

Computational Creativity and Social Justice: Workshop Report

Organizers: Gillian Smith, Dan Brown, Anne Sullivan

The first workshop on Computational Creativity and Social Justice was held on June 20, 2017 in Atlanta, GA, co-located with the International Conference on Computational Creativity (ICCC). The workshop ran for the morning session, and consisted of one session of paper presentations followed by a group discussion on open challenges in CC and social justice. This report provides a brief description of the papers presented, and an overview of the workshop discussion session. Among all workshop participants, as well as several main conference attendees who approached us afterwards, there was a broad desire to run the workshop in future years.

Paper Presentations

1. *Computational Creativity and Social Justice: Defining the Intellectual Landscape*

Gillian Smith

<http://computationalcreativity.net/iccc2017/CCSJ/smith.pdf>

This position paper provides an overview of the ways in which computational creativity and social justice intersect, using research/practice in games and social justice as a framework. It offers open research questions related to representation and algorithmic bias, potential social justice applications for CC research, and questions for the broader research community to consider regarding diversity.

2. *Unpack That Tweet: A Traceable and Interpretable Cognitive Modeling System*

Upon Ehsan, Christopher Purdy, Christina Kelley, Lalith Polepeddi, Nicholas Davis

<http://computationalcreativity.net/iccc2017/CCSJ/ehsan.pdf>

This technical research paper describes an explainable AI system for synthesizing potential tweets for US President Donald Trump. The authors performed a mixed-methods analysis of a corpus of Trump tweets and a theoretical analysis of types of tweets, which produced a belief base and generative grammar. The resulting system generates tweets in response to news headlines, which can then be further tweaked and explored by a user using variables related to sentiment Trump has toward news topics. The authors hypothesize that such a framework could be a useful way for procedurally exploring the communication behavior of world leaders.

3. *Leveraging Procedural Narrative and Gameplay to Address Controversial Topics*

Ben Samuel, Jacob Garbe, Adam Summerville, Jill Denner, Sarah Harmon, Gina Lepore,
Chris Martens, Michael Mateas, Noah Wardrip-Fruin

<http://computationalcreativity.net/iccc2017/CCSJ/samuel.pdf>

This research paper describes an integrated research project that generates small games that are entangled with procedural, interactive narratives. These games are themed to be about the topic of climate change. Gameplay decisions are tied into the procedurally generated narrative, and vice versa. The authors present initial findings from a player study conducted during the system's development process, showing promise for the generated "serious" games as pedagogical tools.

Takeaways for Scholarship

We identified several research questions related to the theme of making computational creativity more “approachable”, which we hope can prompt new scholarship at the intersection of computational creativity and social justice.

- 1) **Making CC research open to non-expert use.** What technical infrastructures can support CC systems that are accessible to non-expert users? What interface patterns make sense for co-creative systems? How can we handle long-term ramifications of public use (e.g. hosting costs)?
- 2) **Opening up the “black box” of CC systems.** How can we make CC systems explain themselves and acknowledge their biases? Where are the “hidden” humans involved in the algorithms and data that go into CC systems?
- 3) **Making CC accessible to students.** Can we build a glossary of CC terms? How do we make CC easier for non-computer scientists to understand? What would a CC course look like if it were taught in non-technical departments, or to a general audience?
- 4) **Respecting audiences and cultures.** Whose voices are represented in our current technologies, and how does this influence the design of CC technologies? How does Irani et al.’s notion of post-colonial computing¹ relate to CC? How can we infuse our work with respect for the cultural roots of creativity? How do CC systems fit into the sociotechnological landscape?
- 5) **Confronting assumptions.** What alternate values could be used in designing CC systems? What assumptions are we making for “generality”, and how can we make those assumptions explicit?
- 6) **Building and acknowledging a community.** What is an “alternate canon” for CC research that highlights voices of those who are marginalized? What are related communities to CC that we can learn from?
- 7) **Making an impact.** How can we leverage the privileges that come from working in academic institutions? What can we do that cannot be done in other industries? How can we make a positive impact on the local communities that surround our institutions? What is a CC-related “work of provocation”?

Takeaways for ICCS Conference Organization

Several times, our discussion turned towards improving diversity in the ICCS community, in terms of both demographics and disciplines. We came away with three recommendations for future organizers for how to incubate diversity in the community.

- 1) **Introducing outside perspectives.** We recommend a conference session that allows people to introduce research from adjacent communities that have had impact on their work. We discussed three forms that this might take, but there are many ways to accomplish this:
 - a. A papers track intended for literature reviews that frame an outside body of work in a way that is relevant to computational creativity.
 - b. A panel discussion where speakers describe a paper they think will be unknown to the larger community and has been influential for them.
 - c. A papers track that explicitly encourages analysis and critique of existing systems that were not created by the authors themselves.

¹ Irani, L., Vertesi, J., Dourish, P., Phillip, K., Grinter, R. E. *Postcolonial Computing: A Lens on Design and Development*. Proceedings of the 2010 ACM Conference on Human Factors in Computing Systems (CHI’10). April 10-15, 2010. Atlanta, GA, USA.

- 2) **Diversifying attendance.** The introduction of the live stream has been a nice way to build an online community surrounding the conference as well as providing a publicly-accessible archive of talks. We recommend considering more ways to diversify the conference by reducing the costs (physical and financial) associated with attendance. A gallery co-located with the conference could be a way for artists to show their work without needing to pay to attend. Advertising opportunities for remote presentation is helpful for people who cannot travel; people who cannot travel typically do not even bother submitting work to a conference they know they cannot attend. Limited, needs-based travel scholarships could be offered for people who have never attended ICCC before.
- 3) **Engaging local communities of artists and practitioners.** Artists and practitioners are not typically professionally rewarded for writing and presenting a conference paper. Finding alternate ways for local communities of artists to engage with ICCC, whether through social events or sponsoring conference passes for locals, is a valuable way of bringing new voices to the community.