

Unfreezing change as three steps: Rethinking Kurt Lewin's legacy for change management

human relations

1-29

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DOI: 10.1177/0018726715577707

hum.sagepub.com



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Abstract

Kurt Lewin's 'changing as three steps' (unfreezing → changing → refreezing) is regarded by many as the classic or fundamental approach to managing change. Lewin has been criticized by scholars for over-simplifying the change process and has been defended by others against such charges. However, what has remained unquestioned is the model's foundational significance. It is sometimes traced (if it is traced at all) to the first article ever published in *Human Relations*. Based on a comparison of what Lewin wrote about changing as three steps with how this is presented in later works, we argue that he never developed such a model and it took form after his death. We investigate how and why 'changing as three steps' came to be understood as the foundation of the fledgling subfield of change management and to influence change theory and practice to this day, and how questioning this supposed foundation can encourage innovation.

Keywords

CATS, changing as three steps, change management, Kurt Lewin, management history, Michel Foucault

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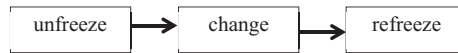


Figure 1. Change as three steps.

The fundamental assumptions underlying *any* change in a human system are derived originally from Kurt Lewin (1947). (Schein, 2010: 299)

Kurt Lewin is widely considered the founding father of change management, with his unfreeze–change–refreeze or ‘changing as three steps’ (CATS) (see Figure 1 above) regarded as the ‘fundamental’ or ‘classic’ approach to, or classic ‘paradigm’ for, managing change (Robbins and Judge, 2009: 625; Sonenshein, 2010: 478; Waddell, 2007: 22). The study of change management has subsequently ‘followed Lewin’ (Jeffcutt, 1996: 173), ‘the intellectual father of contemporary theories’ (Schein, 1988: 239). CATS has subsequently ‘dominated almost all western theories of change over the past fifty years’ (Michaels, 2001: 116). Academics claim that all theories of change are ‘reducible to this one idea of Kurt Lewin’s’ (Hendry, 1996: 624), and practitioners boast that ‘the most powerful tool in my toolbox is Kurt Lewin’s simple three-step change model’ (Levasseur, 2001: 71).

Many praise Lewin, the man of science, the ‘great experimentalist’ (Marrow, 1969: ix), for providing the solid basis on which change management has developed. Management textbooks begin their discussions on how the field of managing change developed with Lewin’s ‘classic model’ and use it as an organizing schema. The following words of Edgar Schein describe the regard that Lewin came to be held in:

I am struck once again by the depth of Lewin’s insight and the seminal nature of his concepts and methods . . . [they] have deeply enriched our understanding of how change happens and what role change agents can and must play. (Schein, 1996: 46)

CATS has come to be regarded both as an objective self-evident truth and an idea with a noble provenance.

In recent years, some have disparaged Lewin for advancing an overly simplistic model. For example, Kanter et al. (1992: 10) claim that ‘Lewin’s . . . quaintly linear and static conception – the organization as an ice cube – is so wildly inappropriate that this is difficult to see why it has not only survived but prospered’. Child (2005: 293) points out that Lewin’s rigid idea of ‘refreezing’ is inappropriate in today’s complex world that requires flexibility and adaptation. And Clegg et al. (2005: 376) are critical of the way in which Lewin’s ‘simple chain of unfreeze, move, refreeze [which has become] the template for most change programs’, is just a re-packaging of a mechanistic philosophy behind ‘Taylor’s (1911) concept of scientific management’. Yet others have leapt to Lewin’s defence, claiming that the representation of his work and CATS is one-sided and partial. They claim that CATS represents just a quarter of Lewin’s canon and must be understood in concert with his other ‘three pillars’: field theory; group dynamics and action research (Burnes, 2004a, 2004b); and that contemporary understandings of field theory neglect Lewin’s concern with gestalt psychology and conventional topology (Burnes and Cooke, 2013). But even those who seek to correct misinterpretations of Lewin’s other ideas relating to change, couch these within a belief in the foundational importance of CATS (Dent and Goldberg, 1999).

It seems that everybody in the management literature accepts CATS' pre-eminence as a foundation upon which the field of change management is built. We argue that CATS was not as significant in Lewin's writing as both his critics and supporters have either assumed or would have us believe. This foundation of change management has less to do with what Lewin actually wrote and more to do with others' repackaging and marketing.

By adopting a Foucauldian approach, we first outline the dubious assumptions held about Lewin and CATS, how this framework and the noble founder claimed to have discovered it took form as a foundation of change management, and was then further developed to fit the narrative of a field that has claimed to build on and advance beyond it. In this light, it is little wonder that those who know only a little of Lewin are surprised that he could have been so simplistic, and that those with a stake in seeing the field of change management develop and grow would see more sophistication and complexity in CATS that others had supposedly missed.

By going back and looking at what Lewin wrote (particularly the most commonly cited reference for CATS, 'Lewin, 1947': the first article ever published in *Human Relations* published just weeks after Lewin's death), we see that what we know of CATS today is largely a post hoc reconstruction. Our forensic examination of the past is not, however, an end in itself. Rather, it encourages us to think differently about the future of change management that we can collectively create. In that spirit, we conclude by offering two alternative future directions for teaching and researching change in organization inspired by returning to 'Lewin, 1947' and reading it anew.

Dubious assumptions

Students of change management, and management generally, are informed that Lewin was a great scientist with a keen interest in management, that discovering CATS was one of his greatest endeavours, and that his episodic and simplistic approach to managing change has subsequently been built upon and surpassed. However, the more that we looked at the history of CATS, the more the anomalies between the accepted view today, and what Lewin actually wrote, came into view.

Our first observation was that referencing of Lewin's work in this regard is unusually lax. A footnote to an article by Schein (1996) on Lewin and CATS explains that:

I have deliberately avoided giving specific references to Lewin's work because it is his basic philosophy and concepts that have influenced me, and these run through all of his work as well as the work of so many others who have founded the field of group dynamics and organization development. (Schein, 1996: 27)

This explanation of the unusual practice of writing an article about a theorist who has been a great influence without making any references to his work, despite referencing the work of others who have been less influential, encouraged us to look further. Most who write about CATS, if they cite anything, cite 'Lewin, 1951', *Field Theory in Social Science*. This is not a book written by Lewin but an 'edited compilation of his scattered papers' (Shea, 1951: 65) published four years after his death in 1947. *Field Theory* was edited by Dorwin Cartwright as a second companion volume to an earlier collection of Lewin's works compiled by Kurt Lewin's widow, with a foreword by Gordon Allport (Lewin, 1948).

Normally in academic writing, providing a name and date reference without a page number implies that the idea, example or concept referred to is a key aspect of the book or article. Of the nearly 10,000 citations to 'Lewin, 1951' listed on Google Scholar, none of the first 100 (that is, the most highly cited of those who cite Lewin), provides a page reference. But despite this, mention of CATS in *Field Theory* is devilishly difficult to find. It is the subject of just two short paragraphs (131 words) in a 338 page book (1951: 228).¹

As one reviewer of the day makes clear, Lewin 1951 contains 'nothing, other than the editor's introduction, that has not been published before' (Lindzey, 1952: 132). And the fragment that would be developed into the CATS model is from an article published in 1947 titled 'Frontiers in Group Dynamics': the first article of the first issue of *Human Relations* (Lewin, 1947a). It is buried there in the 24th of 25 sub-sections in a 37 page article. Unlike the other points made in *Field Theory* or the 1947 article, no empirical evidence is provided or graphical illustration given of CATS, and unlike Lewin's other writings, the idea is not well-integrated with other elements. It is merely described as a way that 'planned social change may be thought of' (Lewin, 1947a: 36; 1951: 231); an example explaining (in an abstract way) the group dynamics of social change and the advantages of group versus individual decision making. It appears almost as an afterthought, or at least not fully thought out, given that the metaphor of 'unfreezing' and 'freezing' seems to contradict Lewin's more detailed empirically-based theorizing of 'quasi-equilibrium', which is explained in considerable depth in *Field Theory* and argues that groups are in a continual process of adaptation, rather than a steady or frozen state. Apart from these few words published in 1947 (a few months after Lewin's death), we could find no other provenance for CATS in his work, unusual for a man lauded for his thorough experimentation and desire to base social psychology on firm empirical foundations.

A book edited by Newcomb and Hartley contains a chapter claimed to be 'one of the last articles to come from the pen of Kurt Lewin' (Newcomb and Hartley, 1947: v). It combines some ideas from the *Human Relations* article but gives a little more prominence to CATS, labelling it a 'Three-Step Procedure' and attempting to link it to some empirical evidence. However, this evidence seems completely disconnected from the 'procedure'. The chapter begins (Lewin, 1947b: 330) by explaining that: 'The following experiments on group decision have been conducted during the last four years. They are not in a state that permits definite conclusions'. None of the other chapters is framed in such a tentative manner. And the editors acknowledge that the book went to press after Lewin's death (Newcomb and Hartley, 1947). All of which suggests that Lewin may not have had the chance to fully revise the paper or that elements might have been finished by the editors.

Despite the lack of emphasis on CATS in Lewin's own writing, the impression is that Lewin gave great thought to CATS. Lewin's recent defenders see CATS as one of his four main 'interrelated elements' (Burnes and Cooke, 2012: 1397) that Lewin 'saw . . . as an interrelated whole' (Burnes, 2004a: 981); or one of 'Lewin's four elements' (Edward and Montessori, 2011: 8). But there seems no evidence for this. Having searched Lewin's publications written or translated into English (67 articles, book chapters and books), the

Lewin archives at the University of Iowa, and the archives at the Tavistock Institute in London where *Human Relations* was based, we can find no other origin for CATS.

Moreover, CATS was not regarded as significant when Lewin was alive or even in the period after his death. Tributes after Lewin's death acknowledge many important contributions, such as action research, field theory and his concept of topology. But Alfred Marrow (1947) does not mention CATS, nor does Dennis Likert, in the same issue of *Human Relations* in which Lewin's 1947 article appears. Ronald Lippitt's (1947) obituary reviews 10 major contributions and CATS is not one of them. None of the many reviews of 'Lewin, 1951' mentions it as a significant contribution (e.g. Kuhn, 1951; Lasswell, 1952; Lindzey, 1952; Shea, 1951; Smith, 1951), and neither does Cartwright's extensive introduction to the volume. Papers on the contribution of Lewin to management thought presented by his daughter Miriam Lewin Papanek (1973) and William B Wolf (1973) at the Academy of Management conference do not refer to CATS. Twenty-two years after Marrow wrote his obituary, his 300-page biography of Lewin does make brief mention of CATS as a way that Lewin had 'considered the change process' shortly before his death, but notes that Lewin had 'recognized that problems of inducing change would require significantly more research than had yet been carried out' (1969: 223). Even a three volume retrospective on the Tavistock Institute, which refers extensively to Lewin's work and the way he inspired other researchers, is silent on CATS (Trist and Murray, 1990, 1993; Trist et al., 1997).

A few writers cite Lewin's chapter in Newcomb and Hartley when referring to CATS. A significant number cite the 1947 *Human Relations* article. But far more cite '*Field Theory*, 1951'. And it is unlikely that many who cite Lewin now read his words: a lack of connection that may explain some interesting fictions. The most significant may be the invention of the word 'refreezing' as the full-stop at the end of what would become change management's foundational framework – a term that implies that frozen is an organization's natural state until an agent intervenes and zaps it (as later textbooks promoting Lewin's 'classic model' would say 'refreezing the new change makes it permanent', Robbins, 1991: 646).

Lewin never wrote 'refreezing' anywhere. As far as we can ascertain, the re-phrasing of Lewin's freezing to 'refreezing' happened first in a 1950 conference paper by Lewin's former student Leon Festinger (Festinger and Coyle, 1950; reprinted in Festinger, 1980: 14). Festinger said that: 'To Lewin, life was not static; it was changing, dynamic, fluid. Lewin's unfreezing-stabilizing-refreezing concept of change continues to be highly relevant today'. It is worth noting that Festinger's first sentence seems to contradict the second, or at least to contradict later interpretations of Lewin as the developer of a model that deals in static, or at least clearly delineated, steps. Furthermore, Festinger misrepresents other elements; Lewin's 'moving' is transposed into 'stabilizing', which shows how open to interpretation Lewin's nascent thinking was in this 'preparadigmatic' period (Becher and Trowler, 2001: 33).

Other disconnected interpretations include Stephen Covey noting the influence of 'Kirk Lewin' on his thinking about change (Covey, 2004: 325); and citations for articles titled 'The ABCs of change management' and 'Frontiers in group mechanics', both claimed to have been written by Lewin and published in 1947.² On further investigation, despite these articles being cited in respected academic books and articles (in Bidanda

et al., 1999: 417; Kraft et al., 2008, 2009) and sounding like something the modern conception of change management's founding father might have written (anyone simple enough to reduce all change to an ice cube might write about change being as easy or mechanical as ABC), they do not actually exist.

As noted earlier, scholars like Clegg et al. (2005: 376) and Child (2005: 293) have critiqued Lewin's work for being too simple or mechanistic for modern environments or unable to 'represent the reality of change' (Tsoukas and Chia, 2002: 570). Indeed, in recent years this has become something of a chorus, with a number of writers (e.g. Palmer and Dunford, 2008; Stacey, 2007; Weick and Quinn, 1999) associating 'classical "episodic" views' (Badham et al., 2012: 189) or 'stage models, such as Lewin's (1951) classic' (Tsoukas and Chia, 2002: 570) with the 'classical Lewinian unfreeze-movement-refreeze formula, which had guided OD work from its inception', but which was now inappropriate 'for the rapid pace of change at the beginning of the 21st century' (Marshak and Heracleous, 2004: 1051).

However, once again these prosecutions seem unrelated to what Lewin actually wrote. Lewin never presented CATS in a linear diagrammatic form and he did not list it as bullet points. Lewin was adamant that group dynamics must not be seen in simplistic or static terms and believed that groups were never in a steady state, seeing them instead as being in continuous movement, albeit having periods of relative stability or 'quasi-stationary equilibria' (1951: 199). Lewin never wrote his idea was a model that could be used by a change agent. He did, however, do significant research and re-published highly respected articles that argued *against* Taylor's mechanistic approach (Lewin, 1920; Marrow, 1969).

Perhaps the view of Lewin as a simplistic thinker emerges from his re-presentation later in management textbooks, where the major output of his life-work appears to be a rudimentary three-step model developed as a guide for managerial interventions. But it is hard to imagine that anybody with Lewin's background would hold such a simplistically ordered world-view. He studied philosophy and psychology. He worked at the Psychological Institute at the University of Berlin until 1933 and devoted himself to establishing a Psychological Institute at the Hebrew University in Jerusalem after leaving the growing anti-Semitic chaos of Germany. His first major article contrasted Aristotle and Galileo (Lewin, 1931), and 'undoubtedly one of the last pieces of such creative work from the pen of Kurt Lewin . . . mailed to the editor on January 3rd, 1947' (Schilpp, 1949: xvi–xvii), was a piece on the philosophy of Ernst Cassirer (Lewin, 1949). Lewin fled to the USA in 1933 to the School of Home Economics at Cornell University where he studied the behaviour of children. From 1935 to 1945 he was at the Iowa Child Welfare Research Station at the University of Iowa. While in Iowa, Lewin listed his title as 'Professor of Child Psychology'. But despite a highly dexterous mind and growing up amid real chaos and change, he is demeaned by modern texts that smugly claim that his CATS 'has become obsolete [because] it applies to a world of certainty and predictability [where it] was developed. [I]t reflects the environment of those times [which] has little resemblance to today's environment of constant and chaotic change' (Robbins and Judge, 2009: 625–628).

To summarize, CATS is claimed to be one of Lewin's most important pieces of work, a cornerstone, which it was not. Lewin is claimed to have developed a three-step

model to guide change agents, which he did not. Lewin is assumed to have given us unfreeze-change-refreeze, which is only 33 percent right (he only wrote unfreeze). Lewin is consequently dismissed as a simpleton, which is clearly not the case. In light of these anomalies, we sought to investigate how Lewin's CATS developed into such a seminal foundation.

Our initial thinking was that Lewin and CATS may fulfil a role in the formation of change management similar to that played by Aristotle's theories in the history of Psychology (Richards, 1996; Smith, 1988). The work of Michel Foucault has been utilized to explore this phenomenon of how fledgling fields seek to establish themselves and gain from showing a connection to, and growth beyond, a great man of philosophy or science. Other studies that have sought to critically examine assumed intellectual foundations of fields related to change management have utilized the approaches of Michel Foucault to highlight such foundational developments (e.g. Cummings and Bridgman, 2011, on Organization Theory; Garel, 2013, on Project Management; Wilson, 2013, on Leadership), and we sought to do likewise in this instance. Foucault has also been used to analyse the 'canonization' of Lewin's legacy, the view that planned change can be managed in a linear fashion, and the notion of the change agent as a rational and neutral actor (Caldwell, 2005, 2006). While we share an interest in critiquing mainstream approaches to change management and Lewin's hagiography and misrepresentation (Burnes, 2004a, 2004b; Burnes and Cooke, 2012, 2013), our particular objective is to analyse the movement, formation and reproduction of CATS's form as a foundation of our thinking about change management.

The counter-historical approaches of Michel Foucault and exploring the career of an idea

The careers of ideas are sometimes influenced as much by their reception as their initial articulation. (James A Ogilvy, *Many Dimensional Man*, 1977: i)

Michel Foucault's work (1980: 70) sought to counter conventional histories that presented a 'progress of consciousness' leading to our present 'advanced' state: histories that legitimated the current establishment. Foucault instead examined 'the emergence of [an established field's] truth games'. Thus, against histories that traced psychology's uncovering of the truth about madness, Foucault (1965: 142) highlighted the role of psychology's history in presenting psychology as at once building on noble foundations (Socrates, Aristotle) while innovating to bring forth a new 'happy age in which madness was at last recognized and treated in accordance with a truth to which we had long remained blind'. Foucault claimed that this history was not objective but written as anticipation: the past viewed in terms of making sense of the present's great 'heights'.

What sustains our belief in what we subsequently take to be as advances in knowledge built upon these foundations? Foucault's answer was a power network 'of relations, constantly in tension, in activity' (Foucault, 1977a: 26). These networks grow as texts and surrounding discourse educates initiates by reduplicating and re-interpreting events and assumptions taken to be important. Conventional histories contribute further to these production/repression networks as they connect disparate events and interpretations into

a continuum to show that the present rests upon grand origins, profound intentions and immutable necessities, and, in a circular manner, these identified origins become 'the site of truth that makes possible a field of knowledge whose function is to recover it' (Foucault, 1977b: 144). But while such networks 'perpetually create knowledge' by producing 'domains of objects and rituals of truth', they also repress by concealing other possibilities (Foucault, 1980: 52, 194). Subsequently, Foucault defined his overarching counter-historical aim as raising doubt about what was promoted as the truth of the foundation and evolution of objects in order to 'free thought from what it silently thinks, and so enable it to think differently' (Foucault, 1985: 9; also Foucault, 1977b: 154; Dreyfus and Rabinow, 1983: 120).

Foucault developed many approaches for developing such counter-histories. However, to analyse the formation of CATS into the form we recognize today we utilize a particular perspective developed by Richard Dreyfus and Paul Rabinow (1983) in discussion with Foucault: interpretive analytics (IA). IA combined Foucault's interest in what he called archaeology and genealogy. Archaeology studied the effects of episteme, an archaeological strata or: 'world-view[s] . . . which imposes . . . norms and postulates, a general stage of reason [and] a certain structure of thought' (Foucault, 1976: 191) on the development of knowledge objects; the 'conditions of possibility' for acceptable knowledge at particular times (Foucault, 1970: xxii). Genealogy, on the other hand, traced the networks of relations that procreated knowledge's formation over time. The archaeological side of IA 'deals with the system's enveloping discourse . . . The genealogical side of analysis, by way of contrast, deals with series of effective formation of discourse' (Foucault, in Dreyfus and Rabinow 1983: 105; see also Foucault, 1985: 12).

Initiates to the sub-field of change management are generally shown a progress of consciousness that begins with CATS as a key foundation, the first and now 'classic' theory, and culminates in the current 'state of the art'. Our counter-history aims to 'unfreeze' CATS, to show how it takes form and develops into something far more than its author ever intended. We examine how its author moves from a minor figure, into a grand founder whose application of science enabled the discovery of the fundamentals of change management, to the well-meaning simpleton who must be improved upon. We follow the formation of the elements after Lewin's death that would influence our view of CATS as a foundational model for the problematization of change that spiked in the 1980s. Then we explore the episteme particular to the 1980s that made possible the form of a new truth of CATS that we see in today. Beyond this, we analyse the reduplication, continued formation and hardening of the historical view of CATS and its author beyond the 1980s, and the development and continuity of many of the questionable interpretations that help maintain today's belief in CATS as a noble, necessary, but overly simplistic foundation upon which we have built but moved beyond.

In so doing, we find that CATS develops a life and career of its own that follows the patterns outlined by other researchers who have taken a critical perspective on the dynamics of disciplines: how preparadigmatic disciplines allow for greater diversity of inputs and interpretations (Becher and Trowler, 2001); the quick 'fractal' splitting of management into sub-fields each with their own distinct but related history as the space afforded to business studies opens up (Abbott, 2001: 10); how particular competing conceptions win out over others and gradually conceal them from view (Abbott, 2001); how

this fast growth facilitates exponential reduplication of winning frameworks (Whitley, 1984); and how in this process fields seek to generate, in somewhat contradictory fashion, innovations that comply with collectively agreed concepts (Whitley, 1984). In conclusion, having outlined the evolution of CATS into the foundation upon which much else in the sub-field builds, we step back behind that 1980s episteme to when change management's foundations could have been thought differently, in order to offer alternative historical pathways and futures for the field today.

The formation and form of CATS

Kurt Lewin introduced two ideas about change that have been very influential since the 1940s . . . [one] was a model of the change process . . . unfreezing the old behavior; moving to a new level of behavior; and refreezing the behavior at the new level. (What the 5th [1990: 81] edition of *Organizational Development* by French and Bell records about Lewin and CATS).

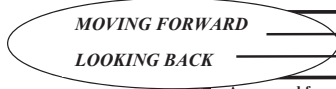
‘ (What the early [1973–1983] editions of *Organizational Development* record about Lewin and CATS [i.e. nothing]).

Genealogical formation

Prior to the early 1980s, Lewin's CATS was largely unseen; by the end of the 1980s, despite the fact that its form was anomalous to what Lewin actually wrote or likely intended for the idea, it was the basis of our understanding of a fast growing field: change management. The early seeds of this formation may be discerned in the reception afforded CATS in the work of two key interpreters in the small but growing field of management studies: Ronald Lippitt and Edgar Schein in the 1950s and 1960s.

Ronald Lippitt was Lewin's PhD student. Despite not regarding CATS as worthy of mention in his 1947 tribute to Lewin after his death, Lippitt remembers how important it is a decade later. Lippitt explicitly and frequently cites what he calls Lewin's 'three phase' model (Lippitt et al., 1958: 129) as the basis for his seven phase model (see Figure 2), designed to be used by what are termed, in a new turn of phrase, 'change agents', in the book *Dynamics of Planned Change*. The focus on the model to be used by change agents starts to turn Lewin's afterthought about change into an instrument.

It is not known why or how Lippitt and his co-authors came back to Lewin's idea (despite dedicating the book to Lewin they only cite his 1947 *Human Relations* article and a 1943 study on food habits), but it was useful to claim Lewin, the venerated master, as a foundation. Particularly as commentators of the day noted that it was not clear what else the model of Lippitt et al. was based on. Even though the preparadigmatic nature of management studies allowed for bolder interpretations than we might expect today, eyebrows were raised in related fields. A review of the book in a psychiatry journal claims that the 'influence of Kurt Lewin is obvious but liberally combined with any current school of psychotherapy' (Senft, 1960: 316). Another in *American Sociological Review* notes that: 'since the authors have not attempted to test any one set of hypotheses, many more questions are raised than answered' (Brotman, 1958: 342).



Not long after Lippitt's work was published, other fragments emerged that would reinforce what we now consider to be the basis of change management. The first record we can find of refreezing being used in a management context was by Schein in a 1961 article 'Management development as a process of influence'. Schein, who cites the 1947 *Human Relations* article, also describes the three elements as 'phases'. Although he does not cite Lippitt in his first interpretations of CATS, by 1965 in a more considered work with Warren Bennis, Lippitt et al.'s work is widely acknowledged, particularly with respect to furthering our knowledge of what Schein and Bennis term 'change agency' (1965: 206).

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change', Schein creates tables that list his development of Lewin's idea with more clarity. In so doing, CATS becomes a basis for a seven-stage 'Model of attitude change' (Schein and Bennis, 1965: 275 – see Figure 2); and a seven-stage approach to process consulting (Schein, 1969).

While Schein originally acknowledged that what he had developed was a 'derivation of the change model developed by Lewin' (1961: 62), later works will attribute more authority to Lewin. By 1965, CATS will be described as 'what Lewin described as the stages of change' (Schein and Bennis, 1965: 275). By 1985, 'Lewinian change theory' (Schein, 1985: 309). By 1992, what Lewin found to be 'the fundamental[s] underlying any change in a human system' (Schein, 1992: 298). It is these formations, rather than what Lewin actually wrote, that will enable the criticism of Lewin: that his model is too instrumental, too simplistic and mechanistic for the complexities of the modern world.

While Schein and Lippitt had good reason to invoke Lewin and develop his sketchy idea, another less directed element would later fill in the background to the emerging freezing/refreezing metaphorical model. The Tavistock Institute was greatly influenced by Lewin, but, independent of him, Europe's leading think-tank on the fledgling field of management had launched a major research project on resistance to change that would influence British management thinking for many subsequent years. This was The Glacier Project, named for the company that had agreed to be the subject of the study, the Glacier Steel Company. One might think that if Lewin's CATS had been seen as a big deal at this time, a link between a great man's model that spoke of unfreezing/refreezing and a project on resistance to change called Glacier would be made much of. But not yet. Long-time Lewin fan and project leader Eliot Jacques' (1951) book on the project does not mention CATS.

In later years, these disparate elements – Lippitt and Schein's interpretations and the glacial freezing/unfreezing imagery – would accumulate into the historical narrative we accept today. But up until the late 1970s the idea of CATS as a foundational theory authored by the great Kurt Lewin had little influence on the mainstream of management education. In fact, the first comprehensive histories of management either do not mention Lewin at all (George, 1968); or mention him, but only in relation concepts other than CATS (Wren, 1972). The first edition of *Organizational Behavior: Concepts and Controversies*, by Stephen Robbins (1979) – typical of the new form of comprehensive management textbooks that still guide teaching today – does not mention Lewin in the main text. However, a chapter on organizational development (OD) states that: 'In very general terms, planned change can be described as consisting of three stages: unfreezing, changing and refreezing' (Robbins, 1979: 377). A footnote to this statement cites 'Lewin, 1951'. But the lack of a page reference and Robbins' arrangement of the terms suggests some other influence. Much more would be made by looking back at CATS, moving forward into the 1980s and beyond.

Archaeological form

Stepping back from the genealogy of the fragments that would be ordered into the history of change management at a later stage, an archaeological view may help explain how

these fragments begin to be enveloped toward the form of Lewin's 'classic model' that we accept today. The 'conditions of possibility' of that version of CATS fit with particular problems, viewpoints and values that framed the development of management knowledge in the 1980s. Below, we examine five of these conditions that promoted the development of 'Lewin's classic model' as a key foundation of change management.

1. American industry and management consultancies seek to compete differently. Around 1980 a new phenomenon occurred: pop-management. Demand was fuelled by a growing group made anxious by their own status mobility, the rise of Japan's business culture and the comparative decline of US industry. An enlarged managerial class, eager for the knowledge that would help them climb the ladders of the new knowledge economy, turned books like *Theory Z* (Ouchi, 1981), *The Art of Japanese Management* (Pascale and Athos, 1981) and *In Search of Excellence* (Peters and Waterman, 1982) into best-sellers.

Supply was fuelled by management consultancies. McKinsey & Co moved to head off its rapidly growing competitor Boston Consulting Group (whose revenues in the late 1970s were growing rapidly aided by popular new frameworks like the BCG matrix) by developing saleable knowledge through linking up with academics such as Tony Athos at Harvard Business School. From this marriage came the McKinsey's Seven-S model, which borrowed the form of a model developed by Athos' Harvard colleague JP Kotter (1978: 67). McKinsey's approach demonstrated the potential of academics and consultants coming together to develop memorable and applicable 'truths' for managers seemingly backed by 'university quality' research.

2. Growing associations of business academics concerned to 'be relevant'. Initially, many in the Academy were critical of pop-management. Schein, in a *Sloan Management Review* article reviewing *Theory Z* and *The Art of Japanese Management* (1981: 58, 62, 63), noted that 'neither book refers to the growing literature', that their arguments were supported by a 'meagre data base' and their 'quick fix . . . prescriptions' were 'glib', 'superficial' and 'naïve'. Gradually, however, the Academy began to fear its own irrelevancy in the eyes of the growing audience of managers wanting actionable knowledge. In 1985, a special Academy of Management symposium devoted to organizational change was organized. Its publicity materials noted that executives were wrestling with the challenge of keeping organizations competitive and that 'an examination of what these executives and their organizations were doing would probably reveal that, in fact, many of the things being tried were consistent with research and theory in organizational behavior' (Pfeffer, 1987: 31). The highlights of this symposium were published in the first issue of *The Academy of Management Executive*, a new 'linking endeavor' between academics and practitioners (Burke, 1987: 5). One article related Lewin's notion of the 'unfreezing phase of the change process' (Beer, 1987: 52) to a practitioner case. Others distilled their insights into simple linear diagrams (Barnes, 1987; Beck, 1987).

3. Knowledge needed to be presented in an attractive scientific-looking package. Many of the best-known and best-selling management textbooks of today were first published in the late 1970s and early 1980s (e.g. Baron, 1983; Cummings and Worley, 1990 [first edition

written by Huse, 1975]; Robbins, 1979; Wheelen and Hunger, 1983). But later editions took on a new appearance in the 1980s. One change mirrored the new presentation of pop-management and ‘bridging’ journals like *The Executive*: the insertion of more simple frameworks and ‘step’ diagrams. These translations of knowledge into diagrams were supported by changes in publishing technology, but looking back at the transition that these books make it is clear that something more is happening. The diagrams were excellent tools for making teaching to increasingly large groups of management students easier (in the next decade slide packs associated with texts would start to be promoted). At the same time, they made the subject look both more scientific *and* practically applicable.

The will-to-science in management studies may be traced to two major reviews prompted by mass expansion in US business education and the perceived threat to academic standards. The Carnegie Foundation’s Report argued that business schools must pursue the development of a ‘systematic body of knowledge of substantial intellectual content . . . in the form of a set of business sciences’ (Gordon and Howell, 1959: 71–72). Similarly, The Ford Foundation’s report claimed that ‘the need is not for any kind of research...but for research which meets high scientific standards’ (Pierson, 1959: xv). While these views became widely shared over the next two decades, some stakeholders were beginning to question the impact of this scientific drive on business education. A 1980 study by Professors Hunger and Wheelen (who would soon write perhaps the most successful strategic management textbook – now in its 13th edition) found that ‘Most [respondents] took the stance that schools have gone too far with quantitative methods [and] modelling [and] felt it was time to return to the teaching of more practical skills and techniques’ (Hunger and Wheelen, 1980: 29). Frameworks provided the ideal vehicle toward this aim, one that still looked like scientific language was being deployed.

In change management, one can discern this will to appear more like a modern science through frameworks, and particularly prescriptive n-stage models, gathering strength in the 1970s. While Gordon Lippitt’s book *Visualizing Change* (1973) refers to Lewin liberally and is replete with drawings, these are not in the linear-episodic form that we now associate with CATS. But a new breed was emerging. For example, Greiner’s (1972: 41) article ‘Evolution and revolution as organizations grow’ begins by claiming that: ‘To date, research on organizational development has been largely empirical, and scholars have not attempted to create a model’. In response, Greiner showed in a set of diagrams that organizations move through a ‘series of developmental phases’. Then in order to better arm managers, he (1972: 46–47) outlines ‘specific management actions’, ‘solutions’ and ‘explicit guidelines for managers’ (see Tushman, 1974 for a similar approach).

This will to present knowledge in generic frameworks or step-by-step prescriptions, when combined with the other main development in management texts in the 1980s – chapters containing clearly articulated sub-fields covering discrete but connected bodies of knowledge each with their own historical provenance – saw the form of the modern management textbook take shape: a form that listed ideas and frameworks in chronological order progressing from early foundations to the latest thinking.

4. A space created by the decline of organizational development. Pioneers from the existing sub-field that dealt with change, organizational development (OD), might have been at the forefront of the new textbook chapters that dealt with this issue. However, a widening

group of academics, consultants, publishers and managers interested in change, criticized OD for being preoccupied with humanistic and democratic values. OD practitioners typically adopted the role of 'facilitator' or 'process consultant' – roles that were divorced from strategy, technology and operations (Marshak and Heracleous, 2004; Worren et al., 1999).

This perceived 'gap' encouraged the emergence of 'a rival, more business-oriented approach referred to as change management' (Marshak and Heracleous, 2004: 1050). The transition is captured by Palmer et al. (2009), who analyse articles in the two sub-fields published between 1980 and 2006. OD's dominance was total in 1980, but by 1993 change management had completely surpassed it. Indeed, the 6th 1995 edition of *Organizational Development* (the text quoted at the head of this section) would be the last.

5. A worthy academic provenance is required. In the modern age, outlining worthy academic provenance is a useful way to seek a field's place at the table of legitimate subjects (Tsoukas and Cummings, 1997). To further its inclusion in the Academy and in the minds of students, managers and consultants, a history of how change management had evolved from serious scholarship on long-standing issues and not just the opportunistic and instrumental concerns of the 1980s would be useful. For a sub-field like change management that sought to map itself onto 'fractally distinct' but related subjects like psychology and sociology (Abbott, 2001), Lewin, the social psychologist, was a perfect intellectual 'father'. The idea that one of the 20th century's most innovative social scientists, with an outstanding track record of theory development based on solid experimentation and lengthy empirical observation, who the first and best thinkers directly concerned with OD and change based their thinking on, was embraced. That this gem could be polished by making something that Schein, Lippitt and others claimed Lewin had promoted into a diagram with stages that could have been applied prescriptively by prospective change-agents, would provide a fine foundation to build further upon. By the end of the 1980s, Lewin's CATS: seemingly natural, but academically proven *and* relevant to managers; and Lewin's supposed promotion of it as a tool for intervening to lead change, would become the foundation of change management, and the origin story passed on to initiates.

Genealogical formation 2

The new form of CATS made possible by the conditions described above was still in a nascent state throughout the 1980s, but throughout this decade and beyond the formation that sustained this truth was maintained, hardened and was subtly developed. Given most management initiates only encounter a deeper history of management and its sub-field (as opposed to direct precedent to their own concerns) in introductory courses and texts, management textbooks may provide the best insight into the conventional view of management's origins (Jones and Khanna, 2006; Payne et al., 2006; Smith, 2007; Van Fleet and Wren, 2005). In order to gauge how different authors and texts enable and sustain this form and formation of CATS, we focused our attention on top selling textbooks that had been through multiple editions, such as Kreitner and Kinicki's *Organizational Behavior*, Greenberg and Baron's *Behavior in Organizations* and Schumacher et al.'s

Management in Organizations. In order to illustrate the developments we observed, we present here an analysis of Robbins' *Organizational Behavior*, first published in 1979 and now in its 15th edition. Robbins' presentation is typical of that in other mainstream textbooks, but we focus on it here because its longevity and consistency of authorship mean its narrative begins prior to the epistemic conditions described in the previous section, continuing right through to the present day, and because of its ubiquity. It is 'the best-selling organizational behaviour textbook, not only in the U.S.A. but also internationally' (Robbins et al., 2009: iii).

We noted earlier the lack of attention paid to Lewin in the first edition of Robbins in 1979. But, reflecting the enveloping episteme outlined in our brief archaeology above, things developed through the 1980s and beyond. The second edition of Robbins, published in 1983, is retitled *Organizational Behavior: Concepts, Controversies and Applications* (emphasis added), but the text in the second edition touching on CATS is the same as in the first. But by 1986, and the third edition, 'Resistance to Change', which was previously reviewed in a few short paragraphs after the mention that 'change can be described as consisting of three stages: unfreezing, changing and refreezing' has become a sub-section in its own right. This is placed before another new sub-section titled 'The Change Process' (1986: 457). This begins: 'When resistance to change is seen as dysfunctional, what actions can be taken? Reducing resistance to change can be best understood by considering the complexity inherent in the change process'. Accompanying the text is a new diagram showing a linear progression from unfreezing, to movement and refreezing (in the form presented in Figure 1 and at the bottom of Figure 2). The text is now not just describing stages by which change may occur but a way of solving (i.e. better managing) resistance to change. A footnote further on in the text links to 'Lewin, 1951', but the figure is not attributed or linked to Lewin in any way. (Kreitner and Kenicki attempt to draw firmer links to CATS' origins, but those who follow them may be disappointed. Their footnote invites readers to go to Lewin, 1951, 'for a full description of Lewin's change model'.)

The fourth edition (Robbins, 1989) is the same as the third, apart from new margin summary points that provide definitions of Unfreezing and Refreezing. However, a new section, 'The OD Consultation Process', explains how 'The unfreezing-movement-refreezing of planned change' can be 'elaborated upon to orient it more specifically to the needs of the OD practitioner or consultant' (1989: 534). This elaboration of Lewin is now supported by references to Burke's *Organization Development*. Burke, the founding editor of *The Academy of Management Executive*, quoted in our Archaeology section, glowingly describes Lewin as 'the theorist among theorists' (Burke, 1982: 30), and uses the similarities between Lewin's and Ronald Lippitt's model of planned change to claim an underlying fundamental or generic approach to change on which he bases his development. In this edition of Robbins, an additional reference to Kolb and Frohman (1970b) appears to provide a stronger link back to Lewin. But while Kolb and Frohman's seven-stage framework, which Robbins copies and adapts, looks useful for consultants, neither it nor the cited MIT Working Paper on which it is based (Kolb and Frohman, 1970a), make any mention of Lewin or CATS. Instead, they claim their framework was based on Lippitt et al. and Schein. Perhaps in the preparadigmatic 1970s they did not see the link to Lewin, or the need to find a link to a deeper foundation?

By 1991's 5th edition, change management's self-supporting view of Lewin's CATS has been created. While the characterization of Lewin is now significantly different from the first edition, the reference is unchanged 'Lewin, 1951' (still no page reference). There are two other innovations in the 5th edition: review/discussion questions at the end of the chapter, including: '8. How does Lewin's three-step model of change deal with resistance to change?' (1991: 653); and a section called Point-Counterpoint (1991: 651), where old theories, like 'Lewin's three-step model' are contrasted with more recent, complex (i.e. better) thinking. Lewin is now being given a second role. He is now both a noble founder and an overly simplistic man whose thinking has been surpassed in our increasingly complex world.

In the 6th edition, 'Lewin's Three-Step Model' is given a new introduction; the heading: 'Approaches to Managing Organizational Change' followed by 'Now we turn to several popular approaches to managing change. Specifically, we'll discuss Lewin's classic three-step model of the change process and present the action research model' (1993: 676). By 1993 CATS has become the 'classic' in a line-up of approaches managers can use to manage change. The linear three-stage diagram that first appeared in 1986 without title or attribution is now boldly titled 'Lewin's Classic Three-Step Model of the Change Process'. Curiously, while Lewin spent a large portion of his life working on action research, and little to none on CATS, 'Lewin 1951' continues to be cited as the basis for the section on the latter, but no reference at all is made to Lewin's work in Robbins' pages on action research.

Then, from this point on, subsequent editions follow the pattern set in the 6th with two gradual developments. The list of 'Approaches to Managing Organizational Change' grows longer (by the mid-2000s there is a list of four: 'Lewin's classic', action research, OD, and 'Kotter's eight-step plan' (Robbins and Judge, 2009: 625–628). And the Point-Counterpoint staged debate becomes more pointed, with the two opposing sides (old/bad versus new/better) lined up against each other on the same page. The anti-'Lewinian/CATS' counterpoint is clear that Lewin's approach 'has become obsolete. It applies to a world of certainty and predictability . . . and it reflects the environment of those times. It treats change as occasional disturbance in an otherwise peaceful world. However, this paradigm has little resemblance to today's environment of constant and chaotic change' (Robbins, 2001: 574). This development of Lewin certainly takes us a long way from the actuality of Lewin's life and work. But this foundation myth will dovetail well with, and mutually support, developments in the annals of management history more broadly, which chart the field's general progression from the noble but simple toward today's great heights.

As described earlier, the first editions of Wren's *Evolution of Management Thought* (1987) make no mention of Lewin's views on change, describing instead Lewin's work on group dynamics, topology and field theory. But the 4th edition in 1994 inserts a new paragraph into this discussion telling us that 'Lewin viewed change behaviour as a three-step procedure' (Wren, 1994: 279), despite it jarring with Lewin's contributions expressed earlier in Wren's chapter: how 'a group was never in a steady state of equilibrium but was in a continuous process of mutual adaptation . . . with continuous movement and change' (Wren, 1972: 324; 2009: 336). This is supported by a correctly attributed quotation from Lewin's chapter in the Newcomb and Hartley book of 1947, and an explanation that

'Lewin's three-step procedure provided a foundation for future action research and organizational change and development techniques' (Wren, 1994: 279). The 6th edition of Wren (2009: 441) further expands on Lewin's contribution and the work of 'his disciples' and notes how later experts like Argyris and Schön 'echoed Kurt Lewin'.

Robbins and Wren are not lone voices. They are part of a wider self-reinforcing network, and this is what makes it difficult to see behind this formation and think otherwise. Conventional and critical textbooks, history books and articles relate and reinforce the current accepted form of 'Lewin's CATS'. The most recent textbook that we were able to consider before writing this article provides a good example with which to conclude. The Asia-Pacific edition of *Organizational Change Development and Transformation* (Waddell et al., 2014), begins its second chapter 'Understanding Change' with a subsection on 'Lewin's change model': 'One of the early fundamental models of planned change was provided by Kurt Lewin' (p. 33). This opening statement is footnoted 'Lewin, 1951'. No other reference to Lewin is provided in the book, but there are references to the work of Schein and Lippitt. French and Bell's link to Lewin in their *Organizational Development* described in our Archaeology section also comes not from Lewin's work directly, but through Schein's 'improvements' (Lewin's 'model' is illustrated by a table by Schein from his 1969 book *Process Consultation*, which breaks Lewin's consideration into steps and sub-steps); and Lippitt et al.'s (1958) 'modifications' (which 'lays out the logical steps involved in OD consulting'). Like Robbins' 4th edition onwards, French and Bell's 5th edition (1995) notes the further 'developments' by Kolb and Frohman, and Burke. And these ideas are reconfirmed in the later book of organized seminal readings *Organizational Development and Transformation* (French et al., 2005: 105–106).

CATS has come a long way. It has become a vehicle by which, as Whitley (1984) describes, an academic field seeks to promote, paradoxically, innovations that follow collectively agreed fundamental concepts. Indeed, the fragment of 'Lewin's Three Steps' has become a solid foundation and inspiration for further development by many. As Figure 2 seeks to illustrate, when the epistemic conditions of the 1980s were receptive to 'truths' presented as scientifically grounded and practically useful or relevant and that could be related to worthy academic provenance, the emerging sub-field of change management provided these by looking back and patterning the interpreted fragments of Lewin, Lippitt et al., Schein and Bennis, Kolb and Frohman and others, into a foundation.

Moving forward within the enveloping episteme that helped form CATS as we tend to think of it today, this heritage helps to inspire, directly and perhaps subconsciously too, other 'n-step guides for change' (Collins, 1998: 83), often crossing back over into other sub-fields or popular themes of the day. For example, Nadler and Tushman's (1989) 'Principles for Managing Reorientation' and Kotter's (1995) '8 Steps of Leading Change' innovate while staying true to the Lewinian fundamentals. By the mid-1990s, management consultancy driven lists of 'principles' like those in 'Better Change: Best Practices for Transforming Your Organization', by the Price Waterhouse Change Integration Team (1995) also fit with the parameters while going into a lot more detail (there are 15 best practice principles), proudly claiming that 'the science of managing change and implementing serious improvements in large organizations is evolving rapidly' (1995: vi). And as other topics such as leadership and learning are problematized and become popular concerns, approaches like Tichy and Devanna's (1986) 'Three-Act Model of

Transformational Leadership', and Schein's 'Model of Change/Learning' (2010) can also claim Lewinian heritage.

Moreover, one can trace an interesting spiral of influence and inference in the work of Kotter in particular. Recall it was Kotter's framework that prefigured that first McKinsey model that helped to create the environment within which the diagramming of Lewin's CATS came to pass. There is an interesting reinforcing circle in Kotter's recent pop-management books – *The Heart of Change* (Kotter and Cohen, 2002); *Our Iceberg is Melting* (Kotter and Rathgeber, 2006) – with their use of the iceberg metaphors and penguin motifs. Whether these are attributable to the author or other employees of the publishers, they are so resonant of the ice imagery attributed to Lewin that it adds further mass to the network that promotes CATS foundational status.

Through this analysis of the form and formation of CATS we may observe how it has grown from a brief aside, to a useful fragment to buttress others' emerging ideas, to a way change might be thought of, to a fundamental underpinning, to an overly simplistic model that we have advanced beyond; from something that one might observe in a social group, to a tool for consultants and other change agents to instigate, manage resistance and make change happen. In short, we argue that CATS has become far more fundamental and instrumental than Lewin ever intended it to be. And while the re-interpretation of Lewin's musing and subsequent facsimiles have produced knowledge by providing confidence in a fledgling sub-field; a historical foundation on which subsequent research can be layered; an appearance of both noble foundations and continual advancement, it is a solid foundation only in the sense that it has hardened through a series of interpretations that have built upon each other, and this sedimentation may now repress other ways of seeing or organizing thinking about change. This has encouraged the sort of simplistic n-step thinking that attracted attention away from teaching its binary other, namely process thinking about change. Something that the vast majority of Lewin's work, and indeed the field of OD before change management took precedence, could have promoted.

Much now rests on and is invested in CATS: so much so that the idea that this foundation stone could be otherwise may be disturbing for many. But by revealing that CATS is contingent (its perceived contribution depends on the prevailing power-knowledge relations), by understanding that the field is built on questionable foundations, we may free things up and encourage thinking differently about change management's past and liberate substantial innovation in the present.

Recovering new frontiers

The object was to learn to what extent the effort to think one's own history can free thought from what it silently thinks, and so enable it to think differently. (Michel Foucault, *The Use of Pleasure*, 1985: 9)

CATS has taken on a life or career of its own and passing on an unthinking acceptance of it as a fundamental basis of thinking about change management may conceal and unwittingly repress other possibilities. Inspired by the critical historical approach of Michel Foucault, the primary purpose of this counter-history is to work against this kind of

repression, and thereby to enable ‘thinking differently’ for the future. This approach encourages us to see that our history could be different: it is both questionable and malleable, so we need not be bound by it. We are freer to find alternative origins that can promote new alternative frontiers, and thus greater plurality and creativity in thinking about change (Caldwell, 2006).

As GW Allport (in Lewin, 1948: xiii) says in his Foreword to the first volume of Lewin’s works published after his death – Lewin 1951 is the second – while some elements of that collection ‘outline his change experiments it is not in any sense a final report . . . Others . . . will [have to] carry . . . forward his program [because b]efore this vital work reached the stage of completion Lewin died’. Lippitt, Schein and others carried forward the elements that became the classic foundation of change management (i.e. CATS), but freed from the idea that this is a fundamental legacy from Lewin 1947/1951, we may be encouraged to look back again, to find alternative origins, and by association new frontiers, in these works.³

Lewin outlines many frontiers in the 1947 paper from which CATS is developed, but the two to which he devotes the most space, and which interconnect to most of the other frontiers he wrote about, are the first and the last in the article. The first is that when studying change the unit of analysis must be the group, not the individual (as psychology might direct us), the organization (as modern management studies is wont to think) or wider society (as may be the want of the sociologist). The last is a call for advances in mathematics and statistics, advances that would enable multiple variables relating to individuals and groups to be analysed as a system, so as to enable the other frontiers he has outlined to be reached. Seeing these two aims as foundations for the future could, we believe, have profound effects on research and teaching now.

To take the idea of the group as the key unit of analysis first, we might begin by considering the ideas that follow from this. Lewin’s (1947a) desire in this respect (which he relates to Cassirer’s view that physics and other sciences generally advance as they imagine and grant existence to new units – e.g. the atom, the molecule), links to the view that while change and constancy in the life of individual and in language may seem paradoxical, their co-existence in the life of a group is not; that understanding the force field made up of elements promoting change and elements promoting constancy is key; as is the idea that managing change is more effective if one communicates with and involves the group rather than individuals. Indeed, all of these things were born out in the one significant empirical study of corporate change that Lewin was involved in: the Harwood Manufacturing Corporation. For example, Lewin’s team (including Alex Bavelas, his graduate student from the University of Iowa, whose ‘Unpublished manuscript’ relating to the work at Harwood is heavily cited in Lewin’s 1947 *Human Relations* article) proved here that the approach to change that met with most success involved all stakeholders work-shopping specific processes and alternatives before agreeing the way forward (Marrow et al., 1967).

These insights are very different from those conveyed in the textbook chapters that teach managers about change.⁴ And as time passes they have become further from view. Over time, the focus has become more about the effective manager as individual change agent, responding to an increasing urgency for change in today’s society, faster-paced

than ever before, the resistance managers may face from individual workers, and the steps and frameworks that can be used to overcome resistance and embrace the need for change. Interestingly, while the 4th and 5th editions of Robbins' textbook (1989: 532; 1991: 645) contain a box called 'OB Close Up', with a description of the Harwood study, by the 6th edition Harwood has been replaced by a seven-step approach for 'changing attitudes with persuasive messages' (Robbins, 1993: 671).

But what if we were to actively recover Lewin's frontier in this regard? To start with teaching, it may be that those textbook chapters on change would be called Group Dynamics, or Managing Change and Continuity, instead of Change Management with its emphasis on the individual manager overcoming resisters (Dent and Goldberg, 1999). Such chapters might begin not with society's ever increasing need for change, or the problem of resistance, or the classic n-stage framework that a change agent can use, but with group behaviour and how this can connect to concepts like motivation, culture and leadership, covered in a textbook's earlier chapters. And, while the episteme we outlined earlier may have still steered textbooks toward reproducing frameworks that seemed relevant to managers, they need not be so crude, start with the idea of unfreezing or breaking resistance and then have the arrows all pointing in the same direction. Indeed, Lewin's later works are full of diagrams, but none of them are linear n-stage forms and his key notion of the force field is depicted with arrows going in opposing directions. If these were the first things that management students learnt, their perceptions of change, and subsequently the future of the field, might form differently.

In thinking about how research might be different we took as a sample of the latest leading-edge research on change the last six volumes of the *Academy of Management Journal* (2009–2014). Outside of a special issue that specifically called for 'process studies of group development' (Langley et al., 2009: 629), all bar two of the articles published relating to change took individuals as their unit. Furthermore, even those who take a different approach pay homage to the foundational status of CATS. For example, when Lewin is cited in the Process Special Issue (Klarner and Raisch, 2012: 163, citing Lewin 1947, no page reference) it is as what the process authors are opposed to: those who have only 'focused on single change events and the different phases'. And while Mantere et al. (2012: 190) present interesting new insights that relate sensemaking in group dynamics to organizational change, the framework they develop goes 'Organizational sensebreaking → Meaning void (unfreezing) → Sensegiving → Acceptance of strategy (nascent freezing)'. Lewin is not directly attributed, but he is there in the background when sensebreaking as the first phase is explained in the article (as Lewin, 1951 – no page reference given). One wonders how Mantere et al.'s framework might have been differently configured if CATS had not risen to prominence in the way we have described here, or how process views might be further advanced were Lewin seen as in their camp rather than something to be opposed – if Lewin was an early promoter of process approaches and group dynamics, not the academic foundation underlying simplistic n-stage models for change agents.

A second key frontier in Lewin 1947a is the idea that new mathematics will need to be developed to enable many of the other things that Lewin, who was ahead of his time in this respect, was keen to see advanced. The frustration that he caused the mathematicians who worked with him at the University of Iowa is legendary. Austrian Gustav Bergmann came there to work for Lewin as a research associate, but the association did

not last long as Bergmann became convinced that Lewin's program was impossible to capture (Heald, 1992). Lewin (1947a) wanted to see the effects of multiple variables relating to change: individual and group perceptions or expectations related to forthcoming change related to perceptions and recalibrations after the event; what he called objective and subjective or behavioural and cognitive phenomena. While such multi-variant analysis may have been difficult in the 1940s, this is not entirely the case now: advances in statistical techniques and computing power offer potential to examine not only relations among many variables at once but also changes in these variables over time. For example, growth modelling with latent variables, conducted with structural equation programs like R and Mplus (Bliese and Ployhart, 2002), can examine how latent constructs like individual beliefs are influenced by discrete events and by other latent constructs, such as the beliefs of other group members. Another approach that might have fascinated Lewin is optimization, which relies on computing power to isolate the values of variables within a pre-determined equation that maximize a desired outcome. Although optimization is often conducted with economic (i.e. profit) and operational (i.e. production) outcomes, the approach could be applied to maximizing (or minimizing) outcomes of interest to Lewin, such as individual prejudice and creativity or a group decision. Programs like MATLAB and Gurobi Python, and even an add-on to the popular MS Excel (Mason, 2013), open up optimization to researchers from all disciplines. While optimization does not replace qualitative or quantitative research (as studies are needed to identify the variables included and the distributions of those variables in the equation to be optimized), with the equation and possible values set, optimization can simulate millions of possible combinations and generate hypotheses that can be tested in subsequent observational or experimental study.

Returning to how teaching change could be made different by thinking again about Lewin's legacy with regard to this second recovered frontier, it could be that new developments and findings related to combining and analysing data from multiple sources using the latest statistical advances could be added to the set of things that Lewin has inspired at the end of those textbook chapters on change, rather than the current textbook norm of showing newer n-stage frameworks and intervention tools as simply building upon 'Lewin's classic model' and surpassing it.

Conclusion

This article has shown that peeling back the layers and re-visiting original sources, rather than relying upon the secondary materials that have interpreted these at particular points in time, can be a worthwhile exercise, not only to reassure ourselves that what we assume to be our foundations are in fact valid, but also because doing so may support and inspire new thinking. At a time when research suggests that trends toward citing a greater volume of references with a shallower (i.e. more proximate to the present day) date-range, encouraged by the ease of digital search engines, may be working against substantive innovation (Evans, 2008), we advocate the opposite: looking back, looking deeper and reading articles like Lewin 1947 rather than just citing them. Our counter history, along with others that seek to look and think differently about the history and future of different elements of management studies (Cooke and Alcadipani, 2013; Cummings and Bridgman,

2011; Hassard, 2012; Wilson, 2013), promotes this sort of liberation from the present: one that inspires us to be more 'retro-active' so as to recreate what we see as historically important and think differently for the future of management and human relations.

Acknowledgements

We appreciate the efforts of the library staff and undergraduate research assistant Jooyi Park at the University of Iowa and Juliet Scott and staff at the Tavistock Institute of Human Relations for their assistance with this research. We would also like to thank our research assistant at Victoria University, Katherine Given, as well as Associate Editor Nick Turner and the three anonymous reviewers for their contributions.

Funding

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Notes

- 1 While it is relatively common for page references not to be included when referring to books this old, it is unusual for page references to be almost never provided. By contrast to Lewin and CATS, more than 20 percent of the academic articles that refer to Lewin's concept of 'topology' via Lewin (1951) do provide page references.
- 2 The references are to 'Lewin, K (1947). The ABCs of change management, *Training & Development Journal*, March, 5–41'; and 'Lewin, K (1947) Frontiers in group mechanics. In: Cartwright, D. (ed.) *Field Theory*. Harper, New York'.
- 3 Indeed, if we wanted to think differently, Allport's work would be a good cipher for Lewin, given its sympathy with his program: its criticism of mechanistic cause-and-effect models and celebration of uniqueness (e.g. Allport, 1961: x–xi); its view that classifying schema are useful but lead to over-simplification, discrimination and false judgment ('we forget these are labels and try to explain [all things] in terms of the labels' – Allport in Evans, 1970: 9); its acceptance that there are as many ways of developing as there are individuals; and its focus on the flow of becoming rather than static states. Allport (in Lewin, 1948: xi) notes that, for Lewin, managers of change were not merely 'clever persuaders . . . utilizing a few fancy tricks'.
- 4 There are some exceptions beyond the mainstream, in particular Burnes (2009), who has written a very good retrospective review of Lewin and the Harwood Studies (Burnes, 2007).

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