

## **Author's response to reviews**

**Title:** Building an interdisciplinary theory of implementation, embedding, and integration: the development of Normalization Process Theory

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**Author's response to reviews:** see over

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2 March 2009

Dear Michel

**Re: MS 1137142064241959**

**Original title: Building an interdisciplinary theory of implementation, embedding, and integration: the development of Normalization Process Theory**

**New title: Development of a theory of implementation and integration: Normalization Process Theory**

Thanks for responding to this submission so quickly. We are grateful to you, and to Drs Estabrooks, Griffiths, and Willis, for some very helpful and thought provoking critical comments on our manuscript. As a result of these, we have made substantial modifications to the paper, and these are detailed below and in an annex to this letter.

The reviewers asked for more background information about Normalization Process Theory. In response to these comments we have added three substantial sections of text. In the 'Background' section, we have added

- (i) a synopsis of the theory and brief indication of its 'position' in relation to others;

- (ii) a description of the contingent circumstances in which the theory emerged and was developed,
- (iii) an outline of some of the discussions that led to the beginning of the second stage of the work (development of the NPM).

We have also added

- (iv) a discussion of middle range theory towards the end of the 'Methods' section of the manuscript.

Finally, Dr Griffiths suggested an extended conclusion. One of the peculiarities of this process is that as the paper has grown in length elsewhere, the conclusion has grown shorter.

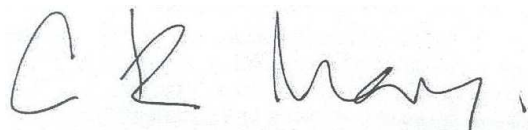
All three reviewers are interested in the genesis of NPT and in the 'impetus' for this work. Incorporating these questions in the present paper is a real problem. We have deliberately restricted the scope of the manuscript to a procedural account of the development of NPM/NPT – focusing on *what* we and others did. We need to restrict the present paper to just this problem, otherwise it will be come unmanageable in scope and size. Other papers can carry these questions forward, however.

The manuscript is much improved because of the reviewers' comments, and we hope that it now meets the requirements of the journal.

I look forward to hearing from you in due course.

Kind regards,

Yours sincerely

A handwritten signature in black ink, appearing to read "C H May". The signature is written in a cursive, slightly slanted style.

## ANNEX: Specific responses

Reviewer: Carole A. Estabrooks	Response
A brief explanation of how this theory meets the criteria of a mid-range theory would be helpful to the reader.	This has been added at the end of the results section.
One really needs to (wishes to) read in press citation #1 before reading this paper to properly understand it – or make do with the 2006 paper on the NPM.	CRM has sent Dr <u>Estabrooks</u> a preprint copy of the paper.  A brief overview of the theory has been included in the background section.
It would also be helpful to have an explanation of the impetus for theory development in this area.	This has been added at the end of the Background section
The authors are drawing on a large body of work that supports the development of this theory. It would also be quite useful if the authors explained if they examined and what other theory they examined that attempts to explain similar phenomena.	We did not undertake a formal review of theory in this area because reviews that performed this function already existed – or were underway. We were aware of them from the beginning, and they are now cited in the Background section - reviews by Michel <u>Wensing</u> , Richard <u>Grol et al</u> were undertaken as part of a study (the REBEQI study). in which Carl <u>May</u> , Luciana <u>Ballini</u> , and Shaun <u>Treweek</u> were Co-Investigators and Tim <u>Rapley</u> was a researcher
Is NPT unique and how is it positioned relative to other theory. For example, Polanyi's work on tacit learning, Gherardi and Nicolini's work on learning organizations and practice/activity theory, Wieck on sensemaking, Beal and Rogers work on routinization of practices, Latour's work on actor network theory.	We have not gone into detail about this, but we have briefly discussed the relative positioning of NPT in the Background to the paper.  A review paper that discusses the relation between NPT and other theories has been underway since last summer, with Frances <u>Mair</u> leading on that piece of work.
There are a number of terms and phrases used in the paper, which could be defined in different ways by the general reader. If defined their intended meanings would be less potentially or not ambiguous to readers. Terms such	These have been clarified. This has been done either by amending the text, or clearly linking boxes to the papers that contain more detail.

<p>as: embedding, material practices, comparative synthetic methods, formative analyses, summative analyses, formal propositions, stabilizing constructs (p. 5), implication analysis (p. 6), enacting (p. 7).</p>	
<p>Discretionary revisions:</p> <p>On page 5 a number of terms are introduced. The reader should be directed to Box 3 where they are defined. This is again the case on page 7, 3rd para. On page 6 the authors state that the theoretical model "behaved as predicted".</p>	<p>These have been clarified.</p>
<p><b>Reviewer:</b> Karen Willis</p>	
<p>MINOR ESSENTIAL REVISIONS</p>	
<p>Some suggestions that may help the authors convey the story more clearly: A brief statement about the positioning of the theory in its initial development: My reading is that it was informed by symbolic interactionist and actor network theories. Briefly outlining this would assist readers to make sense of where this theory is coming from, and provide clarity for subsequent statements: For example, on page 5, where the authors refer to methodology for theory building and broadly sociological explanations.</p>	<p>The multi-disciplinary nature of the groups involved has meant that many different theoretical traditions are represented in this work. We have tried recording this using maps and diagrams but it causes confusion. It's worth adding that as we have played this out in conversation over the years we have often talked more about what a theory is, and what it is supposed to do, rather than where our theorising comes from.</p>

<p>How the method contributed to the retrospective account: While the authors refer to the archive of email and correspondence used to construct their account, there is very little information given about how various constructs were debated etc – the story is presented as though unanimity prevailed, but was this the case? Apart from a reference to 'sceptical' researchers testing the theory, there is no mention of debate or discussion within the 'theory-building team' about what the constructs meant or how they could best be understood.</p>	<p>This is a complicated question to answer. There hasn't been serious disagreement about the theory within this group. We have argued long and hard about the precise meaning of terms, however. There have been serious theoretical disagreements with others, however.</p> <p>Reference to the archive of email traffic etc is a hostage to fortune (it was mainly used by CRM as an aide memoire of timelines and specific contributions and was not analysed as qualitative data). It has now been deleted from the paper.</p>
<p><b>Reviewer:</b> Frances E Griffiths</p>	
<p>Page 4 (section on Phase 1) – the two sentences after the references [2,9] need minor editing for clarity as it is slightly confusing as to whether the work was on studies about telemedicine or whether there was a range of innovative technologies (what was the focus of paper ref 8?). This is a minor edit only and not essential.</p>	<p>This section of the text amended</p>
<p>Page 7 'emergent outcomes' – a phrase I am used to from complexity science but not sure all readers will be – a phrase explaining would be helpful but <b>not essential</b>.</p>	<p>This has been lost as the result of other editing.</p>
<p>Page 8 sentence including 'decoupling macro- from micro-' The reader would benefit from a couple of sentences here, one explaining decoupling and another explaining 'examining the components of generative mechanisms'. I think there is an implication that the team realized the focus shifted to identifying generative mechanisms and their components – please make this clearer (<b>Essential</b>)</p>	<p>This sentence has been rewritten to make clear what Dr Griffiths recognises to be the case, it was a shift in understanding that took place. This is probably the point at which what we had called a Model really did become a Theory.</p>
<p>Conclusion of paper. <b>Essential</b> – clarify what is meant by 'this' in the sentence third from end. I assume 'this' refers to mapping who did what in the collaboration, but this is not clear. Although <b>not essential</b>, I would like to see the conclusion developed a little more.</p>	<p>This clarification has been done, but in doing this the conclusion has become shorter and punchier, rather than more elaborate.</p>