanced Nursing* 69(11): e30–e34.

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