Curriculum, text and forms of textuality

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ABSTRACT
Building on Peters’ and Jandrić’s previous work on curriculum as ‘text’ and ‘discourse’ (Peters, M. A., & Jandrić, P. (2018b). The curious relationships between discourse, genre and curriculum. Open Review of Educational Research, 5(1)), this article seeks to refresh and extend the central metaphor of ‘curriculum as text’ that is adopted as the organizing metaphor of William Pinar’s 2006 book Understanding Curriculum: An Introduction to the Study of Historical and Contemporary Curriculum Discourses. We undertake this analysis by referring to five theoretical notions: Jorge Luis Borges’ “The garden of forking paths” (1941), Roland Barthes’ structuralism (1977), Julia Kristeva’s intertextuality (1966/1986), Ted Nelson’s hypertextuality (1965), and Gilles Deleuze’s and Felix Guattari’s extratextuality (2004/1980). In conclusion, we show that the text is neither simply an artefact nor is it simply a sequence of uttered sounds. The text does not solely reside within the domain of the reader and cannot be considered as the exclusive domain of the author. Looking at relationships between text, textuality, curriculum, and technology, we show that the metaphor of ‘curriculum as text’ is inherently postdigital and that it requires development of a new postdigital language of inquiry and new postdigital forms of textual and non-textual expressions of that language in the years to come.

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Introduction: what is a text?
William Pinar’s Understanding Curriculum: An Introduction to the Study of Historical and Contemporary Curriculum Discourses (2006, 5th edition) is a study of both historical and contemporary curriculum discourses. Pinar uses the central notion of ‘text’ as a means of discussing these discourses but what is a ‘text’? This notion is important to understand because it is one of the major theoretical and critical concepts that emerged out of the practice of writing to analyse and understand literary culture and criticism.

Text is a contested concept. It is a matter of active theorizing, much like any metaconcept in the social sciences and humanities, including ‘curriculum’ and ‘curriculum theory’. This ongoing contestation is a healthy intellectual process that is indicative of whether the debate is ‘alive’ or ‘dead’. Once the intellectual battles over the concept or theory have...
been laid to rest and the life has been drained from the debates, then the concept becomes institutionalized, ossified, and only a matter of historical interest. However, it is unlikely that this will ever happen with the concept of ‘curriculum’ which rests on the contested concepts of ‘text’, ‘discourse’ and ‘genre’, among others. The easiest first attempt at definition of the concept of the text is to argue that text is any object that can be ‘read’. This is a definition that puts the emphasis on the symbolic content rather than the medium. On this account anything that can be read, that can be interpreted or be viewed as a coherent message, can be regarded as a text. While this includes various kinds of writing, it may also include objects that fall outside of traditional writing from advertising and architecture to script-based forms such as film and video. Even the criterion of coherence is not necessarily a requirement, because message might be fragmentary or incoherent but still can be read.

‘Text’ is relational. It comes after the invention of writing, although ‘reading signs’ is an important case. As a relational object it is necessary to inquire about relations within the text, relations between the text and the reader and the text and the writer, and relations between the text and the critic. There are also relations outside the text such as technologies of writing and communication that determine the shape, speed and delivery of texts, and the legal arrangements that determine what can be published. Most basic text typologies set up fundamental criteria for the classification of texts depending on types, classes, styles, and genres of text. One primer makes the following classification:

Depending on the criteria adopted, there are several possibilities of classifying texts. Using some of the most obvious criteria, texts can be classified as spoken or written, dialogical or monological, spontaneous (unprepared) or ritual (prepared), informal or formal, individual (personal) and interindividual (interpersonal), private or public (official, institutional), subjective or objective, interactional (contact-oriented) and transactional (message-oriented), etc. (Ferenčík, 2004)

Approaches to the elaboration of a fully exhaustive and universally applicable method of text typology vary among theorists who adopt communicative functions of texts in relation to the choice of expressive means of language including ‘appeals, warnings, public notices the conative function dominates, in congratulations or expressions of sympathy it is the phatic function, in research reports the representational function, in advertising the persuasive function, etc.’ (Ferenčík, 2004), or a theory of functional types that focuses on five functional styles of English ‘the publicistic, newspaper, scientific prose, belles-lettres styles and the style of official documents’, and or analysis of five ‘languages’ such as conversation, unscripted commentary, religion, newspaper reporting and legal documents (Ferenčík, 2004). The functional approach can be contrasted with both situational approach based on the sphere of activity and form of communication, and with strategic classifications based on macrocompositional principles differentiating narrative, descriptive, and argumentative. The foundation of text typologies involve philosophical issues concerning the question of ‘type’ in logic, semiotics, and linguistics (Van Dijk, 1977).

The question of what is a literary text, its form and limits, has been at the center of theoretical debates in the twentieth century with a range of various positions held by Formalist, Hermeneutic, Poststructuralist, Reader Response and Media critics. The question has become even more difficult to resolve when the text is considered in terms of ‘textualities’ in a hypermedia and globalized society. The question of the shift from text to
hypertext in a computer deserves special attention (see Peters & Jandrić, 2018a). Insofar as curriculum theory depends upon reading texts or texts to be read, then we need to investigate theories of the text in the context of hypermediality and our own experiences with reading on the web. How does specific textual conditions determine or condition modes of reading, authority, ownership, ethics and the canon of literature?

In *What Is Curriculum Theory?* Pinar (2nd edition, 2012) discusses the present problematizing what he calls ‘school deform’ and the ‘defeat of democracy’ as external historical forces shaping the curriculum. He then turns to the progressive moment to discuss ‘The Dissolution of Subjectivity in Cyberculture’ and finally the possibility of ‘finding the future’ emphasizing subjective and social reconstruction. For Pinar, as he says, curriculum theory is the scholarly effort to understand the curriculum as a ‘complicated conversation’.

Rather than the formulation of objectives to be evaluated by (especially standardized) tests, curriculum is communication informed by academic knowledge, and it is characterized by educational experience. Pinar recasts school reform as school *deform* in which educational institutions devolve into cram schools preparing for standardized exams, and traces the history of this catastrophe starting in 1950s. (Pinar, 2012, p. i)

In other texts, he argues against the devaluation of academic knowledge by the programmatic preoccupations of teacher education and the effacement of educational experience by standardized testing (Pinar, 2009); and the way these changes are received in terms of tendencies toward cosmopolitanism or provincialism in what is called the internationalization of curriculum (Pinar, 2014). Pinar (2011) seeks to analyze the character of curriculum studies by reference to the question of culture, the subject and subjectivity.

Based on William Pinar’s *Understanding Curriculum: An Introduction to the Study of Historical and Contemporary Curriculum Discourses* (2006, 5th edition), in a previous article we problematized the concepts of ‘discourse’, ‘genre’, and ‘text’ in order to examine the historical and constructed notion of the curriculum (Peters & Jandrić, 2018b). This article seeks to refresh and extend the central metaphor of ‘curriculum as text’ that is adopted as the organizing metaphor for Pinar’s book in a way that explores different *forms of textuality* and in particular hypertextuality, intertextuality, and extratextuality as a metanalysis by referring to the ways in which the notion of text itself has been theorized within the changing political landscape and the development of media cultures and digital technologies. We undertake this analysis by referring to five theoretical notions: Jorge Luis Borges’ ‘The garden of forking paths’ (1941), Roland Barthes’ structuralism (1977), Julia Kristeva’s intertextuality (1966/1986), Ted Nelson’s hypertextuality (1965), and Gilles Deleuze’s and Felix Guattari’s extratextuality (2004/1980). We begin by discussing the significance of these shifts in terms of text theory in order to broach the question of the future of the text (see London College of Communication, 2018).

**Jorge Luis Borges, ‘The garden of forking paths’ (Borges, 1941)**

In the short story ‘The Garden of Forking Paths’ (*El Jardín de senderos que se bifurcan*) the Argentinian writer Borges (1941) expresses the idea of infinite texts or rather an experiment with the labyrinthine structure of time and the narrative.¹ The story concerns a signed statement by a Chinese professor of English named Doctor Yu Tsun who is a German spy living in the United Kingdom during World War I. He is pursued by Captain
Richard Madden who is an MI5 agent. Yu Tsun remembers his relative Ts’ui Pên who had constructed a novel that was a labyrinth in time (rather than space) where characters must choose one alternative among many others at various points in the plot. Once the decision has been taken, it eliminates all others. Ts’ui Pên’s novel attempted to describe a world where all possible outcomes of an event can occur simultaneously and where each event can itself lead to further proliferations of possibilities. In one sense Borges is making a comment by way of this short story on the nature of time and its relation to narrative texts. As Albert, a character in the story, explains to Yu Tsun:

In the midst of this perplexity, I received from Oxford the manuscript you have examined. I lingered, naturally, on the sentence: *I leave to the various futures (not to all) my garden of forking paths.* Almost instantly, I understood: ‘the garden of forking paths’ was the chaotic novel; the phrase ‘the various futures (not to all)’ suggested to me the forking in time, not in space. A broad rereading of the work confirmed the theory. In all fictional works, each time a man is confronted with several alternatives, he chooses one and eliminates the others; in the fiction of Ts’ui Pên, he chooses – simultaneously – all of them. He creates, in this way, diverse futures, diverse times which themselves also proliferate and fork. Here, then, is the explanation of the novel’s contradictions. (Borges, 1941)

We shall not explain the story except as it comments on the nature of time. Later in the story, Albert explains:

*The Garden of Forking Paths* is an enormous riddle, or parable, whose theme is time; this recondite cause prohibits its mention. To omit a word always, to resort to inept metaphors and obvious periphrases, is perhaps the most emphatic way of stressing it. That is the tortuous method preferred, in each of the meanderings of his indefatigable novel, by the oblique Ts’ui Pên. I have compared hundreds of manuscripts, I have corrected the errors that the negligence of the copyists has introduced, I have guessed the plan of this chaos, I have re-established—I believe I have re-established—the primordial organization, I have translated the entire work: it is clear to me that not once does he employ the word ‘time.’ The explanation is obvious: *The Garden of Forking Paths* is an incomplete, but not false, image of the universe as Ts’ui Pên conceived it. In contrast to Newton and Schopenhauer, your ancestor did not believe in a uniform, absolute time. He believed in an infinite series of times, in a growing, dizzying net of divergent, convergent and parallel times. This network of times which approached one another, forked, broke off, or were unaware of one another for centuries, embraces all possibilities of time. We do not exist in the majority of these times; in some you exist, and not I; in others I, and not you; in others, both of us. (Borges, 1941)

Borges makes reference to Newton and to Schopenhauer, though not to Einstein’s theory of relativity, to express the Western causal concept of temporal succession as a uniform one-way arrow of absolute time – a notion that structures modern narrative in both its historical and literary forms. At the same time, he questions this view leading some critics to claim that Borges is deliberately making an allusion to the Many-Worlds Interpretation in quantum mechanics that asserts the objective reality of the universal wave function which implies all possible alternative histories and futures are real, each representing an actual world. Before this scientific hypothesis reality had always been viewed as a single unfolding history. On the application of quantum mechanics to time reality is reconceptualised as a many-branched tree, wherein every possible quantum outcome is realized. Borges applies this understanding to the text and questions modernist assumptions about narrative as a genre (see Moran, 2012).
Roland Barthes and a structuralist reading of the text (Barthes, 1977)

Barthes is one of the leading French theorists in the immediate post-war period. On the basis of theoretical developments in literary theory, Barthes introduced the notion of the relativity of the text to be defined in terms of its structural relations to reader, writer and critic. He used developments in structural linguistics, semiotics, Marxism, and Freudianism to move beyond an understanding of the text defined by the author and authorial intentions in order to expose bourgeois values in ways first emblazoned by the surrealists and the International Situationists a generation earlier. In ‘From Work to Text’ he argues:

Just as Einsteinian science demands that the relativity of the frames of reference be included in the object studied, so the combined action of Marxism, Freudianism and structuralism demands, in literature, the relativization of the relations of writer, reader and observer (critic). Over against the traditional notion of the work, for long -- and still -- conceived of in a, so to speak, Newtonian way, there is now the requirement of a new object, obtained by the sliding or overturning of former categories. That object is the Text. I know the word is fashionable (I am myself often led to use it) and therefore regarded by some with suspicion, but that is exactly why I should like to remind myself of the principal propositions at the intersection of which I see the Text as standing. (Barthes, 1977, p. 156)

He offers a range of possibilities to understand the meaning of the text: ‘the Text is experienced only in an activity of production’ (p. 157); ‘[the Text] cannot be contained in a hierarchy, even in a simple division of genres’ (p. 157); ‘The Text can be approached, experienced, in reaction to the sign’ (p. 158); ‘The Text is plural’ (p. 159); ‘the metaphor of the Text is that of the network’ (p. 161). He writes about the significance of ‘writing’ and the teaching of writing:

Significantly, the coming of democracy reversed the word of command: what the (secondary) School prides itself on is teaching to read (well) and no longer to write (consciousness of the deficiency is becoming fashionable today: the teacher is called upon to teach pupils to express themselves, which is a little like replacing a form of repression by a misconception). In fact, reading, in the sense of consuming, is far from playing with the text. ‘Playing’ must be understood here in all its polysemy: the text itself plays (like a door, like a machine with ‘play’) and the reader plays twice over, playing the Text as one plays a game, looking for a practice which re-produces it, but, in order that that practice not be reduced to a passive, inner mimesis (the Text is precisely that which resists such a reduction), also playing the Text in the musical sense of the term. (Barthes, 1977, p. 162)

Finally, and famously, Barthes understands the Text in relation to desire, to pleasure: as he says, the Text ‘is bound to jotris sance, that is to a pleasure without separation’ (Barthes, 1977, p. 164).

Barthes demonstrates that the meaning of the text is an active construction by the reader and not established through the author’s intention. Barthes’ assertion of the openness of interpretation as an index of meaning of the text is further explored in his ‘deconstruction’ of the notion of the ‘author’. In ‘The Death of the Author’ Barthes suggests:

The author is a modern figure, a product of our society insofar as, emerging from the Middle Ages with English empiricism, French rationalism and the personal faith of the Reformation, it discovered the prestige of the individual, of, as it is more nobly put, the ‘human person’. It is thus logical that in literature it should be this positivism, the epitome and culmination of capitalist ideology, which has attached the greatest importance to the ‘person’ of the author. The
author still reigns in histories of literature, biographies of writers, interviews, magazines, as in the very consciousness of men of letters anxious to unite their person and their work through diaries and memoirs. The image of literature to be found in ordinary culture is tyrannically centred on the author, his person, his life, his tastes, his passions … (Barthes, 1977, p. 142)

Barthes’ structuralist reading of the text is of particular relevance to the metaphor of ‘curriculum as text’, especially in relation to the changing role of the author in the digital age (Peters & Jandrić, 2018a).

**Julia Kristeva’s intertextuality (Kristeva, 1966/1986)**

Intertextuality is a concept first developed by Kristeva (1966/1986) that attempts to explain how the meaning of one text is shaped by another through the processes of allusion, borrowing and influence such as parody, pastiche, and quotation. The concept is based on a wider structuralist argument concerning how signs derive their meaning from within the structure of a text (its internal relations) and the way words and texts have multiple meanings. In Kristeva’s work this theoretical understanding is achieved through the influence of the Swiss linguist Saussure’s semiotics (2011) on the one hand and Bakhtin’s pragmatic speech-based ‘dialogism’ (1929/1999) on the other. Kristeva, a Bulgarian, studied Mikhail Bakhtin, the Russian cultural philosopher, while studying at the University of Sophia, and on continuing her studies in France under Roland Barthes and others she was introduced to the structuralist program, married the novelist Philippe Sollers in 1967, and joined the now-famous Tel Quel group. She went on to publish *Desire in Language: A Semiotic Approach to Literature and Art* in 1969 (Kristeva, 1969/1980) and to make important contributions to the field of cultural studies, literary and poetic studies and psychoanalysis.

Intertextuality becomes a substitute notion for intersubjectivity based on the understanding that the meaning of a text is not transfer directly from author to reader but accrues and gathers its meaning by references to other texts and so is mediated through other texts. The meaning of a text does not reside in a single text but only in the intertextuality of literature that is produced by the reader and conditioned by other texts they have read. For Kristeva (1966/1986), following Bakhtin (1929/1999), there are three ‘coordinates of dialogue’ including the writing subject, the reader, and other texts and textual space is defined at intersecting planes:

> The word’s status is thus defined horizontally (the word in the text belongs to both writing subject and addressee) as well as vertically (the word in the text is oriented towards an anterior or synchronic literary corpus) … each word (text) is an intersection of words (texts) where at least one other word (text) can be read … any text is constructed as a mosaic of quotations; any text is the absorption and transformation of another. (Kristeva, 1966/1986, p. 36)

Every text therefore is conditioned by other texts which the reader has read and the reader’s own cultural and historical context. Kristeva’s work has been taken up by others and developed and refined: ‘intertextuality’, is a term which describes the idea that meaning only exists between a text and all the other texts to which it refers and relates. Laura Kilbride explains further:

> At its most basic level intertextuality acknowledges the fact that no text is an island. All texts are intertexts in so far as they refer to, recycle and draw from other pre-existing texts. The term...
was coined by the French critic and philosopher Julia Kristeva in 1969. By inventing it, Kristeva was proposing a new theory of reading in which meaning is not communicated between the writer and reader directly but is instead produced when the reader recognises the text as a ‘mosaic of quotations’ of previous texts, which she then decodes in order to make sense of the work. This means that the production of meaning in a text takes place on both horizontal and vertical axes:

Previous texts

\[
\text{↓}
\]

Reader → (Inter)Text ← Writer

\[
\text{↓}
\]

Texts which follow

Whether a text as a whole is based on a source, as was the case with James Joyce’s rewrite of Homer’s *Odyssey* in *Ulysses*, or whether it simply uses language from the same lexicon, the theory of intertextuality recognizes that all texts are reliant on prior traditions and literary forms. (Kilbride, 2018)

This intertextuality is a good model for the concept of understanding in general curriculum theory: all new curricula reflect the history of previous attempts to organize knowledge. All understanding is intertextual in that it contains new formulations, allusions, recycled citations, old formulae, and traditional cadences. According to Roland Barthes:

> Fragments of codes, formulae, model rhythms, bits of social discourse pass into the text and are redistributed within it […] The intertext is a field of anonymous formulae whose origin is rarely recoverable, of unconscious or automatic citations without speech marks. (Barthes, 1973; cited in Kilbride, 2018)

Kristeva’s semiotics is also deeply hermeneutic because she marries her ‘dialogism’ with a Lacanian psychoanalytic approach that describes the birth of the symbolic as being related to the development of the child as a ‘speaking subject’. In *Desire in Language: A Semiotic Approach to Literature and Art* (Kristeva, 1969/1980) she uses the term ‘abjection’ to describe the process of separation whereby the child rejects the mother in order to enter the world of language, culture and meaning (see Felluga, 2018). Her work is also strongly associated with a feminist reading of poetics and tied to the ‘feminine’, especially when she considers the subject in the developmental process of becoming or in crisis (see Chicago Humanities Festival, 2016).

**Ted Nelson’s hypertextuality (Nelson, 1965)**

Ted Nelson’s inclusion in this space might be something of a surprise yet his work on the concept of ‘hypertext’ is an event of the first importance. He introduces the concept ‘hypertext’ at the ACM 20th National Conference ‘to mean a body of written or pictorial material interconnected in such a complex way that it could not be presented or represented on paper’ (Nelson, 1965, p. 96). In an interview with Jim Whitehead in 1996 he reflected on the source of dissatisfaction that originally engendered his work.

> I had done a great deal of writing as a youth, and re-writing, and the intricacy of taking ideas and sentences and trying to arrange them into coherent, sensible, structures of thought
struck me as a particularly intricate and complex task, and I particularly minded having to take thoughts which were not intrinsically sequential and somehow put them in a row because print as it appears on the paper, or in handwriting, is sequential. There was always something wrong with that because you were trying to take these thoughts which had a structure, shall we say, a spatial structure all their own, and put them into linear form. Then the reader had to take this linear structure and recompose his or her picture of the overall content, once again placed in this nonsequential structure. You had two it seemed -- and now I'm reconstructing because I don’t know how explicitly I thought this out as a youth -- you had to take these two additional steps of deconstructing some thoughts into linear sequence, and then reconstructing them. Why couldn't that all be bypassed by having a nonsequential structure of thought which you presented directly? That was the hypothesis -- well the hypothesis really -- of hypertext, that you could save both the writer’s time and the reader’s time and effort in putting together and understanding what was being presented. (Whitehead, 1996)

Nelson went on to develop a computer network with a simple user interface called Xanadu: a computer-based writing system that would provide a repository for the world’s knowledge based on connections between ideas.

Xanadu basically has been my name for an evolving but essentially centrally the same system for the supply and presentation of material with two basic relationships: what we would call the link, which is an unchanging connection between objects, or parts which are different, and the transclusion, which is a maintained connection between parts which are the same. (Whitehead, 1996)

In some ways Nelson’s vision and system predated the World Wide Web with one fundamental difference. Nelson envisaged two-way instead of one-way links that help to preserve context. Hypermedia is an extension of the term hypertext developed and used to describe media linked in a nonlinear fashion including graphics, audio, video, and plain text.

One of the fundamental changes to traditional text which is linear is that hypertext and hypermedia change the basic assumptions of sequential writing and its hierarchical relations of words, sentences, paragraphs, and books. Hypertext is neither sequential nor hierarchical and this represents a fundamental change to the nature of writing and reading, and some would say also thinking and subjectivity insofar as the text has been considered a good analogue for these things (Peters & Jandrić, 2018b). Texts have functioned as the best analogues for the whole range of human activity: thinking, creativity, subjectivity. Instead of a sequence of texts we have a network of nodes; instead of a logic based on linearity we have an epistemology of associative links where the ‘reader’ builds their own creative labyrinth of meaning. Instead of the traditional text of mass production with its one-way broadcast form we have interactivity of animated and manipulable texts that encourage collaboration and co-construction. Barwell (2005) discusses some of the conceptual issues that arise with digital texts:

It is a commonplace that information in digital form brings changes which impact on traditional understandings, disciplines, and skills. Any study of university curricula and graduate requirements over the last 15 years will illustrate the nature of some of these changes. While some will be fairly superficial—students needing to demonstrate they are information literate in order to graduate, for instance—other changes are rather more substantial and the nature of their impact is only beginning to be explored and understood. (Barwell, 2005, p. 415)
He provides examples of three important problems:

The first is a result of their ease of reproduction, alteration, corruption, and transmission, much greater than in the case of texts produced on paper—the challenge is in determining the relationships between apparently identical copies of the one digital text. Provenance of the file, reliable metadata, and some technical aids are important here. The second challenge comes as a result of computer processing requiring a kind of precision or at least removal of ambiguity in the work of being represented in characters and markup. (...) The third challenge comes with the increased development of certain forms of textual production, genres, and practices. (Barwell, 2005, p. 418)

The shift toward digitization is fundamentally affecting the nature of the literary text and impacting our work as readers, writers, teachers, students and critics. Increasingly, audio, visual or multimodal texts are being produced through digital or electronic technology which may be interactive and include animations and/or hyperlinks including DVDs, websites, and e-literature (Media Access Australia, 2012). Digital texts give way to digital books and digital textbooks, and now we face the era of the digitized curriculum. As Eason (2011) reports South Korea aims to consolidate its leading world position by digitizing its entire curriculum by 2015 to promote a form of ‘smart education’ where the focus is on customized learning and teaching. We need to problematize the electronic vision of an educational future that sees it as straightforward and as a matter of the extrapolation of technological trends as it the following depiction by Michael Mayrath, Nihalani, and Perkins, who write:

Education is clearly in the midst of a dramatic transformation. From the incorporation of mobile devices with their “anywhere, anytime” access to information to the rapidly growing presence of tablet devices and digital books, clear challenges are being raised to existing models of how we think, learn, teach, and make decisions. The future seems both clear and imminent — a future in which students carry course texts and personal media in a “digital backpack” that is light, fun to use, enjoyable for reading, and always connected to information and friends. However, visions of media-rich, cost-efficient educational texts available on a variety of digital devices seem frustratingly slow to solidify due to factors ranging from cost at scale to a failure to effectively exploit the pedagogical potential of these devices. (Mayrath, Nihalani, & Perkins, 2011)

Digital curriculum implies much more than digitalization of curriculum; hypertextuality, amongst other developments, impacts teaching and learning at all analogue and digital levels. This is why, in recent works, we prefer to use the concept of postdigital which denotes ‘hard to define; messy; unpredictable; digital and analog; technological and non-technological; biological and informational’ issues (Jandrić, Knox, et al., 2018, p. 895). The postdigital challenge requires a ‘critical philosophy of the postdigital’ which is ‘dialectically interrelated with the theories such as cybernetics and complexity theory, and also processes such as quantum computing, complexity science, and deep learning’ (Peters & Besley, 2018). Dialogue, in its various forms including but not limited to text, has an important role in postdigital developments. ‘As traditional forms of research increasingly fail to describe our current reality, the previous winning horse (traditional research) needs to adapt to a new racing track (postdigital reality) and to new racing rules (of postdigital dialogue’). (Jandrić, Ryberg, et al., 2018). And, as McLaren (2018) reminds us, ‘There are all kinds of social, political, geopolitical, and ethical implications surrounding the term postdigital’ – all of which have direct impact on curriculum.
In the Introduction to *A Thousand Plateaus* Gilles Deleuze and Felix Guattari (2004/1980) write about the concept of the book – an *anti-book* for it is really an *assemblage*, a multiplicity that is unattributable, a *body without organs*. It is not a ‘root-book’ based on binary logic or linear unity that constitutes a radicle-fascicular. By reference to William Burroughs, James Joyce, and Friedrich Nietzsche, they edge towards the concept of the rhizome where, unlike tree or root, any point can be connected to any other and establishes a semiotic chain, a collective assemblage of enunciations, and connects it to a whole micro-politics of the social field. There is no Chomskyian model of linguistics that specifies universals or an ideal speaker. There are no unity only multiplicities which are rhizomatic. As they write: ‘There are no points or positions in a rhizome, such as those found in a structure, tree, or root. There are only lines’ (Deleuze & Guattari, 2004/1980, p. 8).

Against the classical or romantic book there is no interiority of a subject. In this sense, citing Kleist, they suggest: ‘The ideal for a book would be to lay everything out on a plane of exteriority of this kind, on a single page, the same sheet: lived events, historical determinations, concepts, individuals, groups, social formations’ (Deleuze & Guattari, 2004/1980, p. 9). As Deleuze and Guattari write, ‘the book is not an image of the world. It forms a rhizome with the world, there is an a parallel evolution of the book and the world’ (Deleuze & Guattari, 2004/1980, p. 11). They want to banish every trace of Hegel in the object of the book:

> There is no longer a tripartite division between a field of reality (the world) and a field of representation (the book) and a field of subjectivity (the author). Rather, an assemblage establishes connections between certain multiplicities drawn from each of these orders, so that a book has no sequel nor the world as its object nor one or several authors as its subject. (Deleuze & Guattari, 2004/1980, p. 55)

Formalizing the principles of the rhizome, they state:

1 and 2. Principles of connection and heterogeneity: any point of a rhizome can be connected to anything other, and must be (p. 7).

3. Principle of multiplicity: it is only when the multiple is effectively treated as a substantive, ‘multiplicity’, that it ceases to have any relation to the One as subject or object, natural or spiritual reality, image and world (p. 8).

4. Principle of asignifying rupture: against the oversignifying breaks separating structures or cutting across a single structure (p. 9).

5 and 6: Principle of cartography and decalcomania: a rhizome is not amenable to any structural or generative model; it is a ‘map and not a tracing’. (Deleuze & Guattari, 2004/1980, pp. 30–38)

Against the *arborescent* conception of knowledge based on totalizing, binary and dualistic principles, Deleuze and Guattari oppose the rhizome which works with horizontal, non-hierarchical and transspecies connections and resists the organizational structure of the root-tree system that mistakenly charts a chronological causality and looks for value in the origin of things. In asserting this mobile organic structure they make use of biological mutualism and horizontal gene transfer as opposed to evolutionary theory suggesting...
‘Evolutionary schemas would no longer follow models of arborescent descent going from the least to the most differentiated, but instead a rhizome operating immediately in the heterogeneous and jumping from one already differentiated line to another’ (Deleuze & Guattari, 2004/1980, p. 10).

A rhizome may be broken, shattered at a given spot, but it will start up again on one of its old lines, or on new lines. You can never get rid of ants because they form an animal rhizome that can rebound time and again after most of it has been destroyed. Every rhizome contains lines of segmentarity according to which it is stratified, territorialized, organized, signed, attributed, etc., as well as lines of deterriorialization down which it constantly flees. (Deleuze & Guattari, 2004/1980, p. 9)

In botany the rhizome is a horizontal, underground plant stem capable of producing the shoot and root system of a new plant allowing the parent plant to propagate asexually and to perennate (i.e. survive an annual unfavorable season) underground. The rhizomic approach to culture and history is to resist its narrativizing tendencies and to present them as a map, assemblages with no specific origin or genesis: a ‘rhizome has no beginning or end; it is always in the middle, between things, inter-being, intermezzo’ (Deleuze & Guattari, 2004/1980, p. 58). Deleuze and Guattari calls the rhizome ‘an image of thought’ (p. 595) which can be used as a mode of knowledge and a model for society that does not rely on any structural or generative model of linguistics or psychoanalysis.

The map does not reproduce an unconscious closed in upon itself; it constructs the unconscious. It fosters connections between fields, the removal of blockages on bodies without organs, the maximum opening of bodies without organs onto a plane of consistency. (…) In linguistics as in psychoanalysis, its object is an unconscious that is itself representative, crystallized into codified complexes, laid out along a genetic axis and distributed within a syntagmatic structure. (Deleuze & Guattari, 2004/1980, p. 12)

Arborescent thought and culture while ancient and dominant does not provide an accurate map of the brain and neither the brain nor the memory is tree-like or root-based: they argue ‘the tree has dominated Western reality and all of Western thought, from botany to biology and anatomy, but also gnosiology, theology, ontology, all of philosophy (…): the root foundation, Grund, racine, fondement’ (Deleuze & Guattari, 2004/1980, p. 18). Deleuze and Guattari contrast the West with its fields and forests to the East that entertains a special relation to the steppe and gardens: rhizomic tuber agriculture versus that dominated by trees.

**Conclusion**

Approaching the metaphor of ‘curriculum as text’ that is adopted as the organizing metaphor for William Pinar’s Understanding Curriculum: An Introduction to the Study of Historical and Contemporary Curriculum Discourses (2006, 5th edition) through the lens of Jorge Luis Borges’ ‘The garden of forking paths’ (1941), Roland Barthes’ structuralism (1977), Julia Kristeva’s intertextuality (1966/1986), Ted Nelson’s hypertextuality (1965), and Gilles Deleuze’s and Felix Guattari’s extratextuality (2004/1980), we are now ready to draw some conclusions. The text as literature is neither simply an artefact of ink and paper nor is it simply a sequence of uttered sounds. The text does not solely reside within the domain of the reader or the experience of the reader and neither can it be considered
as the exclusive domain of the author’s experience. If we accept these critiques, then we also dismiss any psychological or purely social explanation. Wellek and Warren (1949) argue the literary text is a ‘system of norms, realized only partially in the actual experience of [the work’s] many readers. Every single experience (reading, reciting, and so forth) is only an attempt – more or less successful and complete – to grasp this set of norms or standards’. These norms are implicit and can be detected in all ‘real’ literature by an educated reader. They exist as ‘a system of norms of ideal concepts which are intersubjective. They must be assumed to exist in collective ideology, changing with it, accessible only through individual mental experiences, based on the sound-structure of its sentences’ (Wellek & Warren, 1949).

From Borges’ poetic thought experiment, through Barthes, Kristeva, Nelson, Deleuze and Guattari, we can see the metaphor of ‘curriculum as text’ extending itself into various media and technologies. Entering a new medium, ‘curriculum as text’ always retains a part of its nature in human affairs while at the same time it transforms into something else. For instance, Deleuze and Guattari’s arborescent thought and culture does not provide an accurate map of the brain, while Ted Nelson’s hypertext aims at getting closer to ways humans think (Whitehead, 1996). Meeting somewhere in the middle, ‘curriculum as text’ is ‘both a rupture in our existing theories and their continuation’ (Jandrić, Knox, et al., 2018, p. 895); therefore, it firmly belongs into the postdigital sphere. In this new postdigital context, we need to reinvent insights such as Barthes’ (1977) ‘The Death of the Author’, Julia Kristeva’s intertextuality (1966/1986), and others, while at the same time remembering that ‘we can only anticipate postdigital society in all of its glory in the absence of such a society and we can only understand it through the prison-house of our concepts and/or our experiences’ (McLaren, 2018).

Every generation has its own challenges. Some of our ancestors grappled with the printing press, others grappled with one-way mass media such as radio and television, and we must grapple with the messy postdigital reality where all these forms of text and textuality coexist and interact – amongst themselves, and with other important notions such as curriculum. While we explore postdigital developments in the concepts of ‘discourse’, ‘genre’ and ‘text’ (Peters & Jandrić, 2018b), and while we apply these conclusions to ‘curriculum as text’ (this article), we need to develop a new postdigital language of inquiry and new postdigital forms of textual and non-textual expressions of that language. In our postdigital age, relationships between studies of language and studies of curriculum are tighter than ever. Unified, but not standardized, through the notion of the postdigital, these traditions are bound to have a solid future together.

Notes

1. Borges’ short stories ‘The Library of Babel’ and ‘The Book of Sand’ are also experimental texts that play with similar ideas.
2. This section is taken from Peters (2013).

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