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Key Pedagogic Thinkers
Dave Cormier

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Introduction/Background

Who is Dave?

Dave Cormier of the University of Prince Edward Island in Canada is renowned for coining the term MOOC (Massive Open Online Course) and for developing the notion of rhizomatic learning. In January 2014, he facilitated a MOOC entitled 'Rhizomatic learning: the community is the curriculum' (popularly known as #rhizo14 – the hashtag used on twitter and facebook for it), in which we (Maha and Sarah) were participants.

How was this interview conducted?

Since Dave lives in Canada, Maha lives in Egypt, and Sarah lives in Scotland, this was not a traditional interview. Maha conducted this interview with Dave rhizomatically (see below for explanation of rhizomatic), starting on google docs, facebook and twitter. Additionally, Maha crowdsourced part of this interview by inviting anyone who was interested in asking questions to pose those questions on her blog (Bali, 2014b) or on twitter using the hashtag #askjpd, and Dave Cormier answered those questions on a live (and recorded) google hangout, co-facilitated by us (Maha and Sarah). The full list of crowdsourced questions asked of Dave is available at this Storify[1], the full hangout recording is available here[2], and the transcript is here[3]. What follows is an edited summary of the interview, focusing on particular aspects that we thought would be of interest to readers of the *JPD*. Because of the unorthodox way of conducting the interview, the summary does not follow the order the questions were asked of Dave, nor does it include his full response to each question. We try to explain most terms in the body of the text, but have also provided a glossary at the end of the article for reference.

What is Rhizomatic Learning?

Dave Cormier is reluctant to define rhizomatic learning in a concise format. In a tweet, he told us he has 'been very careful to never write a definition', and he now prefers to think of it as a story[4]. Keith Hamon, a #rhizo14 participant and someone who has engaged with the notion of

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[1] https://storify.com/Bali_Maha/q-and-a-with-dave-cormier-storify-of-questions/
[2] http://www.youtube.com/watch?v=1oX2DFP2O70&feature=youtu.be&a
[3] https://docs.google.com/document/d/1XVk8EPrAt-kns2UfQqGp5gqTt9-PGC_tNn2nx5hYE84/edit#heading=h.sopgunmqg7mn (access will be granted upon request)
[4] In personal communication, Dave said, 'D&G hate the word metaphor… I have certain feeling[s] about how the word translates into English. It's the reason I now use the word story.'

rhizomatic learning for many years, suggests that 'we define differently in the rhizome: from the inside out, rather than the outside in' (Hamon, 2014). But even those of us who have experienced rhizomatic learning, whether via #rhizo14 or otherwise, find it difficult to define it or explain it in a way that would make sense to others who have not experienced it (although one of us, Maha, believes it is the way most adults learn informally anyway, but not the way we often approach teaching/learning in formal contexts). Sarah describes her rhizomatic journey as tending and building her garden of knowledge; she needs to try to control the weeds[5] and ask other participants in the learning process for cuttings and pretty plants; she needs to nurture her seedlings till they are sturdy enough to survive without her help.

We used several of Dave's blogposts, as well as the writings of some of the participants in #rhizo14 to clarify the concept for *JPD* readers. Cormier's notion of rhizomatic learning is in great part inspired by the work of Deleuze & Guattari (1987) on rhizomatic thinking, but taken to explain how meaningful learning can occur in an age of abundance. The rhizome is a botanical metaphor (Cormier, 2008), although Cath Ellis (2014), a participant in #rhizo14 who is very familiar with Deleuze and Guattari's work, prefers to think of it as a model; she blogged about the difference between arborescent (tree) and rhizomatic (root) thinking as described in Deleuze and Guattari's (1987) work[6]. We have reproduced her comparison in the table below:

Arborescent	**Rhizomatic**
Fixed order Plotted points	Connection Heterogeneity
Unity	Multiplicity
Beginnings, Middles and Ends	Multiply entryways & exits; inbetweenness, becomings
Reproducible Describing a de facto state	Open Connectable Susceptible to constant modification
Competence	Performance
Hierarchical	Acentred Non hierarchical
Filiation	Alliance
Starting and finishing	Coming and going

Maha (google doc): You've often said rhizomatic learning is not really a theory. What is it, then?

Dave: I think of it as a story. It could be a theory… I'm just not sure what that would mean. If you see a theory as something that can be falsified then rhizomatic learning isn't that. If you see the meaning of theory more broadly than that… then it certainly is a theory from my perspective. The uncertainty around this leads me to use the word story. I think if more people take up the rhizomatic banner, people with different strengths than I, more focused research type strengths, it could make its way to theory.

[5] Of course some weeds are rhizomes, some rhizomes are weeds. It is all a matter of balance, and perspective.
[6] Of course, it's important to remember that these are only metaphors or models. Real trees and rhizomes are far more complex than these models might have you believe.

Taking the rhizome metaphor to describe rhizomatic learning, Cormier (2008) writes:

> A rhizomatic plant has no center and no defined boundary; rather, it is made up of a number of semi-independent nodes, each of which is capable of growing and spreading on its own, bounded only by the limits of its habitat (Cormier, 2008). **In the rhizomatic view, knowledge can only be negotiated, and the contextual, collaborative learning experience shared by constructivist and connectivist pedagogies is a social as well as a personal knowledge-creation process with mutable goals and constantly negotiated premises**. The rhizome metaphor, which represents a critical leap in coping with the loss of a canon against which to compare, judge, and value knowledge, may be particularly apt as a model for disciplines on the bleeding edge where the canon is fluid and knowledge is a moving target (emphasis added).

Rhizomatic learning then, according to Cormier, has intersections with social constructivism and connectivism. Bali (2014a, p. 45) summarizes connectivism as follows:

> Connectivism, the belief that 'learning is a network phenomenon, influenced (aided) by socialization and technology' (Siemens, 2006, Background section, para. 5), is considered the latest generation of distance education pedagogy (Anderson & Dron, 2011), and is the pedagogical philosophy behind cMOOCs (Rodriguez, 2012). Social media are used extensively in connectivism because it asserts 'that knowledge is distributed across a network of connections, and therefore that learning consists of the ability to construct and traverse those networks' (Downes, 2007, para. 1).

As such, connectivist MOOCs or cMOOCs do not rely on content provided and assessed by a group of instructors as authorities (as opposed to what are called xMOOCs such as most of those offered by high profile universities via Coursera or EdX), and instead relies on the knowledge created and shared by participants on social media.

Rhizomatic learning can be understood as follows:

> The idea is to think of a classroom/community/network as an ecosystem in which each person is spreading their own understanding with the pieces…available in that ecosystem. The public negotiation of that 'acquisition' (through content creation, sharing) provides a contextual curriculum to remix back into the existing research/thoughts/ideas in a given field. Their own rhizomatic learning experience becomes more curriculum for others.
>
> Rhizomatic Learning developed as an approach for me as a response to my experiences working with online communities (Cormier, 2012).

We will return to the notion of rhizomatic learning again throughout the interview.

Cormier on cMOOCs

Since Dave was one of the facilitators of the first ever MOOC CCK08 on Connectivism and Connected Knowledge, some people wanted to ask him about cMOOCs (connectivist MOOCs), and MOOCs in general:

Sarah (twitter): Is/was #rhizo14 a MOOC?

Dave: I would say it was...You can't call something a MOOC before it happens, because the problem is that one of the central qualities is the massiveness; that is the place where the potential comes from. So you look at #rhizo14 and there were lots and lots of connections, lots and lots of unexpected connections, and they happened in dynamic ways in different places. And that's not possible if you only have 10 people – it's just not going to happen... I think that for some of the really big, branded institutions – you know – if you're at the University of Edinburgh or Harvard, I think you have a really good sense of the fact that your brand is strong enough to bring people in whenever you put together one of these projects – be it cMOOC or xMOOC. But a MOOC for the rest of us is something you can only identify after the fact, and I feel pretty happy that #rhizo14 reached the category of that. It certainly reaches the category of openness, it was definitely online and it was definitely a course. But I think the massiveness of the connections speaks for itself. I think it definitely qualifies as that.

Elizabeth (blog): I'm interested in starting up a cMOOC myself. I'm an elementary teacher with no other academic credentials, but I want to get together a sizeable group of people who want to study current trends in modern poetry, and then go out and do it together. Is this feasible? What tools would you recommend?

Dave: It's feasible. The most important thing is that you have some way of contacting enough people. It's certainly not a case of 'build it and they will come'. I've been working online for about 10 years ... The hardest part is to get the people at the start, and then the harder part is to keep them. So, you need to develop some way of engaging so that you don't end up being the teacher, or the facilitator, but rather you're starting up a community to go ahead and do that, and I think that done well and being extraordinarily lucky a cMOOC can be that kind of starting point: it has the qualities of eventedness that allow that to happen. Best recommendation is to use the tools that work, go to the places people know already – Facebook, Google+, Twitter... though P2PU [a MOOC platform] was really helpful [for #rhizo14], just stick with the stuff that already works, don't try to use a new platform or something they don't recognize. Keep the technology simple and put your time into finding people who are going to engage with you. I think it's also helpful at some point to have a really clear idea of what you're expecting. I wrote a blog post called 'an unguided tour of rhizo14' (Cormier, 2014a) that was really popular and people seemed to keep referring back to it – so I think have one thing that explains what you're doing to everybody and keep shooting it out to people. Look at that blog post and see if you can use it as a model.

Cormier on Rhizomatic Learning

Maha (google doc): You've said in various places that rhizomatic learning is influenced by (but not 100% loyal to) Deleuze & Guattari's work on rhizomatic thinking. You've also said there are similarities with constructivism and connectivism but that they are not the same as rhizomatic learning. What is your current thinking about this?

Dave: I've increasingly become disenchanted with the idea of defining educational theory in general and rhizomatic learning in particular. I wouldn't make clear delineations between any of those things at this point. I will say that I find connectivism too tidy, and have always felt that way. I think of the lines of flight, and the idea of nodes and lines that don't connect as being necessary to understanding learning in the real world. I think it's difficult to talk about constructivism as 'one thing', particularly after the time I've spent with some of the definitions used by some in the scientific education community recently. I would say that rhizomatic learning is more specific than constructivism and could, under some definitions, be seen as a form of it.

Maha (google doc): How so?

Dave: If I was forced to talk about constructivism, I would describe it on the other end of the continuum from instructivism. In one view, knowledge is constructed in the process of exploration, and that's what learning means. In the other view, there is a canon of knowledge that needs to be passed on. Where constructivism gets confusing regards whether your 'exploration' is a way to discover the prearranged knowledge or whether it is about actually constructing knowledge in your own map.

In the sense that constructivism is about making your own map, about constructing in the unknown, it is like the story of rhizomatic learning.

Maha (google doc): How did the 'idea' of rhizomatic learning emerge? How has it evolved since you first thought about it?

Dave: That's a pretty big question. I was introduced to the rhizome by one Bonnie Stewart, while she was studying at European Graduate School in Switzerland. It resonated for me as a way to talk about some of the things that I was seeing happening on the internet and in my classrooms. It gave me language for talking about the unknown, the unprepared, the accidental. The uncertain.

Let's say that I've had inklings my whole life that things that seemed whole weren't really. My work with online communities has only solidified my belief that these things are possible and indeed desirable.

The biggest change, I would say, has been my confidence in it. The more I go on, the more I weave other things I've learned (complexity theory, permission, abundance) into the mix the more it makes sense to me.

Cormier on when rhizomatic learning works

Dave: I have grave reservations with rhizomatic learning in formal educational online spaces. Not because it isn't possible, but because it doesn't serve what most people think of as learning. It also doesn't require formal education. From an individual, online perspective, it is born of abundance. Many people who would come to a formal setting are coming for the opposite kind of experience. Sometimes someone just wants to hear a lecture. Sometimes you just want to know how many cups of sugar someone thinks you should add. We cannot approach all learning from the perspective of deeper learning, I don't think we have the space for it.

In a face-to-face environment it is MUCH easier for me to support people who are at risk inside of a rhizomatic structure. It can be very disconcerting. It is very difficult to assess that from a web based perspective… particularly at scale.

Rhizomatic learning for MOOCs and open courses… yes. Face-to-face certainly. I've had challenges using other approaches.

Mauro (blog) Is it possible that at some point rhizomatic learning, which is by nature uncontrolled, can become a problem for the learning community?'

Dave: Absolutely this can be a problem. Anytime you take something that is unpredictable it can become a terrible problem. Imagine you're trying to build a barn. You have a very clear objective, but someone says 'I know, let's build a crazy tunnel that will allow us to do this other thing, then this is very distracting and disturbing, and I think depending on what you want to get done there are times to do things rhizomatically or not. If you're looking to play a song on a guitar, like I am at the moment, then I'm playing the same notes over and over and that's not a rhizomatic approach because that doesn't suit. But it should be less of a problem in a learning community, because if you want people to learn over time, well in my experience then the community needs to be flexible to allow people to grow. If they're too dictatorial then they're no longer communities and you have to pay people to keep them, so I'd say certainly some of the rhizomatic stuff should be there if it's a community that you're expecting to be ongoing.

Keith (blog): In his book *On Complexity*, Edgar Morin says that we must learn to define from the inside out, and not only from the outside in. How is the community as curriculum an instance of defining a class from the inside rather than from the outside?

Dave: When I look at that question and think about inside out, I think of things like objectives. In my own face to face classes my students get really frustrated when I don't set objectives for them. I say 'look, objectives are things you have to set for yourself coz I don't know you well

enough on the first day we've met to tell you what you need to know'. I think this is true in any case where you're not talking about the absolute basics in a field. So if we're talking about introductory physics, I don't think that the inside out is particularly effective, certainly not given where so many of our students were coming from. If they were a tabula rasa and we were starting at the beginning, maybe we could do that, but that's not where they're coming from and I think it's unfair to expect them to be able to make that transition cold. But, when we're talking about things like #rhizo14, where we're talking about – let's face it – fairly esoteric educational concepts, you have a chance to go and allow for these things to be created from the inside, and I think the curriculum was very much created from the inside in the sense that it certainly wasn't imposed upon by me, it was maybe sparked by me in some sense but not imposed, and not imposed by expectations – and those expectations had nothing to do with money, because nobody paid. And there were no certificates that were driving it, and there were no clear objectives that people had to meet. And I think because of that the curriculum was a lot richer, it was a lot more diversified, and you didn't have that constant worry you have whenever you try to construct a curriculum for an outside in model, where you think that at some point you have to assess people, but because you're allowed to do that you get a chance to make new connections, you get a chance to grow rhizomatically, you get a chance to actually learn in unexpected ways, to allow the knowledge to connect in ways that are different for each person. You can allow things to emerge, you can have that becoming feeling – you're in a constant state of becoming because there are no targets, so you have a chance to learn for longer and, I think, more effectively. I won't call rhizomatic learning a theory as I have no way of disproving this, but I think you can learn deeper that way too. And I'm happy to have that feeling and not have to prove it.

I think these things are effective when you don't have a particular responsibility to every single person who comes in. And I think that's something that we have to constantly refer back to. In a MOOC, I'm not responsible for 500 people. I'm responsible for the process (the MOOC itself) and people are responsible for themselves. So the way the MOOC is designed doesn't work for 100 people, and there were certainly people who thought #rhizo14 was confusing and they just kind of looked at me and shook their heads. That's OK because the social contract is such that I am not responsible to them in any way. Whereas in my face to face classroom, people have paid, they come in, they have an expectation that every one of them is going to learn something that changes the dynamic. I think you can still do that rhizomatically, but I think at some point you have to add a little bit of scaffolding to ensure that you fulfill that social contract you're a part of.

Mauro (blog): If rhizomatic learning needs some channeling isn't this opposite to its philosophy?

Dave: I don't see its philosophy as being 100% anything. So I don't think rhizomatic learning requires no structure, and I don't think that's a contradiction. I hate to go straight for the gardening metaphor, because the rhizomatic stuff is technically postmodern philosophy, but Deleuze and Guattari use the metaphor so I'll make that leap. It's very much a curation process. When you set up a lawn, you don't throw the seeds all over the place, you set up a place and

plant them, you water it, you keep the bugs away. I see it like that – you let it grow in ways that are natural for it inside that space, and maybe outside of the space as well (unless it's Japanese Knotweed). So I don't see it as hands off, I think there's lots of environmental factors that help things grow, and I think that whenever you're trying to cultivate something in particular, controlling those environmental factors can be helpful.

Cormier on #rhizo14

Maha (google doc): You've just finished facilitating a course about rhizomatic learning (#rhizo14). What were your goals for that (un)course? How did it pan out for you?

Dave: That's in the blog post :) [below pasted from the blogpost (Cormier, 2014b)]

> Fundamentally I was hoping that 40 or 50 people would show up to the course and that by the end there would still be a handful of people interested in the discussion. I thought it would be a good opportunity for me to gather the work that I had done and make it better than it was before. I find the pressure of having an audience is very helpful in convincing me to get things together. I was not precisely hoping that we would get enough people for the course to have MOOC like characteristics, and I certainly didn't put the time into advertising it in a way that was likely to lead to that. I was hoping that after 6 weeks I would have a better grasp on my own work, and that a few participants would have had a positive experience.
>
> In the more macro sense, I'm always hoping that a course that I'm working on leads to some sort of community. My work since 2005 has focused on ways to encourage people to see 'the community as the curriculum'. I'm always hoping to organize an ecosystem where people form affinity connections in such a way that when the course ends, and I walk away, the conversations and the learning continues.

Sarah (twitter): 'What made #rhizo14 so successful? (hint: was it the brilliant participants?)'.

Dave: I hate to agree with Sarah on this, but certainly, and I had this very conversation with somebody yesterday, when I say that you can't know if you're going to get enough people for it to be a MOOC, I think you also can't know whether or not you're going to get the *quality* of people that are going to be able to make the kind of connections that you're interested in. I was fortunate by the people that came in, by their dedication to the subject, by their willingness to engage in the crazy questions that I sent out to them – because they were very, very willing to engage, and were not defensive. Well, in some cases they were, but not in a bad way. When I do my own self-evaluation – when I close the door and say 'what is it about that that I want to do again next time?', I think that the aggressive questions were really helpful as a way for people to rally and create a sense of community. I think assigning community leaders early on was really helpful, and I think I was really fortunate who those people were, and actively saying 'Who would like to moderate this kind of conversation? Who would like to engage?' was really useful. I think that not assigning any materials was really useful. It was the course you could

never fall behind on. There was never any 'oh, I gotta read those articles before I can engage in this conversation', it was a place where people really could engage early on and they could engage when they wanted to.

Vanessa (twitter): So if it was a MOOC when it was actually running, what is it now?

Dave: (laughs) I think of it as a MOOC in waiting, partly, as I assume we're going to do this again next January, a seasonal event – and when I think about MOOCs I think there's a connection between them and really good conferences, where people expect them to come around every year, and they get a tone and a feeling. I was talking to the folks from the Sloan-C [now called *Online Learning Consortium*] online conference, and they were saying that every year about half the people have been there since 1994, and my hope that #rhizo14 as it goes forward will be like that, so half the people will be totally new people, and the other half will be people who are still part of this entity, this discussion space, this connection space that is what I call a community online. So I guess I'd call it a community now, Vanessa, even if the activity on the spaces where people are now starts to slow down, the connections between the people don't go away. So, if I'm right, when the call goes out next year, half of the people who are really engaged this year will come back, the other half will go onto other things that are really important to them, and then hopefully we'll get another slew of people who'll have totally different ideas and will come in and make it totally different.

Maha (google doc): The course was entitled 'rhizomatic learning: the community is the curriculum'. How closely are the two aspects of it intertwined?

Dave: I see them as different expressions of the same thing. If you see knowing in a rhizomatic sense there is no difference between a book, a teacher, a learner a whatever… there's a bunch of stuff out there and we make our own maps of it. As a facilitator, I'm trying to create an ecosystem wherein that community has a better chance to form.

Maha (google doc): Did you generally feel that what happened in rhizo14 represented your view of what rhizomatic learning is? How so?

Dave: The biggest takeaway for me from rhizo14 is the idea of permission. I really focused on giving people permission to participate, to engage, to diverge in this course and am really happy with the way things turned out. This will become a bigger focus for me going forward.

Maha (google doc): I assume rhizomatic learning embraces uncertainty and unexpected outcomes, some of which can be pleasant, others unpleasant.

Dave: I have a difficult time when I perceive myself as misunderstood. Most of my unpleasant experiences are related to me not doing what I was hoping to do. Most of the pleasant ones are seeing people break through to new, empowered places after being given permission to do what they mostly wanted to do anyway.

Conclusion

We hope that this interview has helped readers know more about Dave Cormier's views on MOOCs, cMOOCs, rhizomatic learning and the #rhizo14 MOOC experience. It is meant as a portrait of Dave's ideas and thoughts at a certain point in time, rather than as a critical review of all of his work.

So what is rhizomatic learning? We don't know if anyone can tell you in a concise way, and our attempt at doing so earlier in this interview took up more than an entire page.

Rhizomatic learning is a response to the realization that some important bits of knowledge are not objective matters of fact which can be proved to be true or false, but that many human concerns are open to interpretation. Philosophically it's the latest comment in a conversation that began with Socrates and ended up with the post-structuralism of Gilles Deleuze; pedagogically it's the latest chapter in a story about constructivism and its various guises. Rather than assuming that the teacher is an expert who transmits knowledge into the minds of their students, rhizomatic learning takes seriously the constructivist thought that learners need to construct knowledge for themselves and embraces the conclusion that this entails that there will be no one fixed set of artefacts that form a curriculum. As Dave says earlier in this piece, rhizomatic learners are empowered to make their own maps – the teacher's role is to facilitate, not (merely) to orate. Rhizomatic learning can be explained by the mantra that the community is the curriculum or as the idea, as Keith points out (above), that rhizomatic learners are defining a class from the inside out. It's hard to encapsulate, but we have tried our best. We think that #rhizo14 is a particularly good example of rhizomatic learning.

Dave recognizes, as do we, that rhizomatic learning is not for every context or every learner; that there are instances where the lack of direction and structure can hinder some people's learning or even make the learning experience inaccessible. Dave recognizes (in parts of the interview not shared in detail here) that there are almost always access issues with these kinds of experiences: infrastructure to connect to the internet; the English language, as well as the discourse accepted by learning communities on social media. However, for a good number of participants in #rhizo14, it was, and continues to be, a community that formed and created their own learning journeys.

How do we summarize #rhizo14? Dave believes that unless you are a big name university like Harvard or Stanford, you cannot know that an open online course you create is necessarily going to be 'massive' enough to be a MOOC until you run it and people come. Two things that helped people engage with #rhizo14 were his asking for community leaders to help facilitate the course; and the fact that there were no assigned readings/videos, and therefore people could not 'fall behind' on the course. It was also important for him to allow participants permission to 'diverge' and follow their own paths through the course. His view is that the hardest two steps in succeeding in facilitating a MOOC are to find the 'right' mix of people, and then to keep them engaged throughout the duration of the MOOC. In some cases, like #rhizo14, the MOOC continued long after its official end date, and for Dave, this has achieved the more important purpose of running the MOOC – to bring together people who can

continue as a community afterwards. He calls the current #rhizo14 group a 'MOOC-in-waiting' in the hopes that some of them will still be around when he runs it again in January 2015 with new participants joining in. Dave does not believe that the rhizomatic learning approach works for every context or every learner, but that it is more appropriate for adult open learning in an age of abundance.

We were not able to include everything from the interview for space reasons, which reminded us of this particular question we were unable to include (but here it is now!).

Simon (twitter): 'is exclusion the curriculum?' and 'definition of curriculum is more a question of what/who one leaves/keeps out than the reverse?'

Dave: I think the word 'we' inevitably means 'not them' and that's always the thing that worries and concerns me… a community is by its very nature a ''we' activity and a 'we' activity can only be defined when there's a 'not them'. So it's always oppositional. It can be a very welcoming 'we', but there still has to be a 'we'.

'We' (Sarah and Maha) leave you with this sketchnote created by Mauro Toselli (used with his permission) summarizing his reflections after the Google hangout with Dave. It is, of course, only partial, as is this summarized and edited version of the interview. But you can view the full interview video on YouTube and the text on Google Docs.

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[7] Originally published on Flickr: https://www.flickr.com/photos/xlontrax/14032674544/in/photolist-no28fy-n198m3-mDVe6z-mucpg4-mu5GN2-jz2Lw7-jccm26-jK5nK6-jyZRS8-jPVSYW-nmyFQp-khZMyY-khYnVg-jWLNsP-jyfkpH

Glossary of terms

Connectivism
Connectivism is 'a learning theory for the digital age (Siemens, 2004) and is considered to be the learning theory behind cMOOCs (Bali, 2014a, above).

D&G
Gilles Deleuze and Felix Guattari. Deleuze was a philosopher at the Sorbonne, France. Guatari was a psychoanalyst and political activist. Together they wrote a number of works, including *A Thousand Plateaus (ATP)*, in which the rhizome, and rhizomatic thinking, are introduced.

Lines of flight
In the original French this is 'lignes de fuite', which are the convergence lines in a painting. It has nothing to do with flying. 'Lines of flight' is part of the vocabulary developed by D&G in *ATP* in order to focus on how things connect, rather than how they 'really' are (Parr, 2010, p. 147). It tries to describe the way that things are messily connected (or unconnected) in rhizomatic thinking/learning, and how they tend to leak into each other.

MOOC
Massive Open Online Course. MOOCs can be categorised in different ways, one way of doing this is to distinguish between a cMOOC and an xMOOC.

cMOOC
The 'c' is cMOOC stands for 'connectivist', from the pedagogical theory of connectivism associated with George Siemens and Stephen Downes. Connectivist MOOCs or cMOOCs emphasise the importance of collaborative learning and social networking. They do not rely on content being provided by and assessed by a group of instructors as authorities. Participants create knowledge for each other and share their discoveries via social media.

xMOOC
By contrast to a cMOOC, an xMOOC is instructivist. They are often just an online version of a traditional course, composed of lectures (often just repurposed from its original setting), recommended readings and summative quizzes. Courses will typically have discussion forums and longer assignments will be peer marked. According to commentators, Udacity, Coursera and edX deliver xMOOCs (Siemens, 2004).

Rhizomatic learning
This is a term used by Dave Cormier to describe a type of learning that can happen in this age of abundance, especially online learning using social media.

Rhizomatic thinking
This is a concept extensively written about in D&G's ATP, a postmodernist philosophical work. D&G suggest two metaphors for two types of learning: the tree (arborescent) and the rhizome (rhizomatic). The latter is an attempt to give a picture showing how seemingly unconnected things can actually form meaningful connections for us (see Deleuze & Guattari, 1987, esp. pp. 18-21).

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