Renaming Social Work: What would Shakespeare Say?

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What’s in a name? Not much, according to Shakespeare’s Juliet, which is why she said: “ … a rose/ By any other name would smell as sweet.” (2.2., p. 750) [1]. Risky though it is, we disagree. And it’s not because we aren’t sympathetic with Juliet’s situation. She was in love, and was telling anyone who would listen that she didn’t give a damn that Romeo’s last name put him in cahoots with her family’s sworn enemies. As it turned out, she was wrong: his last name did matter, leading to a result that was tragic for the two of them.

Which sets the stage for what we, with full apologies to Shakespeare, want to write about.

No doubt, many of you know of the recent proposal by Professor Brekke and others to rename the profession of Social Work the Science of Social Work. After all, several hundred of you were in the audience when Professor Brekke proposed the idea at the Society of Social Work Research’s annual meeting in January 2011 [2]. And something close to 9000 of you subscribe to Research on Social Work Practice (RSWP), which has since featured articles by Brekke and others elaborating or commenting on the idea [3-5].

Still, in case you are one of a small minority who hasn't heard, or of a larger minority who hasn’t read the RSWP articles yet, not to worry. We provide a relevant summary below. But first, a few words about who we are, what we’re up to, and why.

One of us is a Professor Emeritus in Social Work; the other is, well, fairly advanced in his career but still fairly distant from retirement. Both of us are at the University of Michigan. One of us became aware of Brekke’s proposal through chats with colleagues. Disquieted, he asked the other of us what he thought. Both of us then read Brekke’s first article in RSWP [3], along with the articles accompanying it [4].

Subsequently, one disquiet became two, for twofold reasons: first, together we thought the basis and substance of Brekke’s proposal was flawed, and second, that the associated commentaries were devoid of critical discussion, referring to SoSW, as the Science of Social Work was quickly acronymed, as if it was a fait accompli.

We conveyed our concerns to a journal editor, proposing to write a critical rebuttal. The journal editor demurred. One of us then said: “Well, since this invokes science, and to be scientific is to be skeptical, why not try to stimulate discussion and critical appraisal by circulating our thoughts to colleagues using the web.” The other of us said: “What a great idea”; and the rest ..., well, so far, the rest has turned out to be a lot of hard work.
First, there were thousands and thousands of words to read, and many arguments to unpack. Second, as we labored through the development of our arguments, it became apparent that one rebuttal wouldn’t be enough. There was room for at least three, one dealing with Brekke’s justification for proposing a science of social work, another focusing on his ideas about what that science might look like, and a third reflecting on the meaning, implications, and potential unanticipated consequences of the argument and associated commentaries.

This missive gives our first rebuttal: it deals with Brekke’s justification. If nothing else, we hope the arguments and data we present lead you to ask: “What exactly is Brekke saying is the problem, and do I agree?” If you are moved to comment, and we hope you are, you can do so by going to the website we set up to encourage discussion: [http://ssw.umich.edu/assets/renaming-social-work-discussion](http://ssw.umich.edu/assets/renaming-social-work-discussion). We look forward to hearing from you.

**It’s What’s Underneath That Counts**

According to Brekke, despite social work’s growth since the mid-twentieth century, and its current numerical significance in providing social services vis-à-vis other relevant disciplines like psychology and psychiatry, social work has been a laggard in contributing to recent, dramatic advances in knowledge and research methods relevant to understanding the human behavior, contexts, and interventions that are the objects and means of social work practice.

How to explain this laggardness?

Brekke’s hypothesis is succinct: science is not central to social work. The supporting evidence: the ISI Web of Knowledge (ISIWK) lists substantially fewer journals for social work than for nursing, clinical psychology, and psychiatry. Further, only one of the social work journals has an impact factor higher than 2 compared to 2, 33, and 41 journals for nursing, clinical psychology, and psychiatry respectively.

Accepting his hypothesis as therefore plausible, Brekke allows that it carries at least two implications, one descriptive - what is the relationship between science and social work - and the other normative – ought the centrality of science to social work be increased. Significantly, Brekke doesn’t allow the latter question to stand as an open question. Instead, he immediately declares the development of a framework for shaping social work into a scientific discipline as one of his paper’s major aims. Unfortunately, this raises a question about the seriousness of his introductory

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1 We think your comments will not only help us think through this topic, but others as well. The site will allow for brief comments (< 200 words) so if you are compelled to write a longer response, we will welcome receiving your document as an email attachment. We will contact you about how to best share it with others, if that is your wish.
justification, allowing that it may be more rhetorical than substantive since his thesis appears to be the question he proposes to answer. That is, Social Work ought to be more scientific because it should be.

We don’t plan at this point to explore the nature and implications of this possible error in reasoning. We will, however, come back to it in our concluding remarks to illustrate the importance of also critically considering the responses to Brekke’s proposal. For now, we would simply point out that the context for Brekke’s paper is one of persuasion; he is arguing from a viewpoint he would like others to accept. We would never question his right to do that. Indeed, as at least one well-known philosopher has argued [6], it is by bold and oft-times initially untested conjecture that science advances. By the same token, in the words of one equally well-known poet: “No man is an island, entire of it self; every man is a piece of the Continent, a part of the main: …” [7]. Which is to say, science is a collective enterprise [8-9]. It advances through interaction among and between skeptical audiences who nonetheless share common values and ideas. We hope you see our own as well as Brekke’s contribution in this light.

In keeping with this orientation, we adopt an approach still very much in vogue in critical argumentation, though its origins go back some 2500 years to Aristotle. That is to say, and as is, we suspect, already apparent: we look to where Brekke begins his chain of reasoning, the central elements of which are found in the first six paragraphs of his first paper [3]. If these “anchor points” in Brekke’s argument show weakness, conclusions following from subsequent connected arguments and proposals are called into question. Alternatively, if they prove logically and empirically sound, to the extent that we find ourselves in disagreement with Brekke’s conclusions, we are left to find other aspects of his argument to critique.

**Argument I**

The first anchor point is Brekke’s juxtaposing of observations about social work comparative numerical significance and centrality as a service provider, its since mid-twentieth century steadfast articulation as a profession co-occurring with striking advances in social work relevant scientific methods and knowledge, and “... evidence that social work has not been central to these scientific advances” (p. 455) [3]. The impression conveyed clearly is: given its numerical significance, growth as a profession, and centrality as a service provider, it’s reasonable to presume a proportionate contribution to scientific advances from social work. That this, according to Brekke, is not the case is a problem that requires both explanation and correction.

But, just how reasonable is an expectation of a proportionate contribution?

Our response: not very; our reason: we think Brekke may be guilty of the fallacy of division. We explain with an example.
Suppose you were chatting with a friend and she insisted that because a mutual friend was a hockey player, she was also a swimmer, tennis player, and basketball player because, even though she didn’t play these sports, she was an athlete. You would probably think: “This isn’t logical. Though it is true that athletes as a group includes different kinds of athletes, it’s not right to infer that each individual athlete is a hockey player, swimmer, tennis player, basketball player, and so on. You just can’t say what’s true for a group as a whole is necessarily true for each individual member.”

Applied to the case at hand, the implication is clear: while it may be true that all social workers are educated in matters that pertain in one way or the other to service provision, it doesn’t follow, as a matter of necessity, that an increase in their overall numbers will correspond with an increase in social work’s capacity to conduct research and produce knowledge. The vast majority of person’s graduated with social work degrees are just not educated to do that. Neither are they employed in settings dedicated to such activity. In fact, looking at the crucial aspect of research and knowledge development potential, since 1995, of the thousands of social workers graduating each year in the US with masters or doctorate degrees, on average, 290, or approximately 1.66 percent, were awarded doctorate degrees. Moreover, since reaching a high of 1.89 percent in 2005, the trend, on a proportionate basis, has been down.2

So what, you might say. Isn’t that true for PhD degrees generally, that relatively few persons receive them, regardless of discipline? True enough, but that still does not change what these data illustrate: that what’s true for a whole group isn’t necessarily true for its component parts. Moreover, we haven’t finished with this issue yet. Lets see what happens when we compare social work’s PhD production to that of two of the disciplines Brekke invoked, nursing and clinical psychology.

We did this first by plotting numbers of PhDs conferred by year for the three disciplines. The results (Figure 1) clearly show Social Work as placing a distant third.

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2 Data used in making these calculations, as well as in making the calculations reported in Table 1, were taken from tables in Digest of Education Statistics reporting bachelors, master’s, and doctor’s degree conferred by degree-granting institutions, by sex of student and field of study, for the years 1995 to 2012. U.S. Department of Education, National Center for Education Statistics (Ed.), Digest of Education Statistics (1995-2012 eds.). Retrieved from http://nces.ed.gov/programs/digest/.
Next we calculated annual growth rates in PhD production, but not just for nursing, social work, and clinical psychology; we also calculated an overall annual growth rate for the health professions, public administration, psychology as a disciplinary field, and the social sciences so as to have a standard against which to measure our discipline-specific values.

Table 1 gives the results. It shows both nursing and clinical psychology as performing above average over the period 1995 to 2012, with nursing doing particularly well, exceeding the overall average by a multiple of approximately four an a half.

Table 1: Average Annual Growth Rates for Social Work, Clinical Psychology, Nursing, and the Combined Fields of Health Professions, Public Administration, Psychology, and the Social Sciences.

<table>
<thead>
<tr>
<th>Average Growth Rates</th>
<th>Social Work</th>
<th>Clinical Psych.</th>
<th>Nursing</th>
<th>Combined Fields</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.85%</td>
<td>3.08%</td>
<td>11.51%</td>
<td>2.57%</td>
<td></td>
</tr>
</tbody>
</table>

Note. The average annual growth rate is calculated as a geometric mean because the focus is on percentage changes between years.

On the other hand, with an annual growth rate of .85 percent, social work’s performance is decidedly below average. Translating Table 1 values into an imaginary Kentucky Derby by transforming social work’s and clinical psychology average growth values, as well as the overall average growth value, into ratios of nursing’s average growth rate, and setting 53 feet per second, or 36 mph, as
nursing’s winning pace, we can envisage a statistically oriented sports reporter describing the results somewhat as follows:

“There you have it folks. Racing Pulse finished first with a time of 2 minutes, 4.5 seconds, 7 minutes, 45 seconds, ahead of her nearest rival, Freudian Slip. Pulse averaged 36 mph over the mile and a quarter oval, compared to Slip’s 10.3 mph. Strangely, all but one of the remaining horses finished in a dead heat, managing an average speed of 8.1 mph and finishing 11 minutes, 17.5 seconds, behind the winner. Lotta Empathy rounded out the field, finishing a distant 28 minutes and 5 seconds behind Pulse, and averaging just 2.7 mph.

What to conclude from these observations? First, and most obvious to us, is the importance of taking seriously the old maxim: “Its not (just) what you say but the way that you say it.” Or, paraphrased for our purposes: pay attention not just to the substance of an argument but also to its form or structure: do its component parts fit together in what seems, or does not seem, a logical and defeasible way? If they don’t, is there an explanation? As intimated in our introductory remarks, it was a diffuse disquiet with structure, i.e., the possibility of circular reasoning, which got us wondering about Brekke’s paper in the first place.

Second, surely this portion of our analysis (there is more to come) gives grounds for questioning an expectation of something like a proportionate contribution to research and knowledge production from social work compared to allied disciplines like nursing and clinical psychology, unless of course one assumes that PhD graduates in Social Work are substantially more productive than PhD graduate from these other disciplines. We are not aware of evidence demonstrating this. In fact, in a paper comparing publication and citation rates of social science and social work PhD graduates over the period 1985 to 2002, Tucker found evidence indicating the reverse as probably the case (p. 130) [10].

Third, we think our observations about differential rates of PhD production across disciplines raises an interesting puzzle: how to explain these differences, and what might such an explanation tell us about the disciplines themselves? This question is particularly relevant for social work, considering its apparently contradictory role as a significant producer of knowledge-applying service providers against its more limited role in producing formally trained knowledge producers.

One possibility is suggested by Tucker’s characterization of social work’s knowledge development enterprise as giving priority to knowledge for use as opposed to knowledge for understanding. Accordingly, PhD education in social work mainly is directed toward helping students acquire the knowledge necessary to study particular target populations with problems requiring implementable solutions. Accepting this view implies that, compared to disciplines with broader philosophical conceptions of knowledge development, the knowledge social work academics produce is likely to lack generality. Or, said differently, though the knowledge
produced by other disciplines is likely to be amenable to consumption by social worker academics and practitioners, the reverse is less likely to be the case.

Since economic theory tells us that less demand for a good brings with it the dictate of limiting supply, it’s reasonable to assume that the lower demand value placed on the kind of knowledge social work produces influences the amount of resources allocated to it. This limits its ability to grow numbers of PhD graduates relative to disciplines producing more highly valued kinds of knowledge. In turn, this disadvantages it in terms of capacity to contribute on a proportionate basis to scientific advances of the kind Brekke attributes to the social and life sciences over the past number of years.

By now, we suspect (that is, hope) you’re saying to yourself: “Interesting, but what does an abstract explanation of different rates of PhD production across different disciplines have to do with Brekke’s anchor points. Aren’t you losing focus here, maybe even dragging in a red herring or two to divert attention to issues you prefer to write about?”

The answer is no, for two reasons. First of all, we think it affords scientific credibility to our interpretation of the data in Table 1 by giving a theoretical basis for predicting a proportionately lower contribution to research and knowledge from social work than might be expected from allied disciplines such as nursing and clinical psychology. Second, we haven’t finished with this explanation yet, as you’ll see when we get to Brekke’s second anchor point, which, as your luck would have it, is what we turn to now.

**Argument II**

Brekke is properly cautious in his wording about presenting evidence in support of his science-as-not-central hypothesis. He begins by associating “the number of peer-reviewed journals that a discipline houses” (p. 455) [3] with the extent of that discipline’s knowledge development efforts and formal communication about knowledge. Next, he identifies a journal’s impact factor as quantifying “how much the average article from a journal is cited in other articles in a specified time period” (p. 456) [3]. He concludes with a statement regarding the possibility of using these measures “to make one kind of assessment of the degree to which science and knowledge discourse are central in a discipline” (p. 456) [3].

Despite Brekke’s cautiousness (or perhaps because of it), we find his argument ambiguous. What’s meant by the phrase: “one kind of assessment”? What other kinds of assessment might there be? Why was this particular kind chosen? Without this information, we, perhaps like others, were unsure of how to assess the

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3 To be clear, we are not arguing against the value of social work engaging in knowledge development activities to address societal problems by identifying implementable solutions. Instead, we are commenting on the character of that knowledge.
defeasibility and thus credibility of the kind of assessment selected. Reflecting on it, we came up with three possible ions – abduction, definition, and deduction.

**Abduction.** One possibility is that Brekke intends his approach to be interpreted as follows: available data clearly show social work as having fewer journals listed in ISIWK, with lower impact scores, than other comparable disciplines. If disciplines with comparatively fewer journals listed in ISIWK, with lower impact scores, are disciplines in which science is less central, the data describing social work’s status in ISIWK are not surprising. Accordingly, there is reason to belief the hypothesis that disciplines with comparatively fewer journals listed in ISIWK, with lower impact scores, are disciplines in which science is less central.

If this is the approach underlying Brekke’s assessment, its plausibility depends upon the absence of other ways of explaining the same data. For example, you might, on getting up in the morning and observing wet grass outside, explain the wet grass by conjecturing that it rained overnight. Later you might learn that your automatic sprinkling system was turning on an off during the night due to some operating problem. This might lead you to doubt your original hypothesis about it raining overnight.

In a similar vein, you’ll recall our earlier proposal that an expectation of a proportionate contribution to scientific advance from Social Work may not be justified because of Social Work’s slower pace in producing PhD graduates. The underlying reason, we argued, was lower social and economic value placed on the kind of knowledge social work produces.

We think this argument can be extended to also account for differences in numbers of journals and values of impact factors. That is, if disciplines with comparatively fewer journals listed in ISIWK, with lower impact scores, are disciplines producing knowledge of comparatively lower social and economic value, the data describing social work’s status in ISIWK are not surprising. Hence, given the facts about Social Work’s status in ISIWK, there is reason to believe our hypothesis about disciplines producing knowledge of comparatively lower social and economic value as housing fewer journals, most with lower impact scores.

Assuming that our hypothesis is not unduly contrived means there are now two hypotheses, each purporting to explain the same data. What to do? In the absence of

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4 Also referred to as “reasoning to the best explanation,” abduction is common both in science and in every day discourse. Differentiating between different forms of reasoning, i.e., deduction, induction, and abduction, can be difficult. Hence, the following shorthand overview should be read with that in mind. In a deductive argument, true premises guarantee a true conclusion. In an inductive argument, true premises give a conclusion a probability of being truth. Finally, in an argument based on abduction, a true observation is construed as explained by a hypothesis presupposed as true. It is for this reason that abduction is described as “reasoning to the best explanation.”
a capacity to arbitrate between the two on empirical grounds, at a minimum, we think it’s fair to say that each compromises the plausibility of other. Or, restated from the perspective of our critique, the plausibility of Brekke’s science-as-not-central hypothesis is compromised, thereby undermining the acceptability of his second anchor point. Before drawing that conclusion unequivocally, however, there are other options to consider.

**Definition.** We doubt that few of you will disagree with the following: a necessary condition for having a paper accepted for presentation at SSWR is that you submit a structured abstract of the paper by a given deadline. Unless you are an invited author/speaker, failure to do that surely excludes you from acceptance. On the other hand, submission alone doesn’t guarantee acceptance. For that to happen, your abstract must also report content that satisfies other requisite criteria, which include evidence of originality, technical merit, and relevant implications for policy or practice.

Said a bit more formally, a person wanting to present a paper at SSWR must submit an abstract that satisfies a number of necessary conditions that together amount to a sufficient condition for acceptance to present at SSWR. Hence, by definition, a person accepted to present at SSWR must be someone who not only submitted a structured abstract reporting completed research by a given deadline, but also gave it content adjudged as satisfying criteria of originality, technical merit, and relevant implications for policy or practice.

Now, the application: you will recall from above that Brekke characterized social work as having fewer journals listed in ISIWK than nursing, clinical psychology, and psychiatry – 39, 87, 104, and 110 respectively. Further, only one of its journals had an impact factor higher than 2 compared to 2, 33, and 41 journals for nursing, clinical psychology, and psychiatry respectively. Based on these observations, Brekke proposed science as not central in social work.

Reflecting on this in light of our discussion above about the conditions defining a successful submission to SSWR gives another way of interpreting Brekke’s assessment. It goes like this: a necessary condition for science to be central to a discipline is that it house more than 38 ISIWK-listed, peer-reviewed journals. In addition, at least two of those journals must have impact factors of two or above. Because social work does not satisfy these conditions, it is, by definition, a discipline in which science is not central.

By now, at least some of you are no doubt thinking: “So what? What wrong with using definitions in an argument? Isn’t it done all the time, particularly in science?

We concur. It is done all the time. But that certainly doesn’t mean the use of definitions in an argument should get a free pass. For one thing, it is important for an author to be clear about whether or not a definition is the basis of his or her argument. The reason is that what might seem on the surface to be a hypothesis
potentially subject to empirical testing may actually be a conclusion construed as true because it conforms to what is presented as true definition [11]. It may be a stretch, but judging from the lack of attention paid to this issue so far by those who have responded to Brekke’s arguments, this point might just be applicable in this case.

Further, there’s the issue of the content of the definition: can the claim that the centrality of science to a discipline as necessarily defined by numbers of peer-reviewed journals and value of impact scores be accepted as true? As it turns out, this is exactly the issue we investigate in examining our third and final way of interpreting Brekke’s phrase “one kind of assessment” (p. 456) [3]. In the interests of not boring you by going over the same ground twice, we delay any further comment on this business of definition until we see how that turns out.

**Deduction.** To remind from footnote 4, a deductive argument is one in which, if the premises are true, the conclusion must be true. Brekke’s may well have had such an argument in mind when he referred to “making one kind of assessment”:

If science is central to a discipline (P), then that discipline will have a comparatively high number of peer-reviewed journals, many with comparatively high impact factors (Q).
Social work has comparatively few peer-reviewed journals, most with comparatively low impact factors (Not-Q).
Therefore, on a comparative basis, social work is a discipline in which science is not central (Not-P).

If this is what Brekke had in mind, then his argument is logically valid.\(^5\) The question then becomes whether or not it’s sound. That is, do the premises from which the conclusion (Not-P) is derived fit with known facts?

We start with journal counts and with what, we suspect, you already know, that the inclusion of journals in ISIWK databases is selective, entailing an application and adjudication process. What you may not have immediately realized is that, as a result, journal counts taken from that source undercount numbers of discipline-relevant journals. Ulrichsweb Global Series Directory (UGSD) is a more comprehensive source [12]. Compared to the approximately 12,000 international journals listed in ISIWK, it provides detailed information on more than 300,000 periodicals worldwide, including peer-reviewed academic and scholarly journals.

\(^5\) Traditionally, this method of reasoning is called *modus tollens*, and has the logical form: if p, then q; not-q; therefore, not-p. It is valid because it denies the consequence q. It is different from another method of reasoning, *modus ponens*, which has the logical form: if p, then q; p; therefore q. *Modus ponens* is valid because it affirms the antecedent p. Note that if antecedent p is denied, i.e., not-p instead of not-q, or the consequence affirmed, i.e., q instead of p, the reasoning is fallacious.
Table 2 gives counts of English-language, peer-reviewed journals from UGSD and ISIWK for the disciplines, broadly defined, in question, as well as numbers of citation reports recorded in the Web of Science for journals in UGSD’s listings. No doubt, you will immediately notice that our numbers for ISIWK listing are different from Brekke’s. This is because our numbers are for different years, his, from 2011, ours, from 2012.

Table 2: Numbers of Journals listed in ISIWK and UGSD Databases for Social Work, Nursing, Psychology, and Psychiatry, and Numbers of Citation Reports recorded in UGSD.

<table>
<thead>
<tr>
<th>Database</th>
<th>Social Work</th>
<th>Nursing</th>
<th>Psychology</th>
<th>Psychiatry</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISIWK</td>
<td>38</td>
<td>106</td>
<td>114</td>
<td>121</td>
</tr>
<tr>
<td>UGSD</td>
<td>178</td>
<td>203</td>
<td>802</td>
<td>582</td>
</tr>
<tr>
<td>UGSD Citation</td>
<td>68</td>
<td>87</td>
<td>468</td>
<td>395</td>
</tr>
<tr>
<td>Reports</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

Now, to that tricky phrase, "broadly defined": we use it mainly with regard to Psychology and, to a lesser degree, Psychiatry. In the case of Psychology, UGSD doesn’t break its count down to sub-specialties as ISIWK does. Hence, while we know that 802 peer-reviewed journals are classified as falling in the field of Psychology in UGSD, and that 468 of these have citation reports in ISIWK, we are unable to make a direct comparison for clinical psychology. In the case of Psychiatry, it is combined with neurology in UGSD, giving 582 peer-reviewed journals with 394 having citation reports in ISI’s Web of Science. Interestingly, when we add to the 252 journals listed in ISIWK under the Neurosciences to the 121 journals listed for psychiatry, we get a total of 373 journals, which is close to the number of 394 from UGSD of journals with citation reports. More on this later.

For comparisons to ISIWK’S counts of social work and nursing journals, we took UGSD’s “Social Services and Welfare” and “Nurses and Nursing (Medical Sciences)” as the relevant categories. Because of the lower UGSD numbers compared particularly to Psychology, we were able to check out the efficacy of our choice of categories in a bit more depth. First, we searched journal titles within UGSD’s Social Services and Nursing categories, looking for such stand-alone-in-journal-title descriptors as “social work”, “social policy”, “social services”, and “health,” and “nurse” and “nursing” respectively. We found 93 matches (52%) for social work and 177 (87%) for nursing.

Next we examined ISIWK listings against UGSD listing: did the latter include all of the journals the former listed? Before proceeding to try to answer this question, we

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6 A journal can receive a citation even if it is not an ISIWK Journal. For example, the social work journal Child Welfare has received approximately 100 cites in the Web of Science even though it is not currently included in ISIWK’s listing of social work journals.
had to make an adjustment in our numbers. The reason: our UGSD listings contained only journals published in English. For nursing this meant dropping six journals from the ISIWK listing. In addition, we also found two journals that were entered twice in the ISIWK listing, once using an old ISSN number and once using a new number. Subtracting these eight from the original 106 gave us 98 ISIWK journals to use in our analysis. For social work, the ISIWK listing contained two journals not published in English, and one that had ceased publication in 2009, leaving us with 35 journals to consider.

Using Microsoft Access, we looked for links between ISIWK’s and UGSD’s journal listings, based on each journal’s international standard serial number (ISSN). For nursing, we found that 87 of UGSD’s 203 journals matched 87 of the 97 ISIWK Journals, leaving 10, or not quite 10 percent, unmatched. An apparent reason for this: Ulrich classified these extraneous 10 as primarily medical science journals.

For social work, the situation is somewhat different in the sense that UGSD reports 68 journals with citations in ISI’s Web of Science whereas ISIWK classifies only 35 journals as social work specific. Following the matching procedures we used for nursing, we found 28 matches between our UGSD and ISIWK listings, meaning 7 less than the ISIWK 35. Looking at each of these seven individually, four are classified by UGSD as primarily psychology journals, one as medical, one as sociology, and one as public health.

Returning now to our promise to say a bit more about psychiatry, we used our matching procedures to look first for links to UGSD for ISIWK’s 121 psychiatry-only journal listing. We found 79 journals from the 121 matched entries in UGSD’s Psychiatry and Neurology listing. For our combined ISIWK Psychiatry-Neurosciences listing, we found 233 matches, or an approximately 60 percent match rate, to the 394 journals UGSD reports as receiving a citation report in ISI’s Web of Science.

By now, you’ve no doubt noticed that our ISIWK-UGSD matches are by no means 100 percent: we’re not talking mirror images here. A reason for this is that UGSD relies on Library of Congress categories as interpreted by journal editors and their own staff in grouping journals into categories. ISIWK, on the other hand, groups its journals by analyzing citation patterns. Regardless, we are confident our analysis illustrates sufficiently large overlaps to support a claim of the journal counts in

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7 Initially we assumed this was the case for ISIWK, which our analysis subsequently showed to be otherwise. By that point, however, we had compiled our USGB data files using English-only as one of our criteria, so decided to stay with it. Fortunately, it turned out to be a non-problem since we were able to identify relevant non-English language journals in ISIWK. In addition, the numbers were too small to make a difference to our conclusions.

8 We will say more about what the difference between 68 to 35-journal discrepancy when we discuss impact scores below.
ISIWK as substantial undercounts of broader populations of discipline-specific and discipline-relevant journals. As a result, and accepting for now (there is more to come) Brekke’s claim of numbers of peer-reviewed journals “… is an indicator of how much knowledge building and formal communication about knowledge is central to that field …” (p. 455) [3], an implication of using this measure is that science seems closer to social work’s center, particularly vis-à-vis nursing, than is suggested by ISIWK data alone.

But this is not the end of our journal-count story. There is one more part to go.

We all know it’s hard to understand something that interests you by checking it out only once. If you really want to understand it, it’s best to hang out with it for a while. Fortunately for us, USGD’s databases include journal-founding dates. As a result, we were able to hang out for a while with journal counts. Figures 2 and 3 give the results.

Looking first a Figure 2, 1959 plots the numbers of journals extant in that year that had been founded on or before 1959. Psychology, with 99, had the highest number, followed by Psychiatry with 72, Social Work with 17 and Nursing with 15. Subsequently, the chart plots numbers of new journals by decade from 1960 to the present. It shows Psychology and Psychiatry as the clear leaders in all decades, with Social Work and Nursing vying for third and last place. In the 1960’s, Social Work led by a margin of 13 to 10 new journals. It lost out by one in the 1970s, founding 34 new journals to Nursing’s 35. Nursing forged ahead in the 1980s and 1990s, founding a total of 106 new journals to Social Work’s 72. However, since 2000, Social Work has regained the lead, with 40 new journals to Nursing’s 36.

Figure 2: Histogram of Journal Foundings for Social Work, Nursing, Psychiatry, and Psychology before 1960 and by Decade, 1960 to 2013
Figure 3 plots the cumulated totals of journal founding for all four disciplines, beginning with the number founded in, or before, 1959, and then showing the overall trend, as well as the trends among the individual disciplines, through to 2013. The overall trend is upward from 1970 through to 2000, when the total number of founding levels off. This is also the case for three of our four disciplines: social work is the exception. It shows a low but nonetheless continuing rate of increase, capturing a very slightly higher proportion of the total number of new journals founded since 2000.

Descriptively, the data in Figures 2 and 3 fit both with Brekke’s claims of strong advances in scientific knowledge over the past thirty years, and his observation: “There are signs that social work’s commitment to rigorous research is growing” (p. 457) [3]. But this is still begs the question of whether or not a variation in numbers of journals over time and across disciplines follows, as a matter of necessity, from changes in the centrality of science in a discipline.

We don’t think it does.

Look again at Figures 2 and 3, at the drop in numbers of new journals over the decade of the sixties, and at the increase from 1970 to 2000. Do you believe these changes resulted from science first becoming less central, and then more central, not just in social work but also in nursing, psychiatry, and psychology?⁹ We don’t.

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⁹ We recognize, of course, that we leave open the question of what might be learned by studying journal foundings in social work and other disciplines before 1960. Is it possible, for example, that the sixties marked the end of a longer decline in founding rates? Time, available resources, and current purpose preluded the possibility of such analysis.
Instead, we think something else is at work, something suggested to us by the purpose of disciplinary journals, which is to further the progress of that discipline’s science by generally reporting new research. Reflecting on this led us to see the fact of a journal’s existence, in and of itself, as testimony to the importance accorded science by some individual, group or organization within the discipline. In turn, this caused us to see the importance of journals, or written science, as a constant, meaning that, as a constant, it could tell us little, if anything, about the processes underlying the creation of new journals. Nor could it tell us anything about how numbers of journals proliferated, and why rates of proliferation vary across different disciplinary fields. To get answers to these questions, we were going to have to look elsewhere.

So we did.

We looked to a subfield in organization theory called organizational ecology\textsuperscript{10} [13-15]. It told us that if we were to account for the patterns of journal foundings depicted in Figures 2 and 3, we would have to study how variation in social, economic, and political conditions shaped opportunities for their founding and proliferation. It also told us it would be wise to examine how opportunities to acquire effective knowledge about journal initiation, operation, and management were distributed within and between the disciplines. Finally, it told us not to overlook how competition might condition numbers of new foundings, particularly as the overall numbers of journals increased.

Clearly, we are not in a position to heed this advice empirically in the context of this paper. The best we can do is to offer a few anecdotal observations, such as: it seems plausible that the history and size of psychology and psychiatry (as embedded in medical science) vis-à-vis nursing and social work have something to do with explaining differences in their respective journal numbers, particularly, but not solely, as it pertains to resource constraints and effective knowledge acquisition opportunities. More generally, we don’t think it’s totally off the wall to suggest the downward trend in journal founding in the sixties may have something to do with social, political, and intellectual turmoil of that era, and that its subsequent replacement with an upward trend had something to do with demography and the expansion of higher education. Finally, there’s the interesting flattening of the overall trend after 2000 depicted in Figure 3: perhaps that’s telling us the disparity in journal numbers across discipline is moving toward a position of stability, not because of differences in the centrality of science, but because of emerging “market

\textsuperscript{10} Organizational ecology has been an active area of research since the mid-1970s, with numerous researchers invoking its theory and methods to study the founding and proliferation of a wide range of entities, ranging from restaurants, banks, and nonprofits to daycare centers, foster homes, and newspapers. Baum [13] and Carroll and Hannan [14] provide extensive literature reviews. Tucker [15] gives examples of extending organizational ecology to the study of social work education and foster care.
saturation,” a concomitant reluctance by ‘traditional’ publishers to support new entrants, and the rapid growth of open access journals.

Now, let’s get back to the point of this discussion of journal numbers and journal foundings, which is whether a conclusion of social work as a discipline in which science is not central is sound because it is supported by premises that fit with known facts. To recall, the important premise in this case is one contending that how many peer-reviewed journals a discipline houses, and values of their impact factors, is a necessary consequent of the centrality of science to the discipline.

Based on the data we’ve presented, and on what we now of relevant theory and research, we think there is a strong case for arguing against the full truthfulness of this premise and, thus, against the conclusion inferred. However, there is still the business of the impact scores: what can be said about the soundness of a claim proposing the magnitude of their values as also a necessary consequence of the centrality of science?

Fortunately for us, others have done the relevant work on this issue. We refer here to a 2008 study reported by Althouse and colleagues [16]. Using data on 4,300 Web of Science-listed journals over the period 1994 to 2005, they investigated, among other things, why impact factors vary widely across academic disciplines. Controlling for size of disciplinary field and growth rate of scientific literature, the results showed the strongest predictor as disciplinary citation practices: disciplines that cite heavily from field-specific JCR indexed journals have higher impact scores; those that do no cite heavily have lower scores. Moreover, citing from journals not in ISI databases, as reflected in the 68 to 35 difference in citations for social work we noted earlier, depresses scores even further. Put in more concrete terms, the reason average journal impact scores for Cell Biology and Astronomy are over twice as high as those for Physics is because their reference lists are longer and contain proportionately more cites of JCR indexed articles. On the “soft” science side of things, this is also the reason why the average impact score for Law is more than twice as large as Economics’ average impact score. To us, this simply makes more sense as a way of explaining why impact scores vary across disciplinary fields than does an approach which asks us to accept the variation in values of the impact scores as indicating science as necessarily less central to Physics and Economics than to Cell Biology, Astronomy, and Law.

Back now to the business we began just before we introduced Althouse and colleagues, namely, what conclusion to draw about the soundness of the proposition:

If science is central to a discipline (P), then that discipline will have a comparatively high number of peer-reviewed journals, many with comparatively high impact factors (Q).
Similar to the point we made then that available data, theory, and research give a strong case for arguing against accepting as defeasible a claim of variation in journal counts as a necessary consequence of the centrality of science to a discipline, so does Althouse et al. research support a similar conclusion for the proposed relationship between the centrality of science and impact scores. This being the case, we think the conclusion derived from the deductive if p then q argument – science as not central to social work – though logically valid, must be rejected as not sound, at least until such time as the data and arguments we have presented can themselves be shown as not defeasible.

**Parting is Such Sweet Sorrow**

We started this paper by quoting Shakespeare. We propose to end the same way. But first, let’s take a brief look at what we’ve done, and at what it might mean.

We got the ball rolling by introducing ourselves and explaining our motivation, which was not just to express our disquiet about Brekke’s proposal and the responses to it: we also hoped to prompt a broader conversation about the questions and issues raised using the power of the Internet. We then explained our approach, followed by a summary overview of what we termed Brekke’s two anchor points.

Our first argument examined the anchor point of whether or not it was reasonable to expect social work to have made a proportionate contribution to the advancement of relevant scientific knowledge, compared to nursing, psychology, and psychiatry. We found it was not, that the reasoning underlying the expectation was fallacious, and that, empirically and theoretically, it made more sense to expect social work to have made a comparatively lower contribution.

Our second argument focused on Brekke’s use of journal counts and journal impact factors as relevant indicators in making “one kind of assessment” of the centrality of science to a discipline. Given the ambiguity of the phrase “one kind of assessment,” we explored three possible interpretations – abduction, definition, and deduction. We found problems with each, meaning there are good reasons for believing that Brekke failed to demonstrate as plausible his claim of science as not central to social work.

So, where do our arguments about Brekke’s two anchor points leave us?

Looking at our second argument, it clearly calls into doubt the acceptability of using journal counts and journal impact factors as a basis for examining the relationship between science and social work. This is not to say that that relationship doesn’t merit examination: it’s just that our analysis shows the case to do it as not having been made. Hence, the question is raised: what problem is a science of social work intended to solve?
But that’s not all.

By design, the journal impact factor aims to measure a journal’s influence and ISI claims to index only the most influential journals [17-18]. It follows, therefore, that from ISI’s perspective, social work’s comparatively low journal counts and low impact factors are saying that, when it comes to influence, social work is marginal in science. Viewed in this way, bodies like NASW, instead of being implicitly criticized for not imitating Psychology and Psychiatry by not defining science as central to social work might better be acknowledged as simply being realistic. Measures like journal counts and journal impact factors, it seems, may be something like wishes: they can end up giving back what you don’t want.

Another issue suggested by our second argument goes to a task we propose to take up in the future, analyzing the written responses to Brekke’s ideas. Here’s an illustration of why we think it may be important.

You’ll recall that the second question Brekke derived from his use of Journal counts and journal impact factors was a normative one – ought the centrality of science to social work be increased. As a normative question, it connects to Longhofer and Floersch’s first response paper in which they argue for a science of social work based on a critical realist philosophy because, among other things, it deals with the “is-ought” problem (p. 501)[20].

Well, what is this problem?

Unfortunately, Longhofer and Floersch don’t tell us, at least not in language as clear as that used by David Hume, the person who famously articulated it in 1739 [21]. To paraphrase, Hume was concerned that, in his reading of those who wrote about morality in his day, he often found a surprising shift in their reasoning, with the terms, is, and is not, suddenly replaced by the terms, ought, or ought not. He then goes on to say that, although the shift is subtle, it’s very important:

For as this ought, or ought not, expresses some new relation or affirmation, 'tis necessary that it shou’d be observ’d and explain’d; and at the same time that a reason should be given; for what seems altogether inconceivable, how this new relation can be a deduction from others, which are entirely different from it (p. 302) [21].

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11 This claim finds empirical support in Rosvall and Bergstrom frequently cited study, “Maps of random walks on complex networks reveal community structure” [19]. It uses citation data to map the network structure of science. An analysis of a subset of data on social science citation patterns shows social work as not well integrated into the social sciences (p. 1122).
At the risk of being overly pedantic, as well as revealing our own lack of philosophical expertise, what Hume is getting at is the acceptability of arguments like the following:

1. Social work has relatively few journals, most with low impact scores.
2. Having relatively few discipline-specific journal and journals with low impact scores indicates science as not central in social work.
3. *Science ought to be more central in social work.*
4. Therefore, social work *ought to have* more discipline-specific journals with higher impact scores

As Hume sees it, the problem here is not just that a hidden “new relation,” or unexplained third premise, has been added to an argument. It is also that the conclusion contains content not in premises 1 and 2. Hence, the argument itself is not logically valid.

Applied in the context of our second argument, what emerges is the question: how does Brekke get from the *is* of journal counts and impact scores to an *ought* question about science’s status in social work? What’s the justification for that jump?

We highlight the question here not as a criticism of Brekke. As we’ve said, he was, and is, doing his job, namely, trying to persuade others to his viewpoint. Some rhetoric is to be expected. However, the same courtesy does not extend to his professional audience. As we see it, they have a public responsibility not unlike the quality control responsibility of a peer-reviewer, i.e., to critically vet what’s presented in the interests of deepening understanding of the questions and issues involved. Hence, in the case of Longhofer and Floersch, having highlighted the *is-ought* problem, we wonder why they let Brekke’s jump from an “is” to an “ought” slip by unnoticed. On its face, it was an opportunity to illustrate the relevance of their own view of critical realism while, at the same time, clarifying that there was an alternative way of justifying an *ought* question regarding social work’s status vis-à-vis science besides the use of journal counts and impact scores. If nothing else, such a contribution would have prevented readers from having to wade through our ramblings about the issue.¹²

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¹² Given social work’s historic emphasis on founding its legitimacy in both the *oughts* of social justice and the *is’s* of scientific research, we agree with Longhofer and Floersch’s identification of the “is-ought” problem as a central one. Further, based on a reading of Brekke’s elaboration of his initial proposal for a science of social work, it’s not about to go away. For that reason, we urge you to read Longhofer and Floersch contributions carefully, particularly from the perspective of recognizing that it’s not sufficient to declare beliefs; it’s equally important to be able to give reasons for them. By the same token, read critically. For example, we found ourselves agreeing with Briar-Lawson [22] arguments that Longhofer and Floersch need to be more aware of presenting ideas in ways that are understandable and relevant if they are to be competitive in local contexts. Plus, we’re not overly fond of dogmatic statements like: “… facts are never theory free” [20, p. 501]. But, as we said in the text, arguments about these sorts of things are for another time and place.
This takes us, finally, back to Shakespeare, but not this time to *Romeo and Juliet*. Instead we go to his Sonnets, to Sonnet CXXX (130), which opens with the line: “My mistress’ eyes are nothing like the sun; ...” (pp. 131-132)[23]. It continues, using words, invoking images, that tell us of Shakespeare’s lady’s imperfections. Her lips are not coral red, her breasts do not compare in whiteness to snow, and her cheeks are not the color of roses. Moreover, she breathes like any other, her voice is not terribly musical, and, to top it off, she walks, not like some ethereal goddess, but on the ground. Nonetheless, she is, Shakespeare concludes, as extraordinary as any woman who has been misrepresented by undue comparisons.

Needless to say, we’re not going to tell you what lesson you should take from your own reading of this or any other Shakespearean sonnet. Far be it for us to pretend to such authority. But, we can tell you, in this instance, what lesson we would like you to take. It starts with a question: if it’s not reasonable, as our first argument suggests, to expect social work to contribute proportionately to the advance of science, might it not be undue to compare her to psychology, psychiatry, or even nursing, given the latter’s much deeper entailment in medical science? Perhaps such comparisons serve mainly to distort our view of what is, in fact, social work’s extraordinariness, that it works in society’s gaps and seams, giving caring, providing service, to those who would otherwise drop through, their problems and suffering maybe not unnoticed but oftentimes unheeded.

This is not to say that Shakespeare’s mistress did, or must, rest on her laurels, that one kind of extraordinariness is enough. Or, more literally, because the proposal for a science of social work arguably begs the question of what problem it will solve, it doesn’t necessarily follow that social work doesn’t have a problem. Our history is too potted with external and internal debates about questions of definition, role, purpose, and justification to deny that.

But if the problem isn’t that science is not central to social work, what is it?

From memory alone, we can point to two other assessments – one, that social work is too eclectic and lacks the kind of central organizing question that would enable its development as a scientific discipline[24] and second, that its practitioners and educators are not scientifically literate enough to appropriately use available scientific knowledge[25]. The first suggests not a science of social work but social work as a science of the ecology of caring[26]. The second implies that proposing

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13 At the risk of error and over-simplification, this is one meaning we take from Gambrill’s response paper to Brekke.

14 Indeed, to us, the phrase “science of social work” implies a science with social work as its object of study, as illustrated, for example, in Roger Sibson’s 1991 book, *Towards a New Sociology of Social Work* [26]. If social work is to construct a science, we prefer it use descriptors that define that science as aiming to understand phenomena beyond social work itself.
either a science of social work or an ecology of caring may be putting the cart before the horse. We aren’t about to arbitrate these or other possible options. But we do think they and other possible conceptions should be part of the debate in reaching a consensus about what social work’s problem may, or may not, be. Perhaps through such debate we’ll discover not so much that we need a new name as how to more fully merit the name we have.
References


4. Eleven additional articles on the subject matter were published in the 2012, volume 22, issue of Research on Social Work Practice.


