Learning, Knowledge and Technology within the Meta-orthodox Proletarianization of Nursing in Ontario

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ABSTRACT

In industrialized countries around the world, financial pressures continue to impact health care and labour processes involving professional nursing care work. The story of contemporary nursing work is far from simple although careful assessment of it may offer refinements and clarifications to the emergent trends in the nature of professional work, knowledge and occupational structures within "knowledge economies" more generally. Distinctive to health care labour processes, nursing is a profession evolving within what some time ago Bucher (1988) characterized as a "teeming arena" of health care occupations in "a complex and shifting division of labor" (p.131), which, in countries like Canada, has—unabated for several decades (cf. White, 1993; Grinspun, 2003; Cooke, 2006; Hamilton and Campbell, 2011; Valiani 2012, 2013)—continued to become ever more complex. In Ontario (Canada) specifically, there is growing empirical evidence that professional nursing learning, knowledge and judgement-making in occupational life is undergoing severe alterations as new technologies, more complex and ambiguous divisions of labour, documentation protocols linked with work/patient flow management systems are increasingly taking hold. These alterations are documented in this paper drawing upon a recent survey of Ontario Registered Nurses (n=1326) and in depth interviews (n=58) and selective occupational life history interview (n=8) undertaken within the auspices of the Changing Workplaces in the Knowledge Economy (CWKE) project housed at the University of Toronto. Analysis is framed by Labour Process Theory, but seeks to integrate both a distinctive conceptualization of professional proletarianization (Derber) and distinct conceptualizations of craft work/knowledge (Sennett). It suggests how the forces of a "meta-orthodox proletarianization" which include how these forces are being experienced and responded to by rank-and-file (staff) nurses may be unfolding in Ontario nursing care work. Of particular interest are effects of labour process re-engineering technologies (bed and patient flow management tied to Length of Stay metrics), supported by more localized protocols and policy,

which depend significantly upon the transformation of traditional artifacts/constructs of nursing *care plans* into *clinical pathways*. It is claimed that the care plans/clinical pathways mediate different trajectories of nursing professional knowing, judging, doing and learning by either being *used by* nurses in the labour process in attempts to retain forms of craft knowledge or by *making use of* nurses in attempts to re-engineer the nursing care labour process.

Introduction

In industrialized countries around the world, financial pressures continue to impact health care labour processes and professional nursing care work and learning specifically. Confirming and deepening understandings of aspects of this, this paper reports on a study of changes facing Ontario (Canada) Registered Nurses (RN). In it we see there is growing empirical evidence that professional nursing learning, knowledge and judgement-making in occupational life are undergoing severe alterations as new technologies, more complex and sometimes more ambiguous divisions of labour, documentation protocols linked with work/patient flow management systems are increasingly taking hold.

Undertaken within the auspices of the Changing Workplaces in the New Economy (CWKE: 2016-2020) project housed at the University of Toronto, this study is informed by a survey of RNs, in depth semi-structured interviews, and selective occupational oral history interviews. As part of a broader CWKE project aiming to study nursing, engineers and overall changes in professional class structure, the discussion below can be regarded as specific piece of the overall puzzle of analysis of both nurses and the contemporary professional occupational class structure in Canada as such. Its distinctive contribution revolves around the level of analysis and the specific set of theoretical tools and perspectives it seeks to refine and test.

The overarching frame of the paper is Labour Process Theory (LPT)(cf. Thompson 1989). Incorporated into this framing are conceptualization of the forces of professional proletarianization as formulated by Derber (e.g. 1983) and a conceptualization of craft, skill and knowledge as formulated by Sennett (2008). As applied to the Ontario RN research data of the CWKE project, I argue that a specific type of *meta-orthodox*[1] professional proletarianization may be unfolding. As I explain, this so-named meta-orthodox perspective seeks to include and exceed established orthodox perspectives rooted in the work of Harry Braverman (1974) and

[1] *Meta-* as in transformed into a more highly specialized form.

others in the LPT tradition. What further constitutes the notion of meta-orthodoxy are the co-determinacy of what Derber describes as technical and ideological forces of proletarianization, and the agentive responses of rank-and-file staff RNs themselves as understood vis-à-vis a type of craft work/knowledge. In this regard, special attention is paid to labour process re-engineering technologies, protocols and policy that I argue likely depend a great deal upon the transformation of traditional artifacts/constructs of *nursing care plans* into re-engineered *clinical pathways*.

I begin by providing a snap-shot of the current financial pressures at play in health care generally and professional nursing care work specifically and briefly summarize the key roles of labour process re-engineering as well as health care work (bed/patient) management protocols, policies and technologies. I then present the analytic framework before summarizing the research methodology, and addressing the findings and analysis.

A Snap-Shot of the State of Nursing Care Re-engineering

Decades ago (e.g. Bucher 1988), health care labour processes and nursing care work and learning were characterized as a "teeming arena" made of "a complex and shifting division of labor" (p.131), and all indications across the globe suggest that for industrialized countries, in principle, little of this has changed today. In Canada specifically, forms of neo-liberal restructuring have been a primary driver of change in nursing care work for several decades (e.g. Campbell 1988; White, 1993; Grinspun, 2003; Cooke, 2006; Hamilton and Campbell, 2011; Valiani 2012, 2013). The evolving pressures are framed within health governance, leadership and management circles by a sustained preoccupation with productivity, cost and care work system reform. In reviewing research on nursing care work, skill and knowledge specifically we find several competing analytic perspectives which have nevertheless regularly converged in seeking to address similar questions and concerns surrounding nursing workload, accountability as well as skill and knowledge (e.g., Gray 1989; Bachurach et al., 1990; Hanlon et al., 2005; Cooke, 2006; Rankin and Campbell 2009; Hamilton and Campbell 2011). In some instances through the years, questions about professional nursing care work design, labour process and skill degradation have likewise been entertained (e.g. Bellaby and Oribabor, 1977; Brannon, 1994a, 1994b, 1996; Coburn, 1988, 1994; Harvey, 1995; Scherzer, 2003).

For the purposes of this paper, I claim a contemporary snapshot of the state of the dynamics of nursing care work, skill and knowledge change should begin with attention to

labour process *re-engineering*. Evolving re-engineering interventions (referred to in a large variety of ways according to jurisdictional context, proprietary branding, and so on) are nevertheless primarily motivated by the pressures and preoccupations I mention above. Responding to these needs is a global health care software and change management industry which appears capable of operating despite these jurisdictional differences including whether health care is nationalized, partially nationalized or fully privatized (Jabbour et al. 2018). Indeed, as summarized in recent North American nursing economics and informatics research for example, the above pressures and preoccupations described in the Canadian context above are similarly, if unproblematically, reflected. They are characterized clearly by intensifying attempts to drive health care labour process re-engineering by structuring new, data-driven uses of Length of Stay metrics, changes in discharge policies, bed management and patient flow monitoring. In so doing, several profound effects as regards nursing care work are notable, e.g.,

> Increased throughput also increases the rate of admissions and discharges to units, activities that place high demands on nurses' time. Lengths of stay are also shortening as patients are discharged more quickly to post-acute care, including skilled nursing facilities and home health. This increases the acuity of patients in hospitals but also increases the acuity of patients in post-acute care. Nurses working in these settings as well as hospitals are thus dealing with patients of higher acuity. The increasing acuity of patients and the new work required in the re-engineered work flow are unlikely to be met by increasing nurse staffing, but instead will require changes in the way nurses spend their time. (Needleman 2013, p.200)

An important point of departure for analysis in this paper, Needleman in fact goes on to explain that in this context that existing nursing skills and knowledge come to be "at odds" with re-engineered care work change initiatives and work management technologies, e.g.,

> The expansion of technology via electronic health records, telemetry, and telehealth; the increased acuity of patients and growth of task lists associated with delivering care to sicker patients; the demands for nurses to increase coordination of the care delivered by others; and the critical need for nurses to be engaged in the redesign of the complex

> systems in which they work, all have the potential to pull nurses away from the direct nurse-to-patient encounter. (p. 202)

Again, how these types of effects are assessed, appreciated and understood varies by national and even regional jurisdiction, however a number of shared insights—insights also directly applicable to the present study of Canadian RNs—are easily detectable. Focussing on similar changes to the labour process in the UK for example, Storey (2013) has recently summarized research into health care technological re-engineering as having sought "to construct and specify 'standards' of service delivery, to enable conformance with top-down imposed reporting requirements" (p.502), to put in place alternative protocols, and to establish greater uniformity in nursing practice for the purposes of managerial monitoring. He also points out that studies of health technology infusion in the past, as today, have regularly rested upon a "relative neglect of politics and power in healthcare organisations and the perception of individuals within organisations as passive recipients of innovations" (p.501).

In point of fact, as only a minority of the health care work studies literature seem to recognize, few if any of these aspirations or principles of re-engineered health care are new, and nor are the specific change management challenges they necessarily face. Thus according to Hanlon et al (2005), on the one hand contemporary health care labour process re-engineering initiatives do many of the same things that (industrial) re-engineering has sought to do from its inception. To this we may add that nor are these aspirations and principles all that different from the even older tradition of Scientific Management emergent at the turn of the previous century (cf. Sawchuk 2013). Central to such aspirations and principles, as Braverman (1974) famously pointed out, is the separate design from execution resulting in a shift of power, autonomy, discretion and control away from those who do the work and those who design and manage it. On the other hand however it is also recognized in some instances that these forces of proletarianization do not operate in an un-resistant human medium. Thus, as Berg (1997, 1999) observed some time ago, these same approaches to re-engineered health care labour processes—in seeking to reduce a complex, multi-faceted object of knowledge and practice to a limited number of standardized categories and metrics—have and continue to face an inherently fraught, uphill battle.

Combining these observations, in this paper I begin by noting that faced with standardizing and deskilling forces of work design, those who do the work must still do the work that—in many work contexts but certainly in complex human services such as health care—continues to depend upon what I detail below as the contingent, responsive and relational forms of knowing, judging, doing and learning that standardization of design seeks to constrain if not eliminate. It is for both of these reasons, I claim, we may benefit from a recovery of considerations of theorization of professional labour process change, and conceptualizations of both professional proletarianization as well as craft work, skill and knowledge.

Contributions to Theorizing a "Meta-orthodox" Professional Proletarianization by Derber and Sennett

Analytic themes of labour process change, deskilling and proletarianization have long been a central point of debate within the LPT tradition beginning with the work of Braverman (1974). Moreover, although framed by a unique set of analytic commitments which (either positively or negatively) tended to respond to Braverman's original concerns for class struggle, LPT research has from an early stage recognized certain differences that professions, professionalism and professionalization make when assessing labour processes (e.g. Hales 1980; Derber 1983; Derber, Schwartz and Magrass 1990; Cockburn 1985; White 1993; Harris 1998; Adler 2007; Adler, Kwon and Hecksher 2008). It is beyond the scope of this paper to explain the following claims, however these types of commitments—especially when revolving around general concerns for class struggle as such—gave rise to a very distinctive but too frequently limited portrayal professional work under capitalism. And, it is within this general context of *both* the continued importance of these foundational analytic themes *as well as* their limitations that I seek to look back and recover what I suggest to be a small but important intervention in thinking on professional work and proletarianization in reference to the work of Derber.

Braverman's theorization of skill, deskilling and proletarianization was less than a decade old when Derber's (1983) discussion of the potentially distinctive undercurrents of professional proletarianization were first being taken up. Pronounced enough more than three decades ago, I claim that the theorization of these forces of proletarianization that Derber attempted may continue to offer a highly relevant, if imperfect, resource for the present day. Based on an extremely large-scale qualitative study of professionals that would later be reported in a host of

related articles and a culminating book (Derber, Magrass and Schwartz 1990), Derber (1983) noted the increasing incorporation of professionals in organizations which exposed them to managerially regulated labour processes, and marked out those non-traditional professions (those, like scientist and engineers, although we might add nurses too, that he said were "born proletarian", p.312) as uniquely vulnerable. Eclectically informed but attentive to Marxist approaches, Derber argued for and against aspects of Braverman as well as post-industrialism perspectives of that day. Incorporating insights from sociology of professions, he integrated questions of autonomy and control, regimens and constraints, inclusive of symbolic dimensions of power, within his definition of professional proletarianization; and he recognized occupational regulation, advanced expertise as well as advanced computerization as distinctive features implicated in professional proletarianization. He also noted a distinctive role for "science" in attempting to theorize a distinctively professional proletarianization process, i.e., in contrast to industrial proletarianization: science was a double-edged resource used by both sides. In sum, for these and other reasons Derber (1983) argued that the forces of professional proletarianization explained not only distinctive to tendencies found in other forms of contemporary labour processes at the time, but they were also not comparable to those faced historically by the types of craft workers that preoccupied early LPT literature beginning with Braverman.

My awkward reference in this paper to a "meta-orthodox" proletarianization thus emerges in the first instance as response to Derber and other's identification of Braverman "orthodoxy". The implication in this sense is aimed at retaining and exceeding this orthodoxy in a more specialized form by more thoroughly re-unifying what Derber treated separately and sequentially: the dimensions of technical proletarianization (i.e., "plan of production and/ or a rhythm or pace of work [in] which tasks, sub-tasks down to the smallest unit, are routinized" versus ideological proletarianization (i.e., "the lack of control over the ends of one's work", p.313). In these terms, we might also recall that Derber (1983) concluded that for certain professionals, "ideological proletarianization may be a foundation of a new system of labor process control in 'post-industrial' capitalism that *does not* require the technical proletarianization of workers in order to effectively subordinate them to capitalist production" (p.335; emphasis added). As one half of the definition of a meta-orthodox perspective in this paper, I turn to a set of specific agreements and disagreements with Derber while also previewing certain findings of Ontario nurses analysis.

As I hope to show, *like Derber*, I will claim that the professional class struggle over the object of work ('ideological proletarianization') remains important. Although still under-realized today in the case of Ontario nursing labour processes, Derber was likely also correct in highlighting the roles of both advanced information technology in the proletarianization process. Also as Derber pointed out, although I won't dwell on it here, below there is a sense that objective science can indeed be said to be a (double edged) resource available to both professional nursing (i.e., nursing science) and managers of health care re-engineering (e.g., process re-engineering science, change management science, data management science, and "Scientific Management").[2] And, as Derber would have predicted, professional regulation—what he and colleagues addressed in terms of monopolization, closure and the notion of 'logocracy' in later work (1990)—plays a major role in how proletarianization of Ontario nurses is likely unfolding today.

Unlike Derber however, in the case of the present study of nurses, "technical proletarianization" appears thoroughly co-determinate instead of either suitable only to the bygone era of industrial craft workers or as a ratification of the accomplishments of what he argued was the more definitive "ideological proletarianization" process. Derber also likely failed to appreciate the powers of alternative ideological resources (which I also do not dwell on here but which remain important). While Derber did include discussion of ideologies of professional ethics (1983; 1990), in the context of this Ontario nursing study (and other studies of care work) important gaps in this regard include not only those related to either stubborn or emergent working-class ideologies (supported by dual closure/unionism amongst nurses: cf. Gray 1989) but gendered ideologies of care as well (cf. Poole and Isaacs 1997). Central to this paper in many ways, and leading directly to a closing set of comments in this section, nowhere in Derber are matters of professional knowledge-making/re-making—and in particular, the knowing, judging, doing and learning of professional practice—entertained. In this study of nurses, I find these matters to represent a crucial battle-ground. And here I believe there are important distinctions to be made between open-ended, contingent, embodied and problem-finding knowledge *as craft* versus traditional objectifying science-based nursing knowledge.

[2] On this matter Derber (1983) is clear that the class position of technical expertise and objective scientific bases were just as vulnerable if not more so to ideological proletarianization, adding (in Derber et al 1990) that the economic and status stakes in maintaining the mental/manual divide that Braverman critiqued also tended to place professionals in a counter-productive position to resist proletarianization.

Given my special interest in the lattermost issues, I conclude this section with a recovery of another quasi-classic set of conceptual statements on the nature of professional skill, learning and *craft* in order to further a meta-orthodox conceptualization of professional proletarianization. Richard Sennett's book on craftsmanship (2008) can hardly be said to be conceptually revolving around either the LPT tradition or theories of proletarianization as such. However, possibly more than either, it may be the case that Sennett's thinking on the nature of expert knowledge and craft very likely has something important to tell us in relation to the inner dynamics of professional nursing knowing, judging, doing and learning within and beyond conditions of labour process change and proletarianization. How is this so?

Sennett observed that craft work, both historically and currently, has gone hand in glove with complex objects of work, and with a dynamic of "problem-finding" that characterized open-ended, aspiring craft knowledge. Here it may be particularly notable (given the unproblematic dichotomy it presents in discussions of studies of expertise, deskilling and proletarianization) that Sennett also offers a distinctive conceptualization of the role of 'routine'. These are observations which I argue add a previously undisclosed sense of complexity—and perhaps even a sense of unrecognized potential—to an understanding of professional labour process change through which the forces of proletarianization and deskilling that Ontario nurses are facing today are being launched.

> Skill development depends on *how repetition is organized*. This is why in music, as in sports, the length of a practice session must be carefully judged: the number of times one repeats a piece can be no more than the individual's attention span at a given stage. As skill expands, the capacity to sustain repetition increases. In music this is the so-called Isaac Stern rule, the great violinist declaring that the better your technique, the longer you can rehearse without becoming bored. There are ''Eureka!'' moments that turn the lock in a practice that has jammed, but they are embedded in routine. As a person develops skill, the contents of what he or she repeats change. […] When practice is organized as a means to a fixed end, then the problems of the closed system reappear; the person in training will meet a *fixed target* but won't progress further. The *open relation between problem solving and problem finding* […] builds and expands skills, but this can't be a one-off event. Skill opens up in this way only because *the rhythm of solving and opening*

> *up occurs again and again*. […] Since the Industrial revolution of the eighteenth century, the machine has seemed to threaten the work of artisan-craftsmen. The threat appeared physical; industrial machines never tired, they did the same work hour after hour without complaining. The modern machine's threat to developing skill has a different character. (Sennett 2008, pp.38-39; emphasis added)

When one thinks in these terms, Sennett's subsequent observations about the importance of "hands-on" versus "hands-off" expertise—also central to discussion of the nursing data below—take on a distinctive character. The former, according to Sennett, is defined by how "the tactile, the relational, and the incomplete are physical experiences that occur in the act" of hands-on craft work; a form of expertise in which the "difficult and the incomplete should be positive events in our understanding" (2008, p.44). As Sennett says himself, this type of distinction *includes and exceeds* the difference traditionally noted in studies of work and skill that emphasize hands-on versus machine mediated labouring/learning, but it also *includes and exceeds* the distinction between objectivity/standardization versus contingent objects of work/knowledge. It even *includes and exceeds* the traditional Bravermanian critique of the Taylorist separation of execution and design. It further initiates and defines, in other words, "meta-orthodox" aspects of an approach to understanding the forces of professional nursing proletarianization that will be explored and developed below.

As I suggest by the end of this paper, an understanding of aspects of the inner workings of contemporary professional nursing knowing, judging, doing and learning in Ontario is indeed aided by a consideration of the patterns in which "the tactile, the relational, and the incomplete" are organized within routine as well as contingent practice. Building on each of these points, when Sennett (2008) shifts to a discussion of medical care work specifically he further completes and extends a number of additional thoughts important to the present study:

> The conflict between getting something right and getting it done has today an institutional setting, one I shall illustrate in the provision of medical care. […] In the past decade Britain's National Health Service (NHS) has had new measures for determining how well doctors and nurses do their jobs—how many patients are seen, how quickly patients have access to care, how efficiently they are referred to specialists. [And]

> [r]esearchers in Western Europe widely report that practitioners believe that their craft skills in dealing with patients are being frustrated by the push for institutional standards. [46] […] The absolutists working on standards for the system can claim that they've raised the quality of care. Nurses and doctors in practice argue against this numeric claim. Rather than fuzzy sentimentalism, they invoke the need for curiosity and experiment and would subscribe, I think, to Immanuel Kant's image of "the twisted timber of humanity" as applying to both patients and themselves. [50] […] Good work of this sort tends to focus on relationships; it either deploys relational thinking about objects or, as in the case of the NHS nurses, attends to clues from other people. It emphasizes the lessons of experience through a dialogue between tacit knowledge and explicit critique. (2008, pp.46, 50, 51)

Constituting key dimensions of a meta-orthodox professional proletarianization analysis, it is in the context of these two interventions (based upon the works of Derber and Sennett) in the otherwise classic analytic themes of the LPT tradition that I now look toward the empirical study of Ontario RNs below.

Methodology

Data informing this paper come from oral history interviews (n=8) with experienced nurses, semi-structured interviews (n=58) and our Ontario Nursing Survey (n=1326). This research was approved by the University of Toronto ethics review board.

In terms of the Ontario Nursing Survey, electronic data collection occurred between October 2016 and February 2017. The survey was designed to parallel the Changing Workplaces in the New Economy (CWKE) national survey conducted in 2015-16.The Ontario Registered Nursing Survey was carried out in partnership with the Registered Nurses Association of Ontario (RNAO) through which respondents were recruited by a series of advertisements. The sample was felt to represent the basic characteristics of the Ontario RN population as a whole according to both RNAO and the Canadian Institute for Health Information's Health Workforce Database (2014) available at the time, and working RNs constituted 88% of the respondents. The sample was also 88% female, with a mean age of 50 years old (modal range of 45-54 years). Eighty-

percent (80%) of respondents described their race or colour as white, and 95% of respondents indicated being born in Canada.

In terms of interviewing, the oral history interview participants all had over ten years' experience working as RNs somewhere in Ontario (Canada) (with several also having held related, leadership positions of some type at some point). Carried out by phone, recorded and transcribed, these interviews were focused on career histories as well as key changes and challenges affecting the profession of nursing. Oral history interviewees had between 15 and 45 years of work experience, 6 were women, 2 were men, and none self-identified as members of a visible minority. Finally, the research also included semi-structure interviewing based on recruitment of survey respondents indicating an interest in further involvement. Fifty-eight (58) RNs—primarily working as staff nurses—were interviewed by phone. Fifty-one (51) self-identified as female, and 55 self-identified as "white". The mean age of semi-structured interviewees was 42 years old.

Analysis of Findings and Discussion

Contextualization by Survey Findings

Space does not allow me to justice to the value of the CWKE Ontario Nursing Survey. But, it does allow its use for the purposes of establishing questions and contextualizing the qualitative analysis that forms of the remaining bulk of the paper. The most relevant points revolve around concerns nurses have regarding workload, and intensifying skill requirements under conditions of organizational change; conditions I link in this paper to the types of health care labour process re-engineering and technological infusion initiatives discussed above.

Specifically, in the survey, RNs report increases in workload over the past five years that are the face of the matter concerning. It is not unexpected when we attend to either professional research literatures reviewed above that allude to such challenges. Nevertheless, here we see more specifically that over 86% of respondents report their workload to have either "increased greatly" (55.7%) or "increased somewhat" (30.8%).[3] Workload increases, in turn, intensify professional life for nurses, force decision-making about what they do and how they do it, and, I

[3] Survey question: "Has the workload in your job increased, decreased or stayed the same over the past 5 years?"

will argue, inform understandings of the character of meta-orthodox professional proletarianization. Moreover, in the context of education and skill, over 75% report that the skill required to do their jobs has either become "much greater" (31.3%) or "somewhat greater" (44.4%).[4] This is a more complicated finding than it may appear at first blush (e.g., also involved are contradictory perceptions of standards and scope of practice although space doesn't allow me to address those here). In the main however, this finding speaks to the intensification of skill use and suggest that nurses are bearing significant pressures in terms of not simply what they do (workload), but also how they apply (and in many cases struggle to apply) what they know and value most as professional nurses on an everyday basis. What may be of particular importance in contextualizing the qualitative discussion below, however, is that respondents report a very significant amount of organizational change in the past five years. While the literature confirms that organizational change is hardly confined to the last five years in health care, what the literature also confirms is that technological infusion (both point-of-care technologies, but also work management technologies) is accelerating. This begins to focus our sense of the sources of their perceptions of workload and skill change. Notably in this regard, we see the following: 42.3% indicated there had been "a reduction in the number of employees" in their workplace; 39.7% indicated there had been "greater reliance on part-time or temporary workers"; 36% indicated "an increase in overtime hours"; and, perhaps especially relevant to the argument here, 30.5% indicated "a change to the organizational model of nursing care delivery".

The quantitative data just summarized place the following qualitative findings and analysis in perspective, and suggest that the issues which I will be discussing are likely not simply anecdotal. I argue that a labour process analysis incorporating these elements begins to further contextualize the claim below that a distinctive form of (meta-orthodox) professional proletarianization is well underway amongst Ontario nurses.

Knowing, Judging, Doing and Learning: Voices of Meta-Orthodox Proletarianization amongst Ontario Registered Nurses

In the way I have sought to frame this paper conceptually, the following series of data taken from the open-ended responses on the survey's closing question (requesting thoughts on any

[4] Survey question: "In the past 5 years, has the skill required to do your job become much greater, become somewhat greater, stayed about the same, become somewhat less, or become much less?"

additional issues or concerns[5]) is highly instructive. While only these data are reported here, in fact the interpretation I offer is directly informed by and echo not only the quantitative data but preliminary assessments of the semi-structured interview data as well. This interpretation likewise draws explicitly on the conceptual themes I took time to develop earlier: namely, Derber's formulation of the relationship between technical versus ideological proletarianization as well as perspectives on the nature of craft work/knowledge as signalled by my discussion of Sennett.

I begin with evidence as to the matter of whether or not, and if so how, it is the case that a new object of professional work (and professional knowing, judging, doing and learning) is unfolding in the lives of Ontario RNs today. Unsolicited by the type of general, concluding "additional concerns" survey question, the responses are at least somewhat provocative in the very first instance given the sheer number of times that new electronic charting requirements and re-engineered work flow were either directly implied or openly discussed. That is, of the 584 separate responses to this final question on the survey, over half of respondents did this. The substance of these responses is even more important. Charged sometimes with anger, sometimes with sarcasm or sadness, sometimes in brief but instructive quips, and sometimes in more lengthy passages—when viewed through the type of conceptual lens I have tried to introduce above—suggest that these data speak volumes regarding both old and new objects of professional work/knowledge.

> Nursing used to a patient oriented profession. Now the computer technology has taken away from bedside time. (RNOE_b71)

> The art of nursing seems to be falling by the wayside in the light of so much technology. (RNOE_30)

> I am a nurse, not a data entry clerk, a supply clerk, a cleaning lady, or a transportation worker. In the past two weeks, we had a new computer charting system, designed

[5] Survey question: "Are there additional issues facing your profession, or additional concerns you have about your profession, that you would like to tell us about?"

> primarily for an OR installed. Major modifications are ongoing, as they just realized that we look after patients who are AWAKE during many of our procedures. (RNOE_210)

> We have more regulations to follow, with less staff. There are more documentation requirements with most of it being on computers. The Ministry of Health is setting us up to fail. We are unable to keep up with the demands. (RNOE_123)

Apparently obvious to Ontario nurses, mentioned regularly in these data is also the closely linked issue of direct and sustained relational knowing, judging, doing and learning that characterized the tactile, embodied, inherently responsive/open-ended, problem-finding, hands-on work with patients as well, e.g.,

> The implementation of computers at the bedside has sadly decreased the actual hands on nursing care that the patients use to get. Most of the shift is computers. (RNOE_10)

> Nursing is becoming more computerized. By focusing on the computer it is removing us from the patient. (RNOE_b4)

> Too much technology that we are spending less time with the patient. (RNOE_28)

Even in their brevity and lack of contextualization, I feel a sampling of data such as this tells us a good deal. Nurses register a somewhat overwhelming, ongoing experience rooted in electronic charting technologies and protocols. However, there is also a tangible consciousness of aspects of the purposes and objects of work/knowledge being aggressively re-engineered within the nursing care labour processes which, even in the dire conclusions some nurses offer, goes some distance in complicating the basic Derber thesis on ideological proletarianization as anything but a going concern.

Tracing the matter of consciousness of the re-engineering of their work, and again troubling certain presumptions of the ideological proletarianization thesis of Derber, I turn toward the equally brief and equally telling explanations that Ontario RNs in this research that seem to

indicate what is at the heart of the changes. On this matter, there seemed to be considerable consistency across a vast number of responses including the following.

> With the cutbacks in Registered Nurse in Ontario there is great concern that patient care will no doubt be affected. Registered staff experience increased workload related to the increased volume of paper/computer work that is required. This in itself reduces much needed time to be spent on resident care and assessment. (RNOE_b61)

> I used to love nursing, and as a practice I still do. […] But the budget/managers, etc. make it impossible. Nursing used to be an art where you cared, now it is a get them in "treat em and street em" attitude. (RNOE_491)

> There is less and less need for "nursing knowledge" as all tasks are being "dumbed down" to the lowest level. All decisions related to care management appear to be made at the corporate level, and there is NO room for deviation, discussion or independent thought. (RNOE_99)

> The whole of health care has been "dumbed down" and patients are discharged without proper supports. We seem to have taken pride in shoving people out the door to just get a bed. (RNOE_62)

Ideological proletarianization is directly applicable here. However, it is also contested and incomplete, and intricately connected to the technical proletarianzation implied by description of new forces bearing down on the distribution of time and attention to hands-on care work as stated in the earlier excerpts. In other words, the identification of broader issues and pressures concerning the practicalities of how time and routine is organized in the course of nursing care work (technical proletarianization) is clear and concurrent. Moreover, references to the importance of "hands-on", direct engagement with the patient suggest a conscious sensitivity to the current conflict over the place of not only clinical nursing science knowledge but also its relationship to the practices of a "tactile" and embodied knowing, judging, doing and learning (or what I've referred to as craft knowledge).

To this point I have offered glimpses at the summary perceptions of the difficulties—both technical and ideological—revolving around competing and contested objects of work/knowledge of professional nursing. These glimpses, I argue, help summarize the contradiction facing nursing and the professional proletarianization project of labour process re-engineering. Certainly on the face of it, electronic charting—and by extension work (bed/patient) flow software and/or the manual coordination by "flow coordinators" in hospitals—are threatening and sometimes succeeding in its commandeering of time and attention of nurses, steering them away from what nurses themselves understand to be at the heart of their professional knowledge forms and practice. The ever-present computer stations mentioned in the excerpts thus far (and the protocols and policies that attempt to supervise and coerce their use) cannot, however, be said to drive these changes on their own. Were they to do so, claims of purely technical proletarianization, as defined by Derber, would be sustained and the centrality of ideological proletarianization would be undermined entirely. Instead, understanding this requires that we turn to what, to this point, is a missing mediator in the analysis: the organizing construct of electronic charting, i.e., the clinical pathway (cf. Rankin and Campbell 2009; Hamilton and Campbell 2011).

The clinical pathway is a central mediating artefact (both semiotic and materialized in screen text/software) of the electronic charting system that helps explain the forces of meta-orthodox proletarianization amongst nurses in this study. As distinct from the nursing care plans and planning from which it inherits a good deal, according to Adegboyega et al. (2016), the clinical pathway has been the object of American "pathway research" for several decades. Its purpose is to "reduce a pre-identified variation in patient outcomes and costs and, more recently, to keep patients and families informed about their course of treatment or care" (p.2).[6] Beyond the scope of proper historical explanation, here I would simply add that it is an artefact which may be is uniquely suited for re-organizing the time and attention of nurses when harnessed to the type of re-engineering initiatives that are ongoing in Ontario health care today in at least two ways. From

[6] Adegboyega et al. (2016) summarize the four defining criteria as follows:

> (1) Is it a structured multidisciplinary care plan? (2) Is it used to channel the translation of guidelines or evidence into local structures? (3) Does it detail the steps in a course of treatment or care in a plan, pathway, algorithm, guideline, protocol or other 'inventory of actions' (i.e. the intervention had time frames or criteria based progression)? (4) Does it aim to standardize care for a specific clinical problem, procedure or episode of care in a specific population? (p.4)

the perspective of re-engineering system, it is uniquely suited, firstly, due to the context of its birth (as a "care plan") in American nursing education heading World War II and the prospect of nursing labour shortages (McCloskey 1975; Dellefield 2006). Following the war it would become adopted (not without debate at the time or since) within professional practice, become a fully-fledged, codified element of nursing care work, and continued to evolve toward what is called the clinical pathway we know today. However, born in this way, it was meant to allow the deployment of nursing care givers that had neither the benefit of time for initial education or the development of sufficient professional or craft expertise. The historical biographies of such artefacts—in terms of the affordances that come to be buried deep within them—of course do not disappear easily. However, what may be even more intriguing about the clinical pathway as a mediating artefact from the perspective of re-engineering is not so much its inherent link to an under- or de-skilled labour process as such, but rather the sustained production of its professionalized neutrality over time right up to the present in the eyes of working nurses (and nursing education). That is, the distinction between its *use by nurses* (as a care work planning device) in support of expansive, open-ended nursing science or craft knowledge as opposed to *its use upon nurses* (as a device of management of work flow, staffing, budgeting and so on) remains—as seen across nursing education texts, professional standards and guidelines and in the CWKE nursing data themselves—under-appreciated as mediator of occupational power or its disempowerment.

Returning to the observations of Sennett (2008) above, in fact we find in the re-engineered "clinical pathway" an expression of a distinctive way of organizing routine and craft in nursing practice. Routine professional practice necessarily blankets nursing care work. However, it is just as regularly—and often chaotically—interrupted by the complexity, contingency and relational dynamics of a patient's condition (e.g., comorbid, high or rapidly changing acuity), an increasingly complex (teeming) inter-professional relations, ambiguous divisions of labour within registered and non-registered personnel, incursions in care work of a patient's friends and relations (sometimes welcomed, sometimes not), un-predicted spikes in admissions, battles with bed/patient flow coordinators (e.g., nursing bed-hiding), and so on. Amidst all this, and in keeping with comments by nurses we have heard from above, the clinical pathway seeks to persistently re-engineer and marginalize the legitimacy if not the utility of the "hands-on", the "tactile, the relational, and the incomplete" at the level of embodied experience and expertise.

And for the purposes of nursing labour process re-engineering, the clinical pathway may be uniquely indispensable.

In this sense, it is relevant that we again return to and notice some of the evidence in this study of two, inter-mingled trajectories of knowing, judging, doing and learning in practice within the labour process: i) how the clinical pathway attempts to organize nurses' professional knowing, judging, doing and learning; and, ii) how nurses' professional knowing, judging, doing and learning attempts to organize the clinical pathway. As mutually constituting and mutually undermining forces, they are *both* essential to the thoroughly contradictory identity of something I claim we might call meta-orthodox proletarianization.

> I have concerns about the quality of care that we provide patients. Of specific concern is the completion of thorough initial assessments by a collective team, establishment *and consistent revision of a plan of care*, evidence of decision-making based on evidence for care provided, a thorough discharge plan developed in collaboration of the team and the patient and family; then easily accessible evidence of follow up following discharge. (RNOER_b455; emphasis added)

> There *are unrealistic time constraints for assessment of patients with comorbid diseases*. Management expecting us to see more patients and plan [clinical pathway] programs without allowing for sufficient paperwork time to do so. Management is only looking at the stats or the numbers of visits and not looking at the effect of a particular program on the patient's wellbeing. (RNOER_cp23; emphasis added)

In addition to many earlier points of analysis, emphasized in the excerpts above is much of what has been introduced regarding the Janus-faced character of the clinical pathway. Nurses engage with it, as suggested above, motivated by a concern *not* for preserving the systemic coherence and utility of the clinical pathway as such. Nor is there evidence in the data of any motivation (at all) to contribute to the holy-grail of data solutions offered by re-engineering by serving a data input role. Nurses retain an interest for using it relationally. Their interest is in revising it in an ongoing way for the purposes of "problem-finding" as much as "problem-solving". Indeed, using rather than being used by the clinical pathway is the only opportunity to engage in this type of

craft nursing which could maintain and evolve the centrality of *hands-on* nursing knowing, judging, doing and learning. Starkly contrasted with this is an entirely different trajectory of nursing knowing, judging, doing and learning. As has been mentioned, it is one in which protocols, procedures, policies as well as electronic charting systems seek to use the clinical pathway as a device of a re-engineered labour process; or, as one nurse commented referencing its distinct "hands-off" character:

> I see professionals visit needy patients, released too early from hospital, given *nursing care plans, but no nursing*. We cover our asses with 'bits of paper' and policy, but don't actually care enough to do the job of helping someone […] We have moved nursing into the academic, computerized sphere, thrown the baby out with the bath water and nursing care is failing us. I ask, where is the nursing care? (RNOE_b8; emphasis added)

Conclusions

From the perspective of the notion of a meta-orthodox proletarianization process and a nuanced conception of nursing craft knowledge, in this paper I have attempted to show how and why the contemporary story of health care, and nurses coping with it, is not a simple one. Nurses know this in their own intimate terms. Nursing professional associations and unions know this in distinct ways as well. Nursing research speaks certain features of this. However, the CWKE Ontario Nursing research work reported here presents several additional and distinctive points of initial analysis to be considered.

The above selections of literature as well as the data analysis itself both begin to suggest nurses are subject to the sustained and evolving forces of labour process re-engineering and professional proletarianization specifically. What is summarized, both analytically and almost directly in the words of Ontario nurses themselves, is a scenario in which the relationship of "hands-on" and "hands-off" work/learning—more and less openly, infused with more and less anger, frustration, demoralization (as well as complicity and enthusiasm in some instances no doubt)—revolves around objects of nursing practice/knowledge that are not just competing but *irrevocably contradictory*. And, more broadly, this is the barely hidden under-belly of the life of many professions in the so-called "knowledge economy" of today.

The dynamics of nurses' professional learning, skill and knowledge are, I hope it is clear, obviously not properly understood in terms of vague or slippery or neutral-sounding concerns for greater efficiency and cost-effectiveness vis-à-vis health care reform that frame the discourse of health governance, leadership and management circles. Concerns framed as such obscure far more than they explain. Analyses of New Public Management capture several of the dynamics addressed in this paper, but it lacks specificity as regards the details of the nursing care labour process. Likewise, analyses of "orthodox proletarianization" address matters at a high level of generality; useful but also clearly amiss if we begin to note the difference that professionalization and unique aspects of nursing itself make in terms of concrete knowing, judging, doing and learning in the labour process.

Alternatively, I look toward the nature of nursing knowing, judging, doing and learning and how it involves and often prizes the skills and knowledge necessary for coping with the contingent and the complex. This is what Sennett seems to be talking about above with his reference to "the twisted timber of humanity" involved in caring for patients and working inter-professionally in any context, but in particular those labour processes subjected to re-engineering. If proletarianization is applicable here, then it is thoroughly co-determined by what Derber called technical and ideological forms with the clinical pathway likely serving as a key, mediating artifact. The very identity of nursing care re-engineering, however, is co-determined in another way as well: by the (casual and dramatic) re-assertions, by nurses, of not only (and perhaps not especially) nursing science knowledge but nursing's hands-on craft work/knowledge as well. This analysis of proletarianization, in other words, identifies a dynamic that is uniquely professional in nature, possibly most applicable to the more vulnerable professions that were "born proletarian", deeply co-determined, co-determined in a number of ways, incomplete and contested, and, as such, suitably thought of as proletarianization transformed into a more highly specialized—or rather meta-orthodox—form.

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