

## Invited Dialogue: "What's the Problem with Learning Analytics?" (Selwyn, 2019)

# Learning Analytics: Mapping a Critique and Agenda

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## 1. Introduction

In his keynote “What’s the problem with learning analytics?” Selwyn locates his thinking within the broader context of Critical Data Studies (CDS). He situates himself as an “outsider” and an “idiot.” While these disclaimers and self-deprecating humour may have been nothing more than that, in assuming the role of an outsider, Selwyn, possibly inadvertently, assumed the powerful position of the clown or village idiot during a medieval carnival who had a licence to blaspheme, question, and even ridicule sacred beliefs and disrespect boundaries. During these medieval carnivals, the jester had licence to mimic and make fun of serious rituals, and all “hierarchical precedence” was momentarily suspended (Bakhtin, 1984, p. 10). As such, the carnival took on a life of its own, “a second life outside officialdom” (Bakhtin, 1984, p. 6), and “all were considered equal during carnival” (Bakhtin, 1984, p. 10).

Keynotes fulfil a particular function in the planning and compiling of a conference program, and these individuals are invited for a number of reasons — to lend political and/or scholarly gravitas to the event, to stimulate and enlighten, and/or to provoke. Keynotes are also often outsiders to a particular field, and an invitation to deliver a keynote heralds an understanding that, despite being outsiders, their insights are considered valuable to the field. Selwyn embraces the identity of an outsider and, as such, claims the rights and privileges, however temporarily, to question and provoke.

In order to situate my commentary differently than the others, I reflect and comment on Selwyn’s keynote from the perspective of CDS. My approach is not accidental, but firstly based on Selwyn’s own claim that his keynote was informed by CDS and secondly, on my own orientation and location within the context of CDS. In reflecting and commenting on his keynote, it will therefore be appropriate to consider firstly whether his approach to problematizing learning analytics fitted within the general context of CDS. I will then share some reflections on his keynote, and specifically, his wish list for learning analytics.

## 2. Situating the Keynote and My Response in the Context of Critical Data Studies (CDS)

The field of CDS had “multiple beginnings ... as it will always be three words cobbled together imperfectly signifying diverse sets of work around data’s recursive relationship to society” (Dalton, Taylor & Thatcher, 2016, p. 1). In one of the first seminal articles referring to CDS, Dalton and Thatcher (2014) state that CDS involves “a systematic approach to data criticism” (emphasis added), and they table a number of provocations for consideration. They situate “big data” in time and space by asking “Whose data? On whose terms?” (emphasis in the original), and they question the assumed neutrality of technology — “It always shapes and is shaped by a contested cultural landscape in both creation and interpretation” (p. 1). CDS also destabilizes “hard technological determinism” and refutes the claim that data are raw (see Bowker, 2005); and that “numbers speak for themselves” (p. 1). Kitchin and Lauriault (2014) outline the intent and scope of CDS as raising questions “about the nature of data, how they are being produced, organized, analyzed and employed, and how best to make sense of them and the work they do” (p. 1). CDS therefore firstly asks questions regarding how we define data, what data are not considered, as well as how data are produced, conceptualized, and employed. The second proposition of CDS is to consider the notion of the data assemblage “encompasses all of the technological, political, social and economic apparatuses and elements that constitutes and frames the generation, circulation and deployment of data” (Kitchin & Lauriault, 2014, p. 1). CDS’s third proposition unpacks the work these data assemblages do in the context of dataveillance, the attrition and loss of privacy, the impact of profiling and social sorting, and the downstream use of data, to mention but a few.

CDS provides a systematic counter-narrative to the idea that data are pre-analytical and pre-factual, as representative and the truth. Data are “complex socio-technical systems that are embedded within a larger institutional landscape of researchers, institutions and corporations” and are “expressions of knowledge/power, shaping what questions can be asked, how they are asked, how they are answered, how the answers are deployed, and who can ask them” (Kitchin & Lauriault, 2014, p. 4). Reflecting on the emergence of CDS, Iliadis and Russo (2016) claim that “CDS has emerged as a loose knit group of frameworks, proposals, questions, and manifestos” (p. 1) and point to the fact that CDS is still in its infancy. As an emerging

approach to make sense of “data as a form of power” (Iliadis & Russo, 2016, p. 1) identifies three principles that, according to them, should inform CDS. Namely, “the identification of social data problems, the design of critical frameworks for addressing social data problems, and the application of social solutions to increase data literacy” (p. 5).

Interestingly, while some may point out to the very ambitious nature of CDS, some of the proponents of CDS such as Dalton, Taylor, and Thatcher (2016) “choose to live in the unresolved tensions between researcher and subject, technology and society, space and time” (p. 2). These authors point to “what is missing and what must be brought to the analysis of data in order to respond to the existence of particular dataspheres governed by the kinds of technology in different locations” (pp. 2–3). Contrary to popular assumptions about the “data production as a flat, homogenous process” (p. 2), they propose that we have to consider the “missing data,” the “blank spaces,” (p. 2) and the fact that there are different ways of being “digital.” The authors state that if CDS “is to be more than a voice of skeptics, we must be open to and ideally develop alternative knowledges that reflect and build on our criticisms” (pp. 3–4). The other important element to consider is the “epistemological and ontological leap between the individual creating the data and the representation of that individual by the data” (p. 4). The “gap” between the person whose data are collected and his or her abstracted representation creates the notion of the “data doubles” (Haggerty & Ericson, 2000, p. 2). The creation of these “data doubles” — their production, use, and proliferation — is the result of a specific set of power differentials and therefore of central concern to CDS.

### 3. Reflections and Commentary

The title of Selwyn’s keynote “What’s the problem with learning analytics?” not only invites a response, but the way the question is phrased is in line with Selwyn’s broader oeuvre as illustrated in the titles of some of his books, e.g., *The politics of education and technology. Conflicts, controversies, and connections* (Selwyn & Facer, 2013), *Distrusting educational technology. Critical questions for changing times* (Selwyn, 2014), and *Is technology good for education?* (Selwyn, 2016). While I situated Selwyn’s keynote in terms of the role of an outsider or medieval clown, and though my own work is aligned to the values of CDS, I am, somehow, a bit uncomfortable with the phrasing of Selwyn’s keynote title. Though the title is aligned to much of his other work and point of departure as a skeptic, personally, I would have adopted a different strategy without compromising the critique and need for critique. Phrasing the title of the keynote as he did may have prompted the audience to assume that Selwyn questioned the very existence of learning analytics and its claim to contribute to improving teaching and learning. As such, the title may have antagonized and alienated the audience and foreclosed any possibility of a conversation. In the rest of the keynote, however, it became clear that such an interpretation of his question might not have been correct. While Selwyn questioned some of the basic assumptions and beliefs surrounding data, the use of analytics, and a raised a number of ethical concerns, he constructively engaged with the field and proposed not its demise, but an agenda for consideration. Personally, I do not think there was anyone in the audience that would have disagreed with Selwyn that learning analytics should be open for critique, however uncomfortable. There is ample evidence of a general awareness (if not consensus) by researchers and practitioners that learning analytics is anything but perfect (Ferguson & Clow, 2017; Jones, McCoy, Crooks, & VanScoy, 2018; and Kitto, Buckingham Shum & Gibson, 2018). Despite legitimate concerns about some of the assumptions and practices in learning analytics, there is also consensus that the collection, measurement, analysis, and use of student data can hold huge benefit for supporting students and for increasing the effectiveness of teaching. In the broader context of the social contract between society and higher education, higher education not only has a legitimate mandate to collect and use student data, but also the moral obligation to do so, ethically (Slade & Prinsloo, 2013). A different title and approach may have been more inviting and less oppositional, without detracting from Selwyn’s claim that technology is not neutral but value-laden.

In the context of critical approaches to education (see, for instance, Michael W. Apple and Henry Giroux) and critical scholarship on educational technology (Audrey Watters and Ben Williamson come to mind), this keynote of Selwyn, like the rest of his work, is crucial and should be embraced, despite or even amid disagreement and/or discomfort.

If we disregard these critical voices and ignore the values embedded and perpetuated by technology, we participate in “technological somnambulism” (Winner, 2004, in Selwyn, 2014, p. 3) — “the tendency for a majority of people to sleepwalk through their mediations with technology” (Selwyn, 2014, p. 3).

Paramount for Selwyn throughout his oeuvre is facing and troubling educational technology as “a knot of social, political, economic and cultural agendas” (Selwyn, 2014, p. 6). Selwyn follows Popkewitz (1987) in doing “critical intellectual work” and moving “outside the assumptions and practices of the existing order and struggling to make categories, assumptions and practices of everyday life problematic” (Selwyn, 2014, p. 12). He is transparent in his position of embracing a “technological pessimism” (Selwyn, 2014, p. 14) that “is at least willing to accept that digital technology is not bringing about the changes and transformations that many people would like to believe” (Selwyn, 2014, p. 15; emphasis in the original). This type of pessimism is not abdication of one’s responsibilities or accepting defeat but signifies “an active engagement with continuous

alternatives” (2014, p. 16; emphasis added). The title of Selwyn’s keynote, therefore, points to a much deeper approach to engaging with educational technology than what may seem the case on face value.

At the start of his keynote, Selwyn acknowledges the fact that “I am not a data scientist,” and the acknowledgement is a powerful answer to the unasked question: “who has the right to participate on learning analytics as, inter alia a social, educational, political, philosophical and technological phenomenon, practice, research focus and a commercial enterprise?.” In jokingly saying, “You have to start to engage with idiots like me,” Selwyn seems to assume the role of the jester, the savant-idiot, and the idiot-savant who in the blasphemous hilarity of a medieval carnival, could comment on sacred and profane structures, beliefs, and institutions. As such, Selwyn translated the untranslatable, commented on some of the unquestioned assumptions in learning analytics and, as such, attempted to provide a new vocabulary for engaging with learning analytics as a knot of often-incommensurable interests and claims. He acknowledged that the criticisms levied against learning analytics are often not the fault of learning analytics per se, but rather that these criticisms signify an increasing discomfort with the material consequences of the collection, measurement, analysis, and use of (student) data. Learning analytics can therefore not claim innocence, but has to acknowledge that it does not only have material and political effects, and, in its essence, that it is ideological and political. The collection and use of student data, therefore, fit into broader political, economic, social, technological, environmental, and legal ontologies and epistemologies. We, therefore, have to ask, in the words of Selwyn, “what values, ideas, ideologies are baked into learning analytics?”

Particularly enlightening was Selwyn’s reference to the reductive nature of sampling, analysis, and presentation of the analyses in the form of, for example, dashboards, and traffic lights. Every step of the collection, measurement, analysis, and presentation is informed by, and perpetuates certain understanding of learning, and finally, of what it means to be human. As such, every step in the process, from identification of the sample up to the analysis, whether in the form of a dashboard or a report, flattens the complexities and fluid relationships between variables. Amid the complexity of students’ lives and learning journeys, the data we have access to, and the data we base our analyses on, are always incomplete and provisional. “There are not enough data points in the world to adequately capture the complexities and nuances of who a student is ... or how a school or university functions.”<sup>1</sup>

According to Selwyn, we also need to interrogate how learning analytics flow from and perpetuate a particular understanding of data, and data-driven performativity. Selwyn therefore asks, “What does it mean to be a student in a university filled with learning analytics?” If we measure what we value, what gets done will be those things we measure. In so doing, we become what we measure. This reminds me of David Beer’s book *Metric Power* (2016). We cannot, according to Beer (2016), disregard the link between measurement and power. Those who measure have the power to determine not only what will be measured, but also according to what criteria and for what purposes: “As numbers and categories are utilized, this enables norms to be cemented and versions of normalcy to be reified against which people can then be judged” (Beer 2016, p. 43). In this context, Selwyn is on point in raising concerns about who uses the data collected and the analyses provided by learning analytics. In light of the fact that the end-users of the data and analyses may increasingly be non-human, this raises a whole different area of concern (also see Gutiérrez & Milan, 2019). If we consider the role of learning analytics in the context of data and platform capitalism and the reality that students become labourers in a broader market, we have to consider the limitations and dangers in learning analytics. Learning analytics, therefore, has to declare its “bottom line.” Selwyn asked, “What is the powerful idea implicit in learning analytics and how does it fit with the powerful ideas that people already have about education?” (see also Jones & McCoy, 2018; and Jones, et al., 2018).

In the approach Selwyn adopted in his keynote, there was a real danger that, in the role of the outsider and skeptic, his keynote would have ended with only a critique. In staying with one of the key premises of CDS, his keynote did not attempt to resolve the “unresolved tensions between researcher and subject, technology and society, space and time” (Dalton, et al., 2016, p. 2). While Selwyn did not attempt to dissolve some of these tensions, he did conclude his keynote with a “wish list” in line with Dalton, Taylor & Thatcher’s (2016) proposal that CDS has to be more than just skeptical and distrusting, but assist to “develop alternative knowledges” (p. 3) that assist the field to address the concerns and identified gaps. Though it falls beyond the scope of my commentary to reflect on all of his proposals contained in the wish list, allow me to comment on only two of his proposals, namely 1) “giving students control”; and 2) “seeing ethics in terms of power, not in terms of protection.” In “giving students control,” Selwyn proposes that students are informed about how their data are being used, and that students should be allowed to opt-in to the personalized collection, measurement, analysis, and use of student data than being provided with the option to opt-out. This is in line with my own position on moving towards student-centred learning analytics (Slade & Prinsloo, 2013; Prinsloo & Slade, 2016; Prinsloo & Slade, 2017) and allowing students to “build their own” analytics.

Selwyn’s proposal to see “ethics in learning analytics in terms of power, not in terms of protection” is on point. Though my own individual research — as well as my collaborative research with Sharon Slade of the Open University — has always

<sup>1</sup> Neil Selwyn, keynote address at LAK '18 (March 9, 2018): [https://www.youtube.com/watch?v=rsUx19\\_Vf0Q](https://www.youtube.com/watch?v=rsUx19_Vf0Q)

mapped a range of ethical concerns about the collection, measurement, analysis, and use of learning analytics, in the context of the asymmetrical power relationship between students and the providing institution, we have never defined our proposal as succinctly as Selwyn does in this statement. Selwyn expands his statement by foregrounding, *inter alia*, the need to “building ethics into the design of whatever you are doing next,” to hold learning analytic systems (and their owners/providers) legally accountable, and to consider instituting independent “bias assessment” of any new learning analytics system.

#### 4. Concluding Thoughts

In the context of academic conferences, keynotes play a specific role, and depending on the brief provided by the organisers, keynotes may be invited to entertain, share their views on, e.g., the latest trends, present case studies of specific instances of the use of learning analytics, or to provoke. I am not privy to know what informed the selection of Selwyn as keynote. Taking his keynote and the way he engaged with the field as a self-proclaimed outsider as a given; Selwyn played the role of the carnival clown and trickster. In this role, Selwyn used self-deprecating humour, provoked, and commented on some of the sacred and profane structures, beliefs, claims, and assumptions in learning analytics. He translated the untranslatable, commented on some of the unquestioned assumptions in learning analytics, and as such, attempted to provide a new vocabulary for engaging with learning analytics as a knot of often-incommensurable interests and claims.

As someone aligned to the values and principles in CDS, I am, however, aware of inherent danger when one’s work and engagement in a particular field is seen as only critical, and predominantly pessimistic, without (also) appreciating the potential benefits of a critical approach, to both students and providing institutions. Learning analytics offers higher education the tools and analyses to fulfil its mandate and moral obligation to provide caring and supportive but also effective learning experiences. The field, however, should not be averse of criticism, and of inviting contributions that question the very existence of the field, the interests it serves, and its core assumptions and claims.

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