

# Critical Response Process for Data Visualization<sup>1</sup>

John D. Lee

9 September 2018

The Critical Response Process guides constructive feedback to create more effective data visualizations, and more generally, to create better designs. The process rests on a foundation of a growth mindset and psychological safety and consists of four steps: 1. Statement of meaning, 2. Designer questions, 3. Neutral questions from responders, and 4. Permissioned opinions and ideas. In this process, people play one of three roles: Designer, Responder, or Facilitator. The aim is a collaborate conversation where responders help designers identify new ideas and perspectives to achieve a design objective, not for the responders to “fix” the work.

DESIGN THINKING has emerged as an important approach to innovation, consisting of five components: Empathize, Define, Ideate, Prototype, and Test. Design Thinking places emphasis on idea generation and a positive “Yes, and ...” approach to proposed design ideas. It emphasizes iterative improvement of prototypes, but it does not specify a feedback process to guide improvement. Being able to provide such feedback is an important aspect of “good communication skills” that are often required of engineers, but rarely taught. The Critical Response Process fills this need.

## Foundation of Critical Response Process

The Critical Response Process aims to improve the work of everyone involved and is not about a competition. It is like a Seal Team mission where the team works to be sure nobody is left on the beach—the focus is on cooperation rather than competition.

Those presenting work for critique must enter the process with a *growth mindset*—the belief that there is always room to improve and that success depends on refining ideas rather than innate talent.

Those who are critiquing the work must ensure *psychological safety*—the shared belief that interpersonal risk taking is safe and there is a shared commitment to that safety. This can be done with respectful conversation: listen attentively (i.e., no computers or phones), focus on the work not the person, don’t interrupt, judge, or respond with personal opinion. and follow the Critical Response Process.<sup>2</sup> Cultivating deep mutual respect is essential.

Critical response sessions involve 3-7 people who engage in a focused discussion. The designer focuses the discussion by stating: what the work is intended to do, who it is intended to serve, and what stage the work is in.<sup>3</sup> The session concludes with the designer thanking the group and summarizing next steps.

<sup>1</sup> Based on: Lerman, L., & Borsted, J. (2003). *Critical Response Process*. Takoma Park, MD: Dance Exchange, with input from meriko borogove.

Giving and receiving feedback is hard. The feedback sandwich of Positive-Negative-Positive can help. Be sure to capture what works.

Natasha Jen: Design Thinking is Bullsh\*t <https://vimeo.com/228126880>.



The discussion is about the work not the designer (Lerman, & Borsted, 2003).

<sup>2</sup> Chapter 18, Lee, J. D., Wickens, C. D., Liu, Y., & Boyle, L. N. (2017). *Designing for People*.

<sup>3</sup> <http://scottberkun.com/essays/23-how-to-run-a-design-critique/>

### *Roles in the Critical Response Process*

What to do when you mess up and violate a role (because you will): own it, sincerely apologize, and then move along.

**DESIGNER** The designer's role is to present the work and believe that there are ways to improve it. The designer focuses the process on areas of the work that the designer wants to improve. The designer can be a note taker, but this can also be another person.

**RESPONDER** The responder's role is to react to the work to help the designer produce better work, not with the intention of "fixing" the work or guiding the designer to create the responders' best work, and not with the intention of proving the designer wrong.

**FACILITATOR** The facilitator's role is to initiate each step and transition to the next step. The facilitator also maintains focus on the work and adherence to the process.

### *Steps in the Critical Response Process*

The critical response process begins with the designer presenting the work and then talking with the responders around a table.

1. **STATEMENT OF MEANING** Responders offer a response about the meaning of the work, answering the question: "What was interesting, surprising, intriguing, engaging, meaningful...?" The responders' answers should reflect the essence of the contribution, but nothing is too small to merit attention. The responders will identify different meanings reflecting their different values and perspectives.

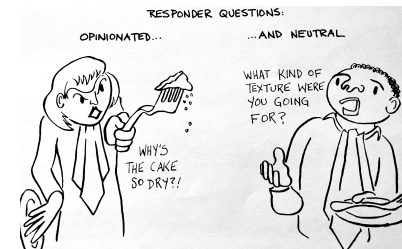
2. **DESIGNER QUESTIONS** The designer asks questions about design problems. Often a general question is followed by one that is more specific, but not so general as "What did you think?", and not so specific as "Should I go with option A or option B?"

3. **NEUTRAL QUESTIONS** Responders ask questions about the work that do not reflect their opinion. Not: "Why did you pick such odd colors?", but "What guided your choice of color?" The questions should prompt new perspectives, but not force a defense of choices.

4. **PERMISSIONED OPINIONS AND IDEAS** The responders begin with "Are you open to my thoughts about XXX?", where XXX is an aspect of the work. The designer should decline if it is about aspects of the work that are not ready to be discussed. The responder should indicate whether his or her comments are subjective or objective.

"I am getting defensive, sorry, thanks for feedback."

"I just let my opinion take over, I'm really sorry, can I try again?"



Responder asks neutral questions of designer, and the facilitator monitors the process (Lerman, & Borsted, 2003).

Strive for kindness and candor rather than niceness and dishonesty.

Articulate and active viewing: Specific response to specific elements.

Designers are responsible for asking clear questions about the work.

Questions should provide designers with more choice, more information, more perspectives, but not specific fixes.

The preceding steps lay the foundation for responders to provide useful input.

*"Remember: Nothing is too small to notice. When defensiveness starts, learning stops. Turn discomfort into inquiry"*