

Abstracts for the seminar in Modeling Complexity:

Bruster:

Representing Shakespeare's verbal complexity visually is difficult but necessary, for illustrations can confirm research findings and sway opinion as to that information. This essay discusses intertextuality, focusing on the question of precedence involving *A Midsummer Night's Dream* and Nashe's *Have With You to Saffron-Walden*. Among the questions it asks: To what extent can visual representation serve as a tool for research as well as the presentation of research?

Witmore:

This paper will explore the nature of a literary forms that become visible through massive, systematic digital comparisons. Advancing a notion of "utopian" criticism, the paper will ask what we can know learn from the placeless, abstract mathematical spaces in which texts -- for example, the plays of Shakespeare -- seem to reside once an algorithm has rendered them "actionable".

Ullyot:

In *Figuring Style: The Legacy of Renaissance Rhetoric* (2014), Nancy Christiansen describes early modern language as a web of rhetorical figures. This resonates with our experience as readers of that language, particularly in literary texts where we encounter self-consciously artful usage. But is that usage necessarily artificial? Might it be, instead, behaviour that reflects the writer's natural habits of thought? And what is the relationship between natural thought and artificial language? This paper addresses some of these questions with an examination of the figures in Shakespeare's *Troilus and Cressida*, as compared to those figures detectable in a wider range of 400 early modern plays. Does *Troilus's* focus on rhetorical persuasion problematize both writers' and characters' uses of persuasive figures?

Stahmer:

Humanistic Content Based Image Recognition

Recent development in the area of Content Based Image Recognition (CBIR) can be leveraged to advance well established modes of philologic and bibliographic inquiry. Following the trails of literary and visual tropes as they move from text to text though both literal reproduction and conceptual adaptation and the study of textual materiality are both longstanding humanistic methodologies that have advanced a variety of traditional modes of scholarly investigation. Such work has historically relied on time intensive human cataloguing and has been limited by the human brain's ability to both remember and simultaneously compare multiple symbolic units and or physical objects. Today, the computational speed, random access, and hard memory of the average smart phone surpasses that of the average human. As such, a potential exists for

computers to act as scholarly collaborators in longstanding modes of textual analysis because they are potentially better equipped than their human counterparts to perform large-scale recognition and classification tasks. This paper presents the preliminary results of recent attempts to leverage this potential at the English Broadside Ballad Archive (EBBA) and discusses potential avenues of future application and development.