

NonModern Education, or, Education Without Qualities: An Essay on Robert Musil's Essayism

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Abstract

Contemporary education systems are premised on the assumption that knowledge can be mapped as official curriculum and learning predetermined as outcomes that all students are expected to achieve; we take it for granted that learning can be measured and compared through standardised assessment; and we assume that teaching can be codified as “evidence based” “best practice” and that teachers’ work can be delineated and prescribed in the form of teacher professional standards. In each case the “qualities” of education—knowledge, teaching and learning—are assumed to be knowable and amenable to modernist tropes of clear, certain, systematic and comprehensive articulation. As a way of opening up space for alternative ways of thinking about education, this paper explores the essayism of twentieth century Austrian writer, Robert Musil, author of *The Man Without Qualities* (1995 [1940]), in order to consider the idea of a “nonmodern” education without qualities—an education that would engage with ideas and experience without reinscribing them within modernity’s characteristic clarity, certainty, systematicity and comprehensiveness. What would such an education entail for curriculum, pedagogy and assessment? What would it say about who we might be and what we aspire to become as individuals and as a society? This exploratory paper ends with some thoughts on the democratic implications of essayism as a mode of nonmodern education.

Keywords Education policy, curriculum, knowledge, literature, Robert Musil

Introduction

This paper is written as the modern world is poised on the brink of the fourth industrial revolution. With its implicit blurring of boundaries between the biological, physical and digital realms, commentators and analysts expect this revolution to reshape all disciplines and domains (Schwab, 2016), rendering

redundant the predictable and instrumental pathways linking education and society under modernity. At the same time, factors such as the rise of “big data,” commercialised curricula, the corporatisation of educational provision and the globalisation of education policy are contributing to the intensification of educational governance at global and local scales (Jules, 2016; Rizvi & Lingard, 2010), thereby, it could be argued, reinscribing the fundamental “grammar” of modern school education (Hartley, 2012; Tyack & Tobin, 1994).

Against this backdrop, the paper explores the essayism of the early twentieth century Austrian writer and novelist, Robert Musil, author of *The man without qualities* (MWQ, 1995 [1940]), in order to consider the idea of a “nonmodern” education without qualities. This would be an education that would engage with ideas and experience without reinscribing them within modernity’s characteristic clarity, certainty, systematicity and comprehensiveness, thereby unsettling comfortable and comforting attachments to received notions of knowledge, identity, culture, nation or empire (Freed, 2011; Jonsson, 2000; McBride, 2006). What would such an education entail for curriculum, pedagogy and assessment? What would it say about who we might be and what we aspire to become as individuals and as a society? This exploratory paper can only gesture towards most of the matters but concludes with some thoughts on the implications for policy and pedagogy of essayism as a mode of nonmodern education.

Modernity, production and education

As reference to the fourth industrial revolution suggests, modernity was built upon three prior technological revolutions. The first of these occurred in engineering, machinery and transport, laying the foundations for modern industry. The second revolution saw electricity harnessed for communication and lighting as well as to power the elevators that allowed the construction of the modern high-rise city. The third revolution saw developments in chemistry which were the basis for the growth of plastics and other synthetic materials that have become so entangled with modern life. These developments and innovations, however, were not merely of technical interest and concern but required re-formation of the human subject in terms of attitudes towards authority, time and space (Hartley, 2012, pp. 10-14). Space was regulated by being divided and compartmentalised according to function within the factory walls, with the production line serving as the epitome of this organisation. Time was managed through the division of the day and night into shifts, through punctuation by the clock and through its verification on the timecard. Compliance with authority was induced through calculation in the form of wage payments; through coercion in terms of potential harassment; and through normalisation in terms of moral pressures to conform to management’s requirements.

But the advent of modernity was not limited to the utilisation of particular technological developments within processes of economic production and the

reform of those providing the labour required to sustain production. Life in modern societies more generally, not least in educational institutions, is inscribed by modernity, with its characteristic emphases on certainty, formal rationality and a desire for a “clean slate” (Toulmin, 1990). Certainty in education is evident in the ways in which knowledge is sequenced in linear fashion in curricula and syllabi and mapped to age levels in terms of “outcomes.” Formal rationality finds echoes in the modes of temporal and spatial organisation typically found in educational institutions, where time and space are organised and managed in ways that echo those of the modern factory. The year is divided into terms and semesters while the school building is divided into classrooms connected by halls and corridors. In both spatial and temporal terms, the institution’s concern is to maximise efficiency and productivity by, for instance, ensuring scope for hierarchical, panoptic oversight (i.e., super-vision) by teachers to prevent excessive movement, the wasting of time and ill-directed effort. The cultivation, inculcation and internalisation of these good habits are reinforced by the requirement to complete homework. Meanwhile, the modern penchant for the clean slate is reflected in the perpetual reinvention of education through policy reforms, which neither take account of their antecedents, nor allow sufficient time for their effects to become embedded before they are superseded by subsequent reforms.

The provision of mass primary school education in the nineteenth century was tailored to provide this spatial, temporal and moral training to the children of the urban masses—and society’s future workforce—converging on cities in response to industrialisation’s need for labour. These historical traces are still evident in the dominant forms of education in the twenty first century with their emphasis on uniformity and standardisation. Indeed, the parallels between the modern factory and education seems even more apt in the current neoliberal era, as achievement in relation to testable knowledge becomes the paramount concern of policy makers and, as a consequence of washback effects, of school leaders, teachers, parents and students. Coffield and Williamson highlight this growing instrumentalism¹ in which exam results function in much the same way as the goods produced in our factories:

our schools, colleges and universities have been turned into exam factories, where teaching to the test and gaining qualifications and learning techniques to pass exams are now what matters, rather than understanding or being interested in, or loving, the subjects being studied (2011, p. 46).

¹Though it could be argued that mass education has always been, to some degree at least, an instrumental concern, focused on providing workers fit for the economy.

The reference to schools as exam factories, however, highlights not only the objectification and reification of knowledge but also the subjection and objectification of those who are subjects of education and who are thus made visible in order to be individuated, compared and classified:

The examination combines the techniques of an observing hierarchy and those of normalizing judgement....In it are combined the ceremony of power and the form of the experiment, the deployment of force and the establishment of truth. At the heart of the procedures of discipline, it manifests the subjection of those who are perceived as objects and the objectification of those who are subjected (Foucault, 1977, pp. 184-185).

Contemporary neoliberal education systems are premised on the modernist assumption that knowledge can be organised and mapped as official curriculum (Kelly, 2009), that learning can be predetermined as outcomes that all students are expected to achieve (Stoller, 2015), and that this learning can be measured through tests and exams and compared at various scales from the local to the global through standardised assessment (Sellar, Thompson, & Rutkowski, 2017; Stobart, 2008). In a similar vein, neoliberal policy makers assume that teachers' work can be delineated and prescribed in the form of teacher professional standards (Clarke & Moore, 2013; Taubman, 2009) and that maximally effective and efficient pedagogy can be codified as "evidence based" "best practice." In each case, the product of education—knowledge—and the truth, or "qualities," of those subjected to education—individuals, institutions and indeed, education systems—are assumed to be knowable and amenable to clear, certain, systematic and comprehensive articulation. So what might an education without qualities look like?

Robert Musil and *The Man Without Qualities*

Wouldn't it be more original to try to live, not as a definite person in a definite world where only a few buttons need adjusting—what we call evolution—but rather to behave from the start as someone born to change surrounded by a world created to change? (MWQ, p. 295).

The modern world of education is one of measurement and testing, of prediction and evaluation, of calculation and comparison. It is a world that, in its efforts to ensure quality and eradicate risk has ended up sapping the vital life-force from education. It would be surprising if the modern subject occupying this world, did not occasionally feel the frustration voiced by Musil's alter-ego in *The Man Without Qualities*, Ulrich, when he wistfully asks the question above, positing a vision of life as an arena of possibilities in contrast to the modernist certainty that has

calcified into the neoliberal mantra of TINA². But who was Robert Musil, author of the man without qualities?

The Austrian writer and philosopher, Robert Musil, was initially trained as an engineer but he also studied mathematics, psychology and philosophy, gaining a doctorate in the latter discipline, before becoming a writer. He occupies a somewhat ambivalent position as a highly respected but also rather neglected figure, one who belongs to that category of writers more often cited than read. This ambivalence is reflected in the nature of his encyclopaedic novel, *The Man Without Qualities*. This is a book in which there is scarcely a page that does not present profound, penetrating and provocative philosophical discussion and yet in which scarcely anything happens, to the extent that *The Man Without Qualities* might be described as a novel without a plot. Written in the years of crisis between the two world wars of the twentieth century, the novel seeks to capture and summarise the cultural and political milieu of the period in Europe. A vast canvas, it veers from mysticism to war, from the musings of an incarcerated sociopathic murderer to popular uprisings in the streets, from mocking accounts of the party tittle-tattle of Vienna's bourgeois to a celebration of adult sibling incest, and from dry explanations of scientific problems to lyrical accounts of timeless philosophical questions.

The sprawling novel, unfinished at the time of his death in exile in Switzerland in 1942, despite his having worked on it for thirty years, is set in Vienna during 1913-1914. In brief, the protagonist, Ulrich, the man without qualities of the novel's title, though extremely bright and talented, has lost his sense of direction and, after being summoned by his father, becomes the Secretary for the Parallel Campaign, the purpose of which is to unify all the peoples of "Kakania" (Musil's name for the Habsburg Empire) in celebration of the seventieth anniversary of the ruler's reign. While Ulrich fulfils his duties half-heartedly, a cast of other characters are gradually introduced, including individuals involved in the parallel campaign and acquaintances from Ulrich's youth and childhood, until his father dies at the end of Part I. At the funeral Ulrich meets his long-forgotten sister and, after becoming mutually attracted to each other, they retreat from society with much of the remainder of the novel taken up with their conversations interspersed with depictions of political developments in Viennese society. According to his notes and papers, Musil's unfulfilled intent was to bring these two strands into convergence at the end of the novel as Kakania's peoples are united in disastrous celebrations at the outbreak of WWI. Such was not to be but in some ways this non-ending seems fitting for a book concerned, amongst other things, with the essentially incomplete and unfinalizable nature of the human subject.

² This, of course, is a reference to Margaret Thatcher's (in)famous declaration that *there is no alternative* to her preferred political vision.

The Musilian subject

The novel's parallel depiction of the Austro-Hungarian empire's quest for its cultural essence and Ulrich's realisation that he lacks any essential identity are part of its insistent rejection and rebuttal of any and all claims made in the name of cultural or collective identities. Overall, then, the novel challenges the idea that cultures and identities express inborn dispositions or inherent characteristics, instead suggesting that the human subject is historically constituted as a consequence of the ways in which it is named, gendered, educated and shaped by social institutions and cultural conventions. Musil suggests that values and beliefs derived from ideologies of nationalism, patriarchy and racism limit and restrict individuals and groups by making what is contingent seem natural and hence inescapable. In contrast, Musil's novel articulates a view of the subject, more akin to that in Lacanian psychoanalysis, as an empty place—a sort of structural void around which life circulates without ever fully penetrating. In the following passage in Part I of the book, Clarisse has been listening to one of numerous heated debates between her husband, Walter, and his childhood friend, Ulrich:

“There's something impossible in every one of us. It explains so many things. While I was listening to you both, it seemed to me that if we could be cut open our entire life might look like a ring, just something that goes round something.” She had already, earlier on, pulled off her wedding ring, and now peered through it at the lamplit wall. “There's nothing inside, and yet it looks as though that were precisely what matters most.” (MWQ, p. 401).

Clarisse's ring here acts almost like a telescope, providing a moment of insight into the emptiness of the subject and offering a form within which to focus for her depiction of the human subject as “just something that goes around something.” This depiction, uncannily, identifies the same empty space or void that characterizes certain psychoanalytic (Fink, 1995; Neill, 2011) and “posthuman” (Benjamin, 2016; Thweatt-Bates, 2016) conceptions of the human subject. This version of the subject is deeply unsettling to the modernist mindset, resting as it does on no firm foundations and containing no solid content. This is a subject that, in its fragile singularity, can be narrated but not defined (Cavarero, 2000). Elsewhere, Musil describes the deep unease and existential anxiety that accompanies such a notion of subjecthood:

However understandable and self-contained everything seems, this is accompanied by an obscure feeling that it is only half the story. Something is not quite in balance, and a person presses forward, like a tightrope walker, in order not to sway and fall. And as he presses on

through life and leaves lived life behind, the life ahead and the life already lived form a wall, and his path in the end resembles the path of a woodworm: no matter how it corkscrews forward or even backward, it always leaves an empty space behind it. And this horrible feeling of a blind, cutoff space behind the fullness of everything, this half that is always missing even when everything is whole, this is what eventually makes one perceive what one calls the soul (MWQ, p. 196).

Again, there are echoes here of psychoanalytic thought and what Eric Santner (2001) describes as a certain “undeadness” (p. 18) in humanity that is “generative of a disturbing surplus animation” (p. 19). Santner argues that a thin line separates our capacity to be animated by this surplus and a defensive shutting-down against its disturbing currents, akin to what Musil describes in terms of “this horrible feeling of a blind, cutoff space behind the fullness of everything.” But what we might refer to as the “uncanny vitality” (Santner, p. 37) animating our lives, as well as the correlative urge to suppress or extinguish this unsettling energy, clearly has implications at the level of the individual and her capacity for creativity in education and other domains. In this regard, it could be argued that modernity’s insistence on certainty and formal rationality, manifested in its strict management of time and space, knowledge and subjects, represents a stifling of the very source of the creativity that modern education policy makers claim to valorise. This also suggests that rescuing education from the grip of neoliberal assumptions will require a loosening of the pressures and constraints on time, space, knowledge and subjectivity and a replacement of the rule of “pedantic precision” (Freed, 2011, p. 48) with an ethos of provisionality, possibility and experimentation.

But the passage from Musil explicitly raises the question, implicit in the novel’s title, of the ontological status of the subject—what would it mean to be a “[hu]man,” i.e., a subject, without qualities? And what would the status of these qualities be without a subject to provide the solidity to which they could attach? This “nonmodern,” i.e., neither modern nor postmodern (Freed, 2011), subject is neither the pre-social subject of modernity, nor the mere product of social forces and discursive imprint, but is, paradoxically, a structural gap or void—it is that “half that is always missing even when everything is whole,” as Musil puts it above. If the modernist subject is the product of rational processes of clarification and purification the nonmodern subject reflects “the dereification of the ontological zones that purification institutes” (Freed, 2011, p. 33). Put another way, the notion of a subject without qualities shifts the emphasis from the ontical to the ontological; it is not about the what of the subject but about how the subject continually comes-to-being; it is not about the content of subjectivity but about its potentiality-for-being (Freed, 2011, p. 89). This view of the subject as beyond the limits of

representation reflects Musil's Nietzschean³ attitude of circumspection towards the solidity of the subject and offers an alternative viewpoint from which to consider and critique the vision inherent in neoliberalism's view of the entrepreneurial, self-responsibilised subject who acts as a proprietor of their own qualities and seeks to maximise their exchange value in the marketplace of life.

But it is not just biological or cultural determinism that Musil rejects. He is equally opposed to systematic philosophy, commenting in MWQ that "philosophers are despots who have no armies to command, so they subject the world to tyranny by locking it up in a system of thought" (MWQ, p. 272) and to scientific certainty for which he substitutes the alternative of living hypothetically. As Musil reflects in relation to Ulrich,

He suspects that the given order of things is not as solid as it pretends to be; no thing, no self, no form, no principle is safe, everything is undergoing an invisible but ceaseless transformation, the unsettled holds more of the future than the settled, and the present is nothing but a hypothesis that has not yet been surmounted (MWQ, p 269).

Unfortunately, such a nuanced, tentative reading of the world is inimical to the drive to certainty in modern education; as a consequence, "what is seemingly solid in this system becomes a porous pretext for many possible meanings; the event occurring becomes a symbol of something that perhaps may not be happening but that makes itself felt though the symbol" (MWQ, p. 270). The manufactured crises and pseudo-scientificism that serve as vehicles and justifications for "evidence based policy"—or what some commentators have depicted as "policy-based evidence making" (Strassheim & Kettunen, 2014)—come to mind as contemporary examples of this drive to certainty in relation to education.

Beyond useful and certain knowledge: Essayism

Education has a history of conceiving of the subjects of education—those who are to be educated—as passive receptacles to be filled. Such a view inheres in the mandating of state curricula that must be taught to all learners and the prescription of pre-specified outcomes that all learners must achieve. Such a perspective is grounded in a simplistic dualism between the individual and the world, in which the former internalises knowledge about the latter in order to put this knowledge to work on the latter in later life as a fully agentive adult. This view of the individual-social relationship suggests limitless possibility, encouraging people to view the

³ Musil is a philosophical novelist, whereas Nietzsche was a literary philosopher, but the latter exercised a considerable influence on the former, as he did on the wider generation of European critical thinkers who emerged in the early twentieth century (see Spencer, 2013).

world as an externality that exists purely for purposes of human entertainment and exploitation.

In this regard it is worth noting that two of the dominant sciences in the contemporary Western world are surely biology and economics, two disciplines that purport to provide certain knowledge and that merge in the discourse known as biocapitalism. Biocapitalism involves a “synergy that has formed around scientific activity (especially the life sciences) and governmental policies and practices oriented towards the dissolution of biological and market barriers to growth” (Pierce, 2013, p. 24). Underlying both neoliberal politics and contemporary neoliberal education policy is a disavowal of negativity and a wilful belief in pure positivity that regards reality as “quantifiable, measurable and ultimately accessible as unequivocal presence” (De Klerk, 2009, p. 1). In other words, there is an underlying attempt to erase the fact that human life and existence depends on meaning making and that meaning making inevitably involves ideology; instead, education policy believes that it deals with things “as they are” (De Klerk, 2009, p. 8). So rather than promoting a critically self-reflexive and socially responsible subjectivity, education becomes *prescriptive* in relation to a pre-determined economic and entrepreneurial vision of subjectivity.

The rich complexity of Musil’s thought cannot receive adequate treatment in a brief paper such as this. But it is important to note that in his suspicion and scepticism towards systems of thought, Musil evinces a quality he shares with the French essayist, Michel de Montaigne, in terms of an awareness of the essential messiness and complexity of human experience and a suspicion towards the supposed objectivity of strictly logical connections amongst ideas. This leads to neither a pure rejection of rationality, nor an uncritical embrace of romanticism or subjectivism—something Musil referred to as “the Other Condition”—but to an awareness of the need for a reconceptualization of both in non-binary terms. This in turn leads Musil to embrace the provisional nature of the essay as a basis for a textual vision of human subjectivity that comprises both personality and external circumstances. As Ulrich states, “an essay, in the sequence of its paragraphs, explores a thing from many sides without wholly encompassing it—for a thing wholly encompassed suddenly loses its scope and melts down to a concept” (MWQ, p. 275). Elsewhere, Ulrich muses how

the accepted translation of “essay” as “attempt” contains only vaguely the essential illusion to the literary model, for an essay is not a provisional or incidental expression of a conviction capable of being elevated to a truth under more favourable circumstances or being exposed as an error...an essay is rather the unique and unalterable form assumed by a man’s inner life in a decisive act of thought....Terms like true and false, wise and unwise, are equally inapplicable, and yet the essay is subject to laws that

are no less strict for appearing to be delicate and ineffable. There have been more than a few such essayists, masters of the inner hovering life, but there would be no point in naming them. Their domain lies between religion and knowledge, between example and doctrine, between *amor intellectualis* and poetry; they are saints with and without religion; and sometimes they are also simply men on an adventure who have gone astray (MWQ, p. 273).

As the latter part of this quote suggests, in addition to comprising a discursive strategy for engaging and navigating the irregularities and complexities of a socially-situated human life, essayism for Musil is also a mode of subjectivity, one that is “suspended amid a network of determining forces” (Freed, 2011, p. 100) and which, as a result, is non-coincidental with itself—something reflected in Ulrich’s offhand remark, “there is nothing I am less fit for than being myself” (MWQ, p. 296). This textual, as opposed to essential, subject is signalled in the novel’s title and even more so in the title of Chapter 39, *A Man Without Qualities Consists of Qualities Without a Man*. As Ulrich observes in this chapter in relation to his life,

everything in it had fulfilled itself as if it belonged together more than it belonged to him....Therefore he had to suppose that the personal qualities he had achieved in this way had more to do with one another than with him; that every one of them, in fact, looked at closely, was no more ultimately bound up with him than with anyone else who also happened to possess them (MWQ, p, 157).

All this suggests that just as the notion of a subject without qualities is less about the *what* and more about the *how* of its potentiality-for-being, so too a nonmodern education without qualities is less concerned with the content of knowledge and more about the process of coming-to-know; it is less about the precise specification of particular items of knowledge and more about the relationships among thoughts and ideas and their connections to lived experience. But just because the content of such an education cannot be prescribed does not mean, I suggest, that it lacks all rigour and order. Rather, as Freed puts it in one of the chapter titles of his book (2011, pp. 89-111), this opens up the possibility of a nonmodern education without qualities as an instance of “order without system.”

Conclusion

The first part of *The Man Without Qualities*, following a short introduction, is called *Pseudoreality Prevails*. Education in the twenty first century might be said to be characterised by pseudo-scientificism, embodied in the positivistic attitudes underlying much education policy, with its exhortations to pursue “evidence-based”

“best practice,” and reflected in much educational practice in schools which unconsciously repeats tropes and practices uncritically derived from industrial modernity. By contrast, Musil’s ideas, reflected in his epic novel, as well as his other writing comprising numerous essays and an earlier novella, invite us to acknowledge the emergent, *irrational* and “in-between” dimensions of the formation and transformation of both the subject and its knowledge, as well as the nonsemantic kernel that lies “below” the level of intentionality in all of us as simultaneously “unknowing” and “knowing” subjects of education. Such a perspective opens education to non-cognitive affective, embodied and unconscious modalities of thought, while also challenging easy and familiar distinctions such as subjective-objective, true-false, fact-fiction, thereby encouraging us to seek inspiration for our educational thought in sources such as literature and film, rather than just in the annals of social “scientific” knowledge.

Importantly, for educators Musil’s essayism encourages us to resist the two-dimensional, technically-oriented world of neoliberal policy where education is often reduced to a depoliticised, technical manual in the name of thinly disguised economic instrumentalism. Instead, Musil’s essaysim encourages us to recognize “the contingency of knowledge as well as the contingent ontology of the knowing subject” (Freed, 2011, p. 102); from this perspective, education might be rethought as an improvisational mode and relational space of listening that needs to be continually renegotiated as we seek to live our lives and learn together.

References

- Benjamin, G. (2016). *The cyborg subject: Reality, consciousness, parallax*. Basingstoke: Palgrave Macmillan.
- Cavarero, A. (2000). *Relating narratives: Storytelling and selfhood* (P. Kottman, Trans.). New York: Routledge.
- Clarke, M., & Moore, A. (2013). Professional standards, teacher identities and an ethics of singularity. *Cambridge Journal of Education*, 43(4), 487-500.
- Coffield, F., & Williamson, B. (2011). From exam factories to communities of discovery. *London: Institute of Education, University of London*.
- De Klerk, E. H. (2009). *Subject to reading: Literacy and belief in the work of Jacques Lacan and Paulo Freire*. Cambridge: Cambridge Scholars Publishing.
- Fink, B. (1995). *The Lacanian subject: Between language and jouissance*. Princeton: Princeton University Press.
- Foucault, M. (1977). *Discipline and punish: The birth of the prison*. London: Penguin.
- Freed, M. (2011). *Robert Musil and the NonModern*. New York: Continuum.
- Hartley, D. (2012). *Education and the culture of consumption: Personalisation and the social order*. London: Routledge.
- Jonsson, S. (2000). *Subject without nation: Robert Musil and the history of modern identity*. Durham, NC: Duke University Press.
- Jules, T. D. (Ed.) (2016). *The global educational policy environment in the fourth industrial revolution: Gated, regulated and governed*. Bingley: Emerald Publishing Group.
- Kelly, A. (2009). *The curriculum: Theory and practice* (6th ed.). London: Sage Publications.
- McBride, P. C. (2006). *The void of ethics: Robert Musil and the experience of modernity*. Evanston, IL: Northwestern University Press.
- Musil, R. (1995 [1940]). *The man without qualities* (S. Wilkins & B. Pike, Trans.). London: Picador.
- Neill, C. (2011). *Without ground: Lacanian ethics and the assumption of subjectivity*. Basingstoke: Palgrave Macmillan.
- Pierce, C. (2013). *Education in the age of biocapitalism: Optimizing educational life for a flat world*. New York: Palgrave-Macmillan.
- Rizvi, F., & Lingard, B. (2010). *Globalizing education policy*. New York: Routledge.
- Santner, E. (2001). *On the psychotheology of everyday life*. Chicago: Chicago University Press.
- Schwab, K. (2016). *The fourth industrial revolution*. Geneva: World Economic Forum.

- Sellar, S., Thompson, G., & Rutkowski, D. (2017). *The global education race: Taking the measure of PISA and international testing*. Alberta: Brush Education.
- Spencer, M. (2013). *In the shadow of empire: Austrian experiences of modernity in the writings of Musil, Roth, and Bachman*. Rochester, NY: Boydell and Brewer.
- Stobart, G. (2008). *Testing times: The uses and abuses of assessment*. New York: Routledge.
- Stoller, A. (2015). Taylorism and the logic of learning outcomes. *Journal of Curriculum Studies*, 47(3), 317-333.
- Strassheim, H., & Kettunen, P. (2014). When does evidence-based policy turn into policy-based evidence? Configurations, contexts and mechanisms. *Evidence & Policy: A Journal of Research, Debate and Practice*, 10(2), 259-277.
- Taubman, P. (2009). *Teaching by numbers: Deconstructing the discourse of standards and accountability in education*. New York: Routledge.
- Thweatt-Bates, J. (2016). *Cyborg selves: A theological anthropology of the posthuman*. London: Routledge.
- Toulmin, S. (1990). *Cosmopolis: The hidden agenda of modernity*. Chicago: University of Chicago Press.
- Tyack, D., & Tobin, W. (1994). The "grammar" of schooling: Why has it been so hard to change? *American Educational Research Journal*, 31(3), 453-479.

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