

The robots are coming! An analysis of creativity in the workplace

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July 20th, 2017

Organizational Behavior Management: Origins, Applications, and Advantages Conference

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- The increasing automation of the workplace
- FANUC facilities
- Nearly half of jobs are susceptible to being automated
- Self-driving technology and the trucking industry

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- Disappearance of tasks requiring unskilled labor
- Trace back until the Industrial Revolution around 1760
- Anti-technology movements such as the Luddites in the early 1800s did not halt this progress
- Employment in farming in 1900 (41%) vs. 2000 (2%)

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- Customer service jobs are also being automated
- Intelligent speech recognition applications instead of human operators over the phone
- Robotic bartenders
- Development of a strong sense of automation anxiety

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- Despite over 250 years of increasing automation, unemployment rates have not dramatically increased since the Industrial Revolution
- While certain jobs are disappearing forever, other jobs are appearing for the first time ever

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- Corporate innovation as competitive edge
- Not just building new technology, but finding creative application of technologies and creative ways of marketing such technology

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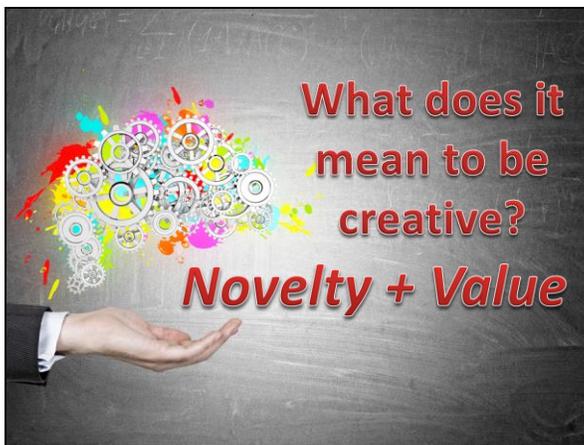
- If OBM does not prepare for the coming workplace of future, we will be left behind
- 1950s psychology for a 1950s workplace
- Perception that we have nothing to say about the most admirable of human achievements
- Important for all of behavior analysis, not just OBM, that we respond to the challenge that we are too simplistic

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- As is the case with most important concepts used casually and inconsistently by the general public, defining creativity is not an easy task
- You will NOT get consensus.

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- Here's the definition that I'm going with: Novelty + value
- Fits most of the verbal community usage of the term
- Not a simple topography
- Performer and audience: Audience has inconsistent criteria for value

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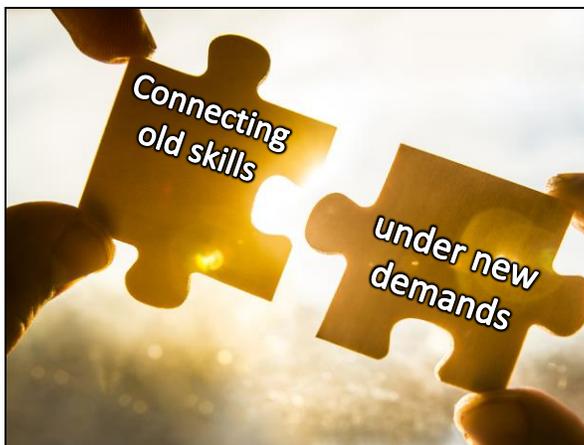
- Minor forms (variability, rule following, Imitation) and major forms (unclear controlling variables): Minor creativity
- Sources of control aren't so obvious: Major Creativity

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- Building fluency with components to increase probability of more complex combinations
- Training tends to neglect
- More fluent with basic skills, more likely to extend to new areas of application
- Example: Sales pitch at just the right moment delivered with uninterrupted flow

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- Pull together skills that were learned separately
- Example of a new customer demand: Combine a fluent script with some old bit of fluent training or fact you learned elsewhere: Unique but effective sales pitch

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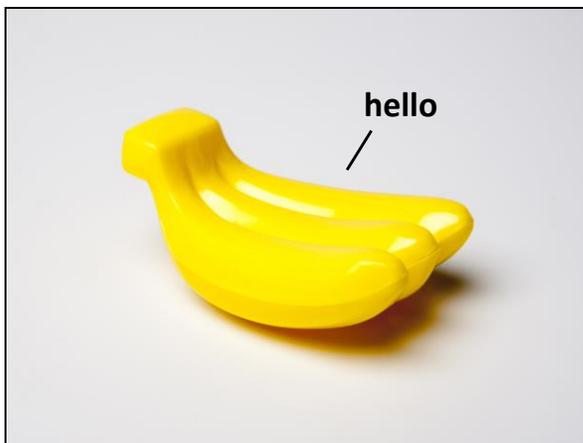
- Wolfgang Köhler
- Chimpanzee problem solving with makeshift ladders
- Common sense understanding of insight as magical solution from out of nowhere
- Columban simulations: Skinner and Epstein (cooperation, communication, imitation, self concept, insightful problem-solving)

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- One of our preferred organisms: the reliable pigeon

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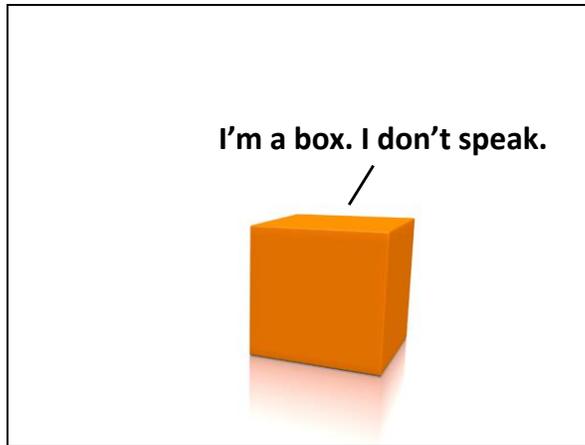
- Keep things analogous to Köhler
- Peck plastic banana rather than plastic key disc

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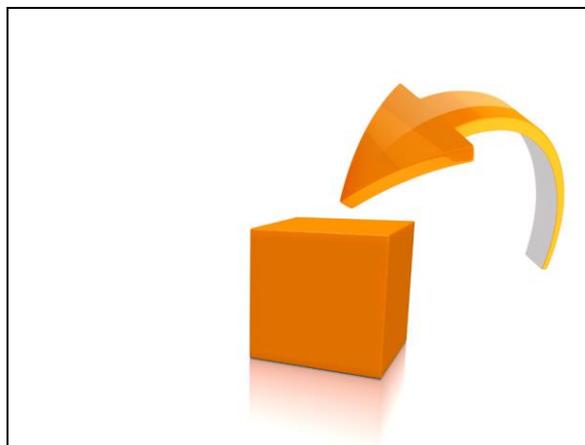
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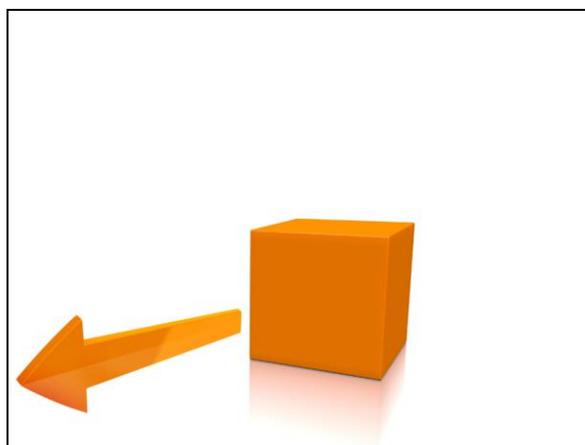
- Nice in the sense they have little history with this object

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- Creatures of flight, not typically climbers

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- Pushing is also unusual

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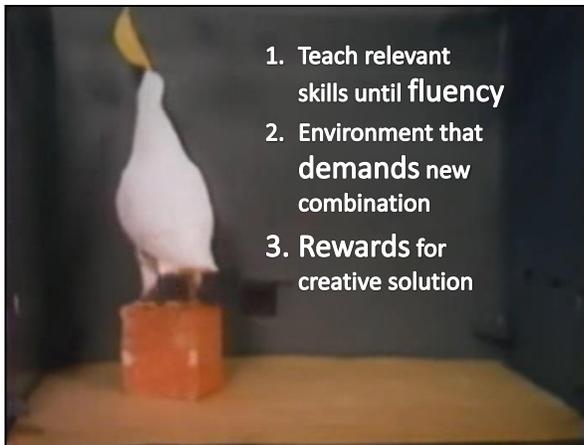
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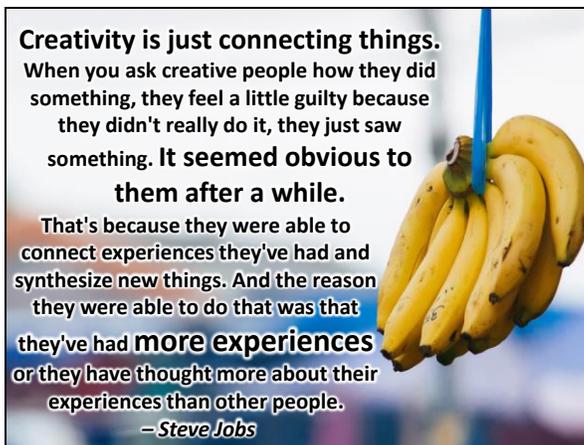
- Three component skills taught independently until fluent

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- Pulled together with the appearance of creative insight, but note that this comes from the history of organism (not magical process)
- Much like what we are doing with OBM here as a whole
- We're taking the behavior analysis skills that were learned to fluency elsewhere, applying them under the new demands of the workplace, and hopefully encountering rewards

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- Quote from Steve Jobs to illustrate this notion

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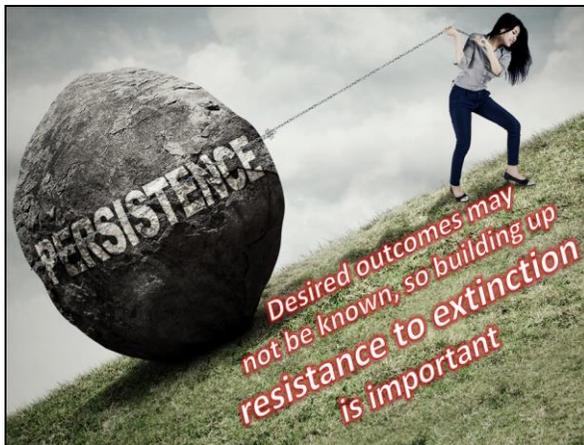
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- Changing current environments to evoke successful novel performance
- Problem-solving as self-managed environmental rearrangements

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- Unlike most training efforts, innovation is unlikely to have a predetermined outcome
- Fluency and thin schedules – persistence: how do you know what skills are relevant

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- Planned extinction and capitalizing on resurgence
- Neglected aspect of extinction process

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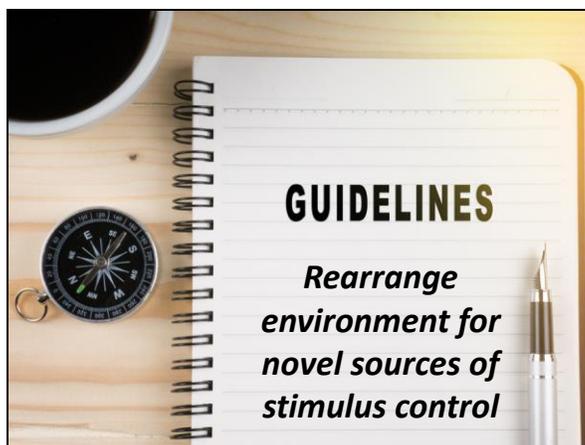
- Direct reinforcement of novelty: Novelty as just another dimension of behavior

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- Guidelines

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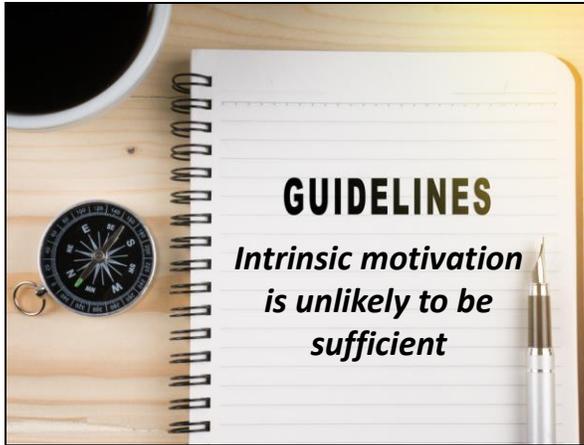
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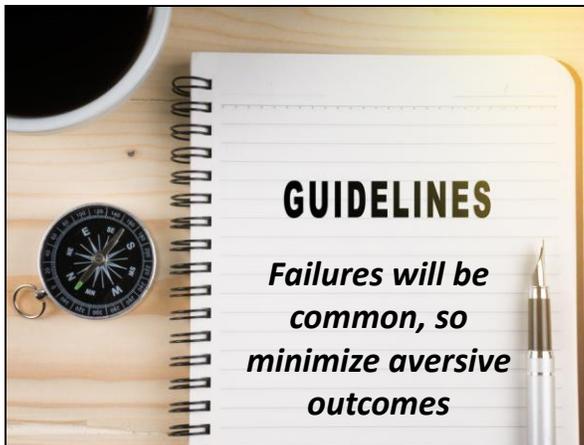
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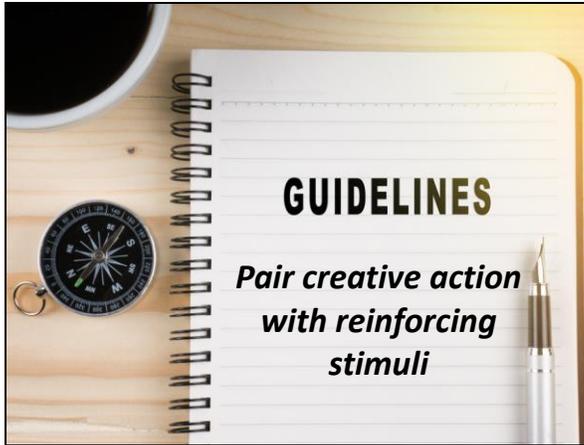
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