

Aims

In this our final workshop we will explore how language constructs reality in *Julius Caesar* and how educational institutions present reality to students. The critical reading we use is a book chapter about how 'complexity theory' helps us reconsider educational thinking. We will first define 'complexity theory' before moving to consider the complex ways that reality is made and remade by language in *Julius Caesar*. Then we will discuss whether education needs to exchange its ('representational') approach of teaching solutions that explain the world for an ('emergentist') approach that equips students to reimagine the world.

Readings

- Shakespeare, William. Julius Caesar.
- Osberg, Deborah, Gert Biesta and Paul Cilliers. 'From Representation to Emergence: Complexity's Challenge to the Epistemology of Schooling,' in *Complexity Theory and the Philosophy of Education*, ed. Mark Mason (Wiley-Blackwell, 2008), pp. 204-17.

Focus questions

- Complexity theory and emergence
- Speaking reality in Julius Caesar
- The point of education

Complexity theory and emergence

Complexity theory has attracted so much scholarly attention over the last two decades that any attempt at definition falls short. A search of the internet will give you a wide range of definitions. A complexivist approach may be taken to anything from physics and chemistry, to business management and social science, to literary studies and education (to name a few!).

For our purposes, a brief definition of complexity theory might include the following. Complexity theory attempts to understand reality from a 'systems' perspective. All things and ideas are systemic to some degree. Some systems are simple and closed, with linear, predictable, repeatable, cause-and-effect processes and outcomes (for example: 1+1=2; open a door, go through, close the door; freeze water to create ice). However, many systems are so complex that we can't fully model or map their processes and outcomes. These systems are nonlinear, unpredictable, dynamic, and changing (for example: the weather, a living human, a galaxy, a city, a family, education). Complexity theory tries to understand and model these complex systems, but at the same time this will always misrepresent the system, because it necessarily reduces the essential complexity to a manageable level.



The essence of a complex system lies in the interactivity of its parts or entities. Rather than being organised by one individual or part, complex systems are organised by these interactions. Even if these entities interact with one another in relatively simple ways, the collective behaviour of the entire system eludes comprehensive explanation because it comprises too many interactions that are too variable to be fully explained. Interactions and reactions cause further actions and reactions, and these unpredictable changes feed back into the system, causing further change.

Complex systems are often described as existing on the 'edge of chaos', which is to say that order and disorder coexist in a tense and volatile relationship. Another key term in complexity theory is 'emergence' which refers to the production of something new out of the volatile and unpredictable system. What emerges is not the end product of any single person or agent, but a distinct outcome of the interactive system itself. Brainstorming and other methods of freely collaborative interactivity are valuable because they try to provoke an unpredictable, complex interaction out of which something new has the potential to emerge.

If education is merely the transmission of inherited knowledge by teachers to new generations of learners, then the outcomes or products are likely to be, generally speaking, predictable and reassuringly recognisable. Many of our current teaching and assessment frameworks assume this as they attempt to control and measure what is learned. Yet, if education promotes truly complex interactivity of ideas and emotions, then the outcomes or products are likely to be (one would hope!) unpredictable, ultimately immeasurable and often refreshingly unusual. In the former, teaching and learning comprise a relatively closed system that reaffirms traditional knowledge structures, while in the latter, teaching and learning comprise a complex system that promotes emergence of the new.

Find out more about complexity:

There is an excellent, open-access, online journal called Complicity: An International Journal of Complexity and Education (http://ejournals.library.ualberta.ca/index.php/complicity/index) which has many articles on how complexity theory impacts on education (see especially the 2012 and 2014 issues). Two highly readable books on complexity and education are: Brent Davis, Dennis Sumara and Rebecca Luce-Kapler's Engaging Minds: Changing Teaching in Complex Times (second edition, 2008); and Keith Morrison's School Leadership and Complexity Theory (2002).

After reviewing this definition of complexity, consider the following questions:

- Do you think of your teaching in the classroom as a closed or complex system?
- How do you think school environments aim to present a certain representation of 'reality' to students?
- Think of an example of your teaching practice that seems to you to provoke open-ended, complexivist learning. Now consider how open it really is and where its limits lie. Does it



facilitate genuine emergence of new ideas and experiences? If so, are these outcomes endorsed or rejected by the more formal (and closed) system of learning?

- What are the virtues of closed, transmission-style teaching (with rigid aims and predefined outcomes) and of open, complexivist-style teaching (without rigid aims and predefined outcomes)?
- If the teacher's role is to cause the emergence of something in the student, what do you think that 'something' is or should be?
- Do you think the aim of teaching is for teachers and students to reach a shared understanding of 'reality'?

Speaking reality in Julius Caesar

Julius Caesar is a play in which facts, events and truths are never simple and static. Rather, everything is overwhelmed, metamorphosed and re-presented by rhetorical language. This means characters are relentlessly redefining the reality around them via language in order to achieve specific ends. Single events are multiply and contradictorily redefined and knock-on effects ripple through the play. This evokes a complexivist world in which one cannot be sure of how anyone or anything should be defined or interpreted.

Use the questions below to guide discussion of how Brutus and Caesar are represented by language in the play.

- Discuss the rhetorical representation of Brutus in some of these passages. How is he represented and constructed by various characters including himself?
 - 1.2.25-176. Cassius and Brutus in conversation.
 - o 2.1.1-69. Brutus in his orchard.
 - o 3.2.167-252. Antony speaking on the assassination of Caesar.
 - 5.5.69-80. Antony and Octavius speak on Brutus' suicide.
- Discuss the rhetorical representation of Caesar in some of these passages. How is he represented and constructed by various characters including himself?
 - 1.2.90-160. Cassius speaking to Brutus about Caesar.
 - o 2.1.10-34. Brutus on Caesar as serpent's egg.
 - o 2.1.161-210. Brutus, Cassius and Decius speaking of Caesar.
 - o 3.1.1-77. Caesar's assassination.
 - o 3.1.254-75. Antony addressing Caesar's corpse
 - 3.2.12-62. Brutus defending his actions in slaying Caesar.
 - 3.2.74-252. Antony eulogising Caesar.



Further questions:

- How does the play's language complicate the 'reality' of the situation in Rome? Consider the different interpretations of natural portents, the assassination itself, honour and virtue, the battle, and Rome itself.
- Can you think about Julius Caesar using some of the complexity terms defined above such as 'the edge of chaos' and 'emergence'? How might this complexivist perspective change how we understand 'reality' in the play?
- Does this approach change how you see the play, and how you might teach it?

The point of education

This focus point will discuss a few issues arising from Osberg, Biesta and Cilliers' chapter, 'From Representation to Emergence: Complexity's Challenge to the Epistemology of Schooling.'

Osberg, Biesta and Cilliers argue that Western formal education tends to be 'representational' in that it claims to present to students an objective account of the world. In this sense, it is a transmission model of learning that depends on a closed system of knowledge that supposedly accurately represents the 'real' outside. Osberg, Biesta and Cilliers argue for a more transactional and dynamic approach which takes account of the fact that the world is not distinct from the ways we conceptualise it and it is always being reordered by human engagements of various sorts. Instead of a 'representational epistemology,' they propose an 'emergentist epistemology,' which leads to:

a different way of understanding educational practice since we find education (becoming educated) is no longer about understanding a finished universe, or even about *participating* in a finished and stable universe. It is the *result*, rather, of participating in the creation of an *unfinished* universe. (p. 205)

They argue that the world and our place in it comprise a vastly complex open system and therefore we need educational models and practices that adequately respond to this. Rather than thinking of our theories and models of knowledge as solutions that represent the world in accurate and final ways, we could think of our theories and models as 'tools' that enable us continually to renegotiate and rethink our world and our place in it (p. 211).

Osberg, Biesta and Cilliers continue:

When we consider the purpose of schooling in terms of an emergentist understanding of knowledge *and* reality, we must begin to imagine schooling as a practice which makes possible a dynamic, self-renewing and creative engagement with 'content' and 'curriculum' by means of which school-goers are able to respond, and hence bring forth new worlds. (p. 215)



So, we conclude this workshop by asking two questions that Osberg, Biesta and Cilliers ask (p. 215):

- What would schooling actually look like if we dropped the idea that its overall aim is to ensure the acquisition of knowledge of an already existing reality that is fully present?'
- 'How might such a practice of schooling actually be "performed"?'