

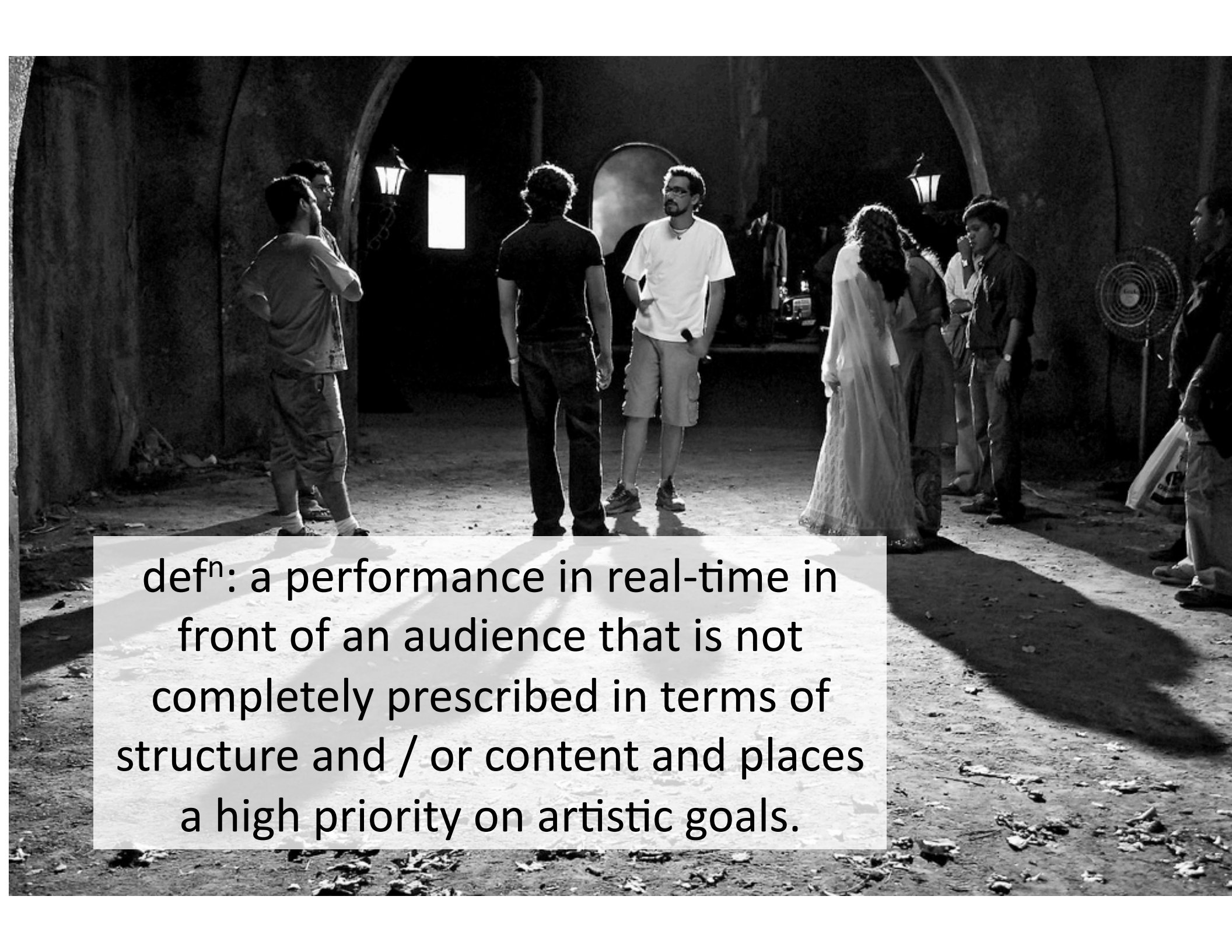
having fun studying fun:  
research in  
improvisational acting



brian magerko

adaptive digital  
media lab

georgia tech



def<sup>n</sup>: a performance in real-time in front of an audience that is not completely prescribed in terms of structure and / or content and places a high priority on artistic goals.





improvisation

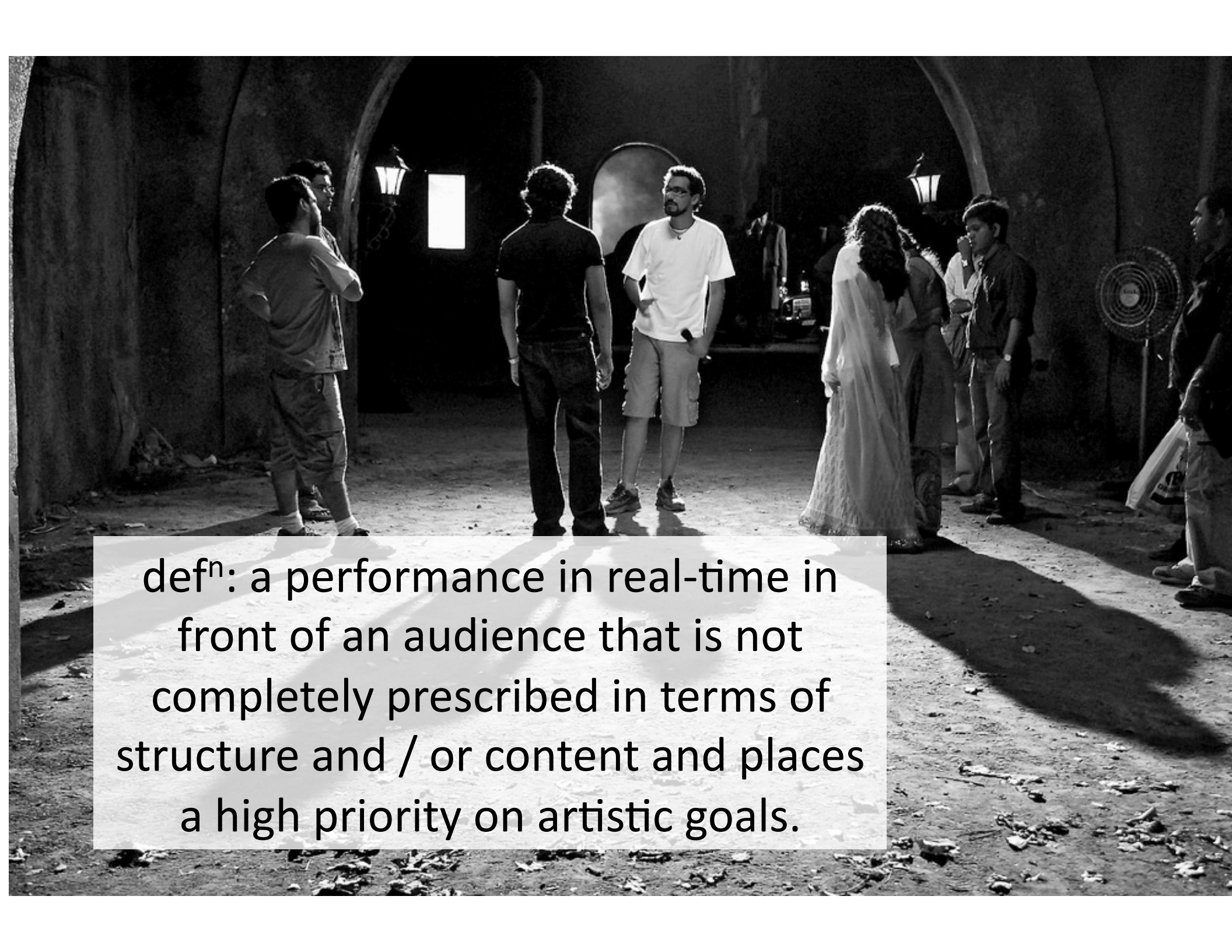




A close-up photograph of a brown dog's head, likely a Weimaraner, against a clear blue sky. The dog's fur is a rich, golden-brown color. Its eye is dark and focused. The dog is wearing a red collar with a blue and white pattern. The word "spontaneity" is written in a white box on the left side of the image.

spontaneity





def<sup>n</sup>: a performance in real-time in front of an audience that is not completely prescribed in terms of structure and / or content and places a high priority on artistic goals.





jazz research





improv agents





improv theatre



un/structured  
creative goals

group activity

multi-modal  
communication

varied aspects of  
cognition

sans explicit  
coordination

maps to agents



methodology

performance

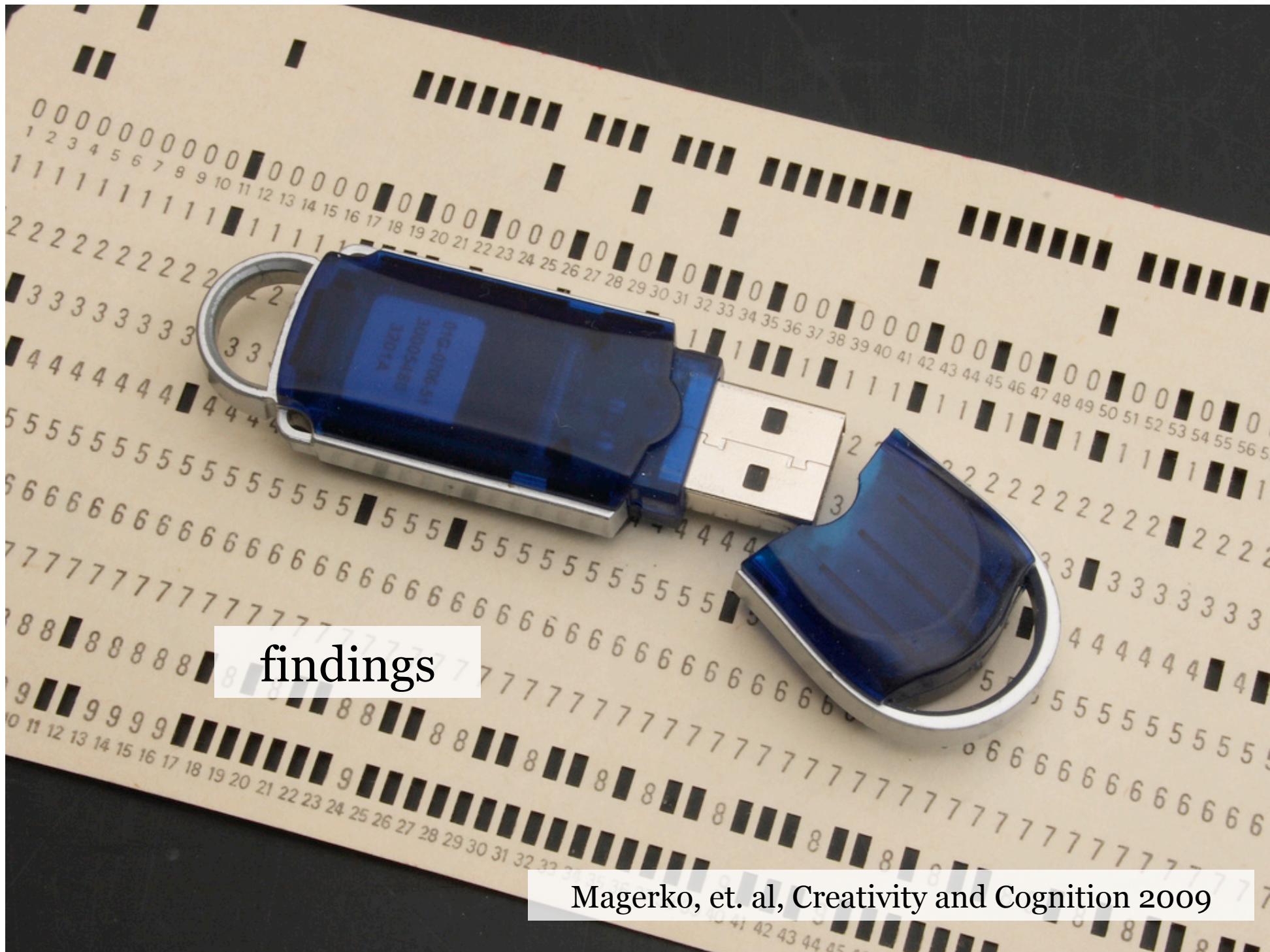
retrospective  
protocols

group interview

build agents



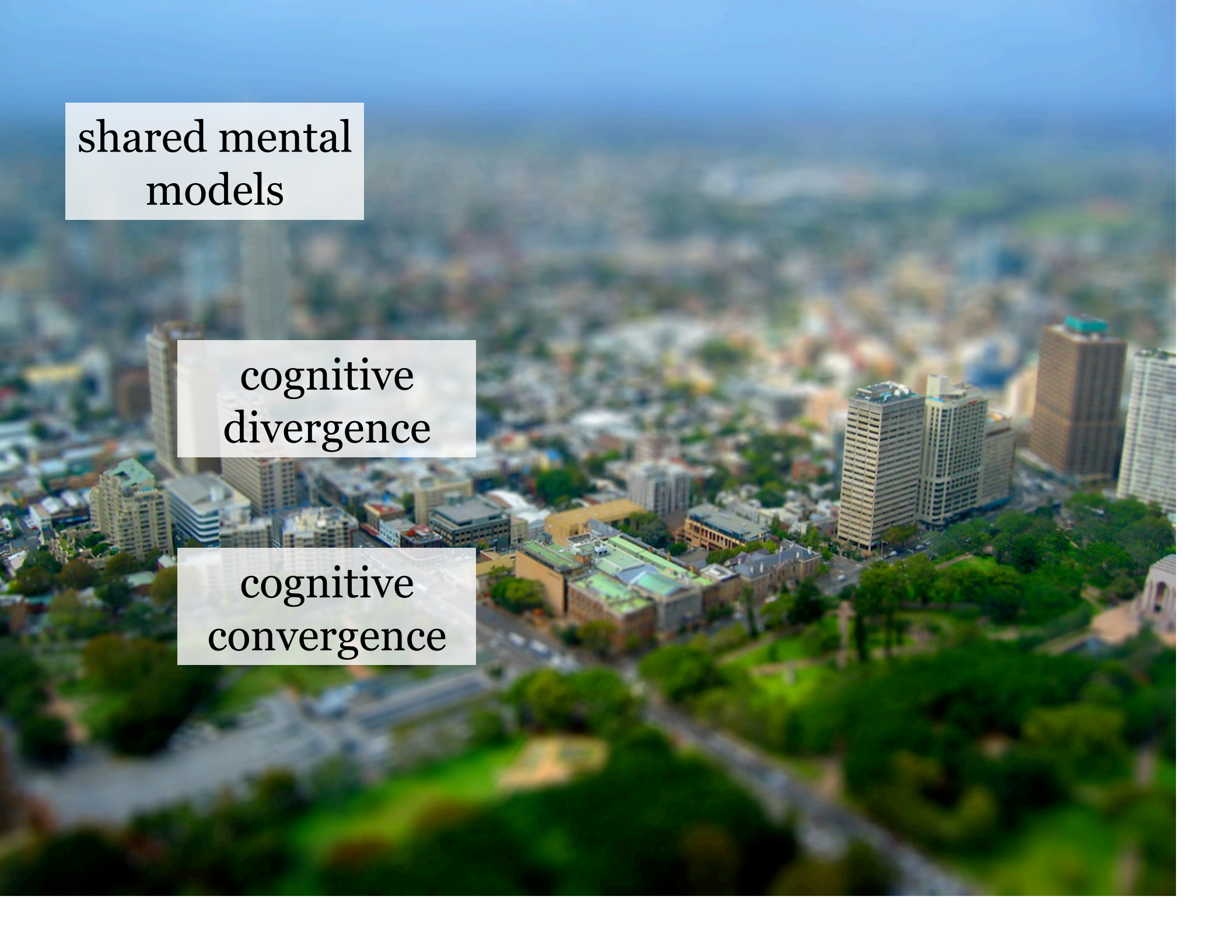




findings

Magerko, et. al, Creativity and Cognition 2009



An aerial photograph of a city, likely New York City, showing a dense urban landscape with various buildings, streets, and green spaces. The image is slightly blurred, giving it a soft, dreamlike quality. Three white text boxes are overlaid on the image, each containing a different concept related to cognitive processes.

shared mental  
models

cognitive  
divergence

cognitive  
convergence





cognitive  
divergence

non-diegetic

audience

methodological

interpersonal

theoretical

moral

external fact

diegetic

character

environment

actor

future-oriented

A glass of amber liquid is being poured into a smaller glass. A beam of light illuminates the scene, creating a dramatic effect. The background is dark, and the liquid is a rich, golden-brown color.

character  
divergence

attributes

relationships

history

goals

emotions



# character divergence







environment  
divergence

attributes

location

objects



# environmental divergence



cognitive  
convergence

observation

repair

acceptance





repair  
techniques



presentation

clarification

deferment



repair  
techniques

clarification  
request

verification

blind offer



# verification and assessment





# reverse scaffolding



# blind offer





acceptance

acknowledgement

groupthink

rejection

perceived (full/  
partial) consensus





narrative  
development

environment

character

actor intent  
for events

deconstruction of offer

Baumer and Magerko, ICIDS 2009



basic  
cognition

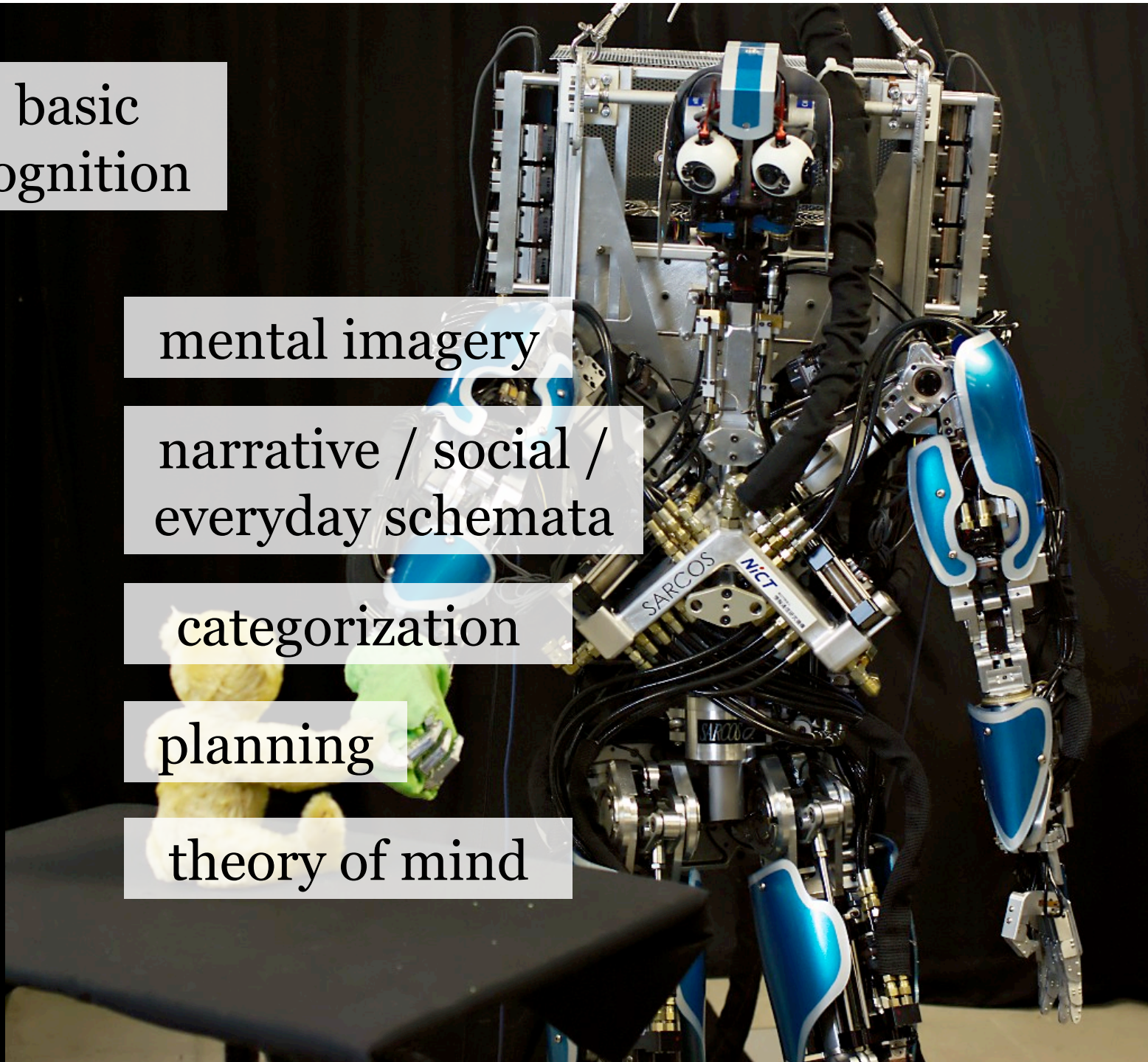
mental imagery

narrative / social /  
everyday schemata

categorization

planning

theory of mind





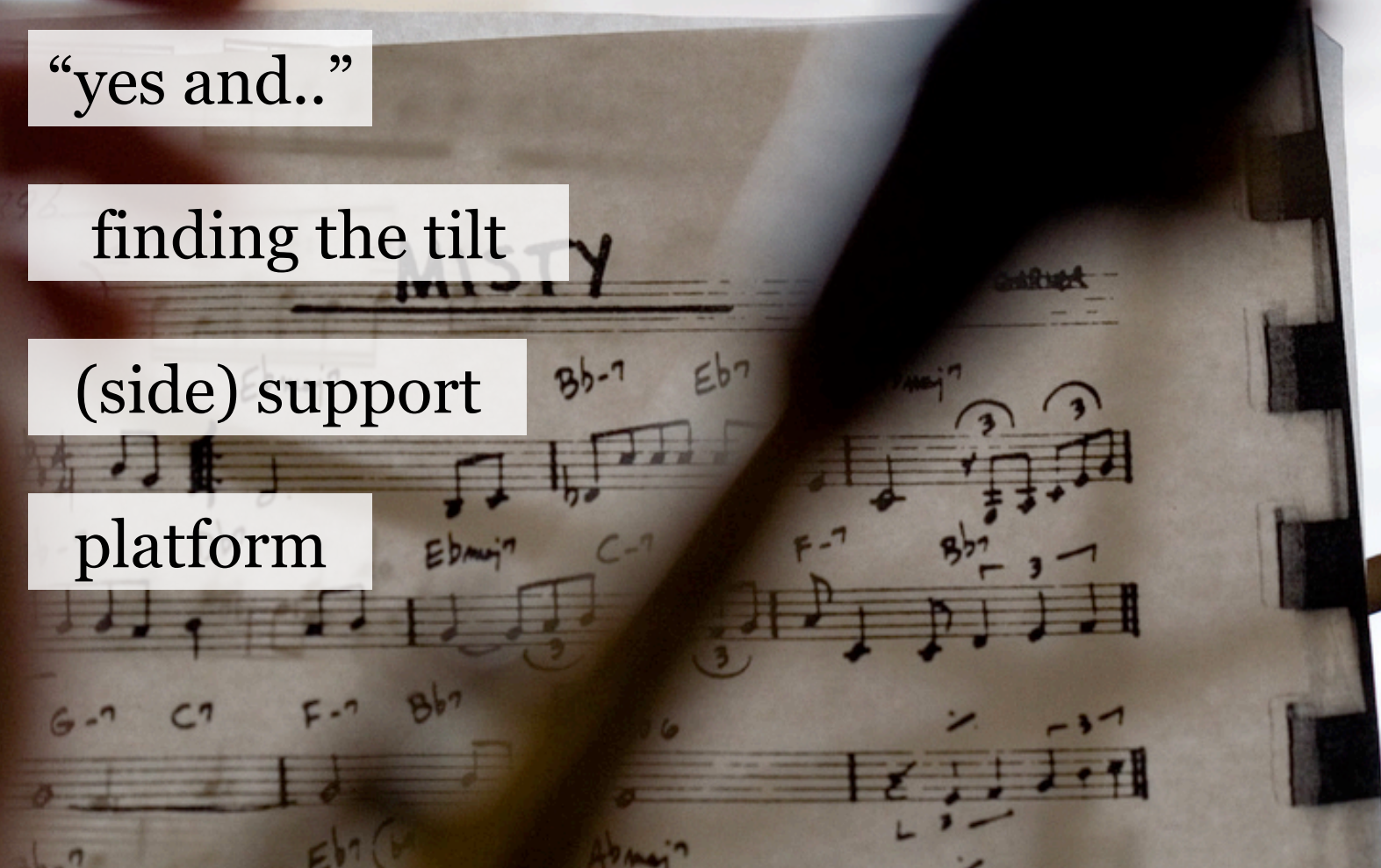
referent  
use

“yes and..”

finding the tilt

(side) support

platform





examples







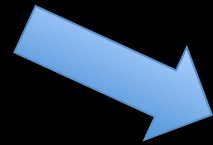








basic  
cognition

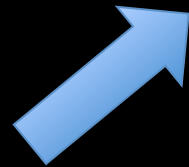


narrative

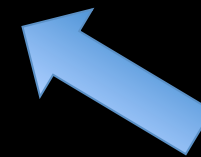


Why / how are  
offers made and  
responded to?

shared  
mental  
models



referents







micro-agents

Magerko et. al, 3<sup>rd</sup> Interactive Narrative Technologies Workshop, 2010



A photograph of a stream with water reflecting autumn trees and a large rock in the foreground. The water is clear, showing ripples and reflections of the surrounding environment. The reflections are of trees with yellow and orange leaves, and a blue sky. A large, dark rock is visible in the lower right corner, partially submerged in the water. A thin, dark stick or branch lies across the rock.

current  
agents

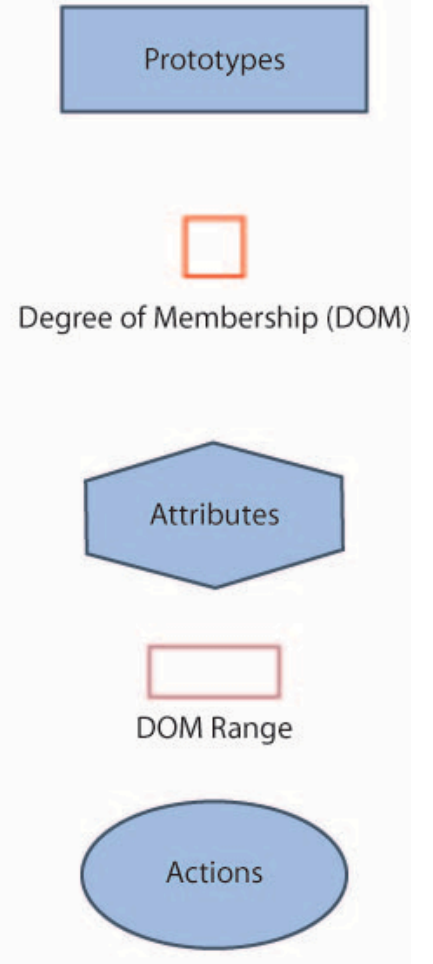
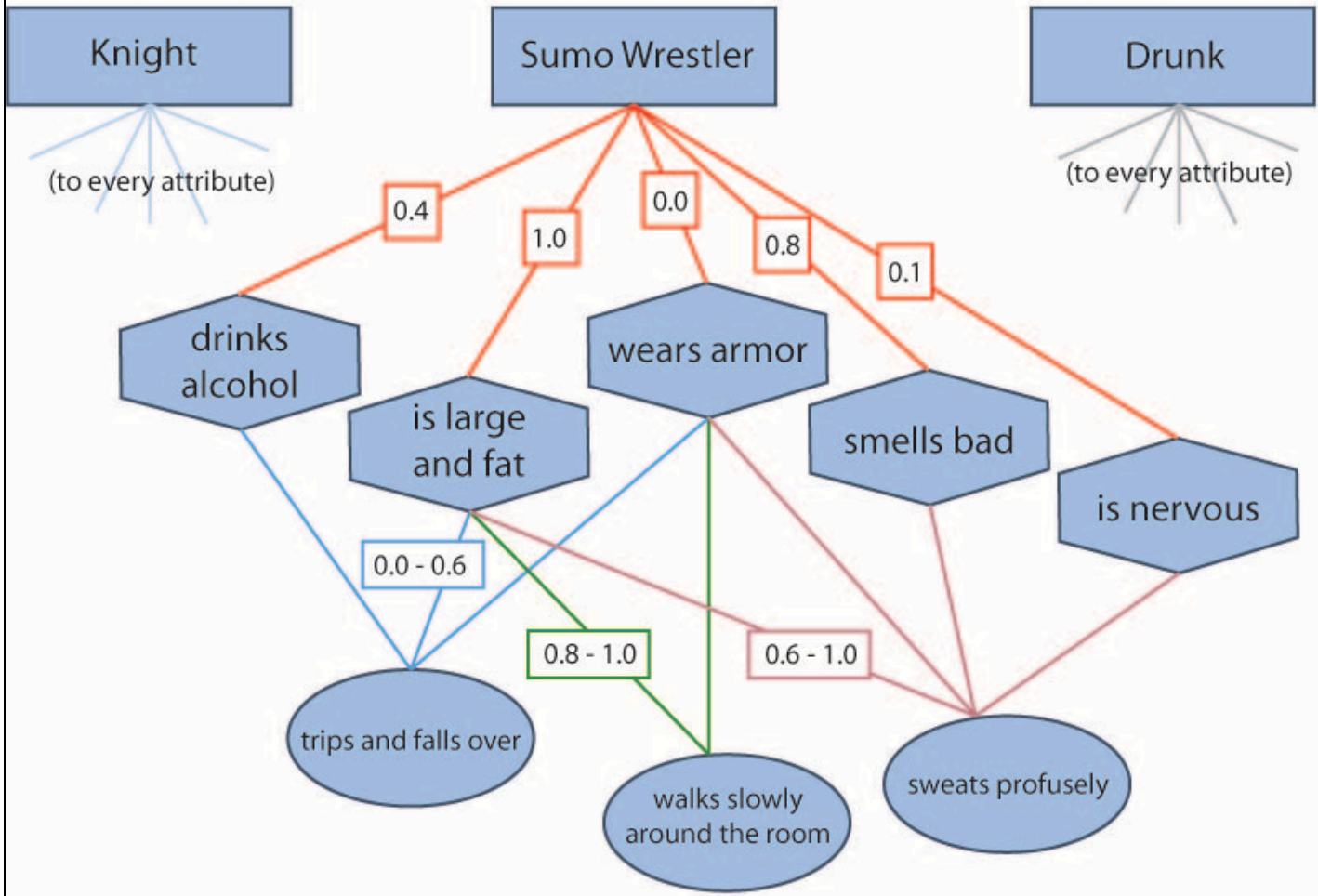
“interesting”  
characters

conflict  
creation

cognitive  
convergence



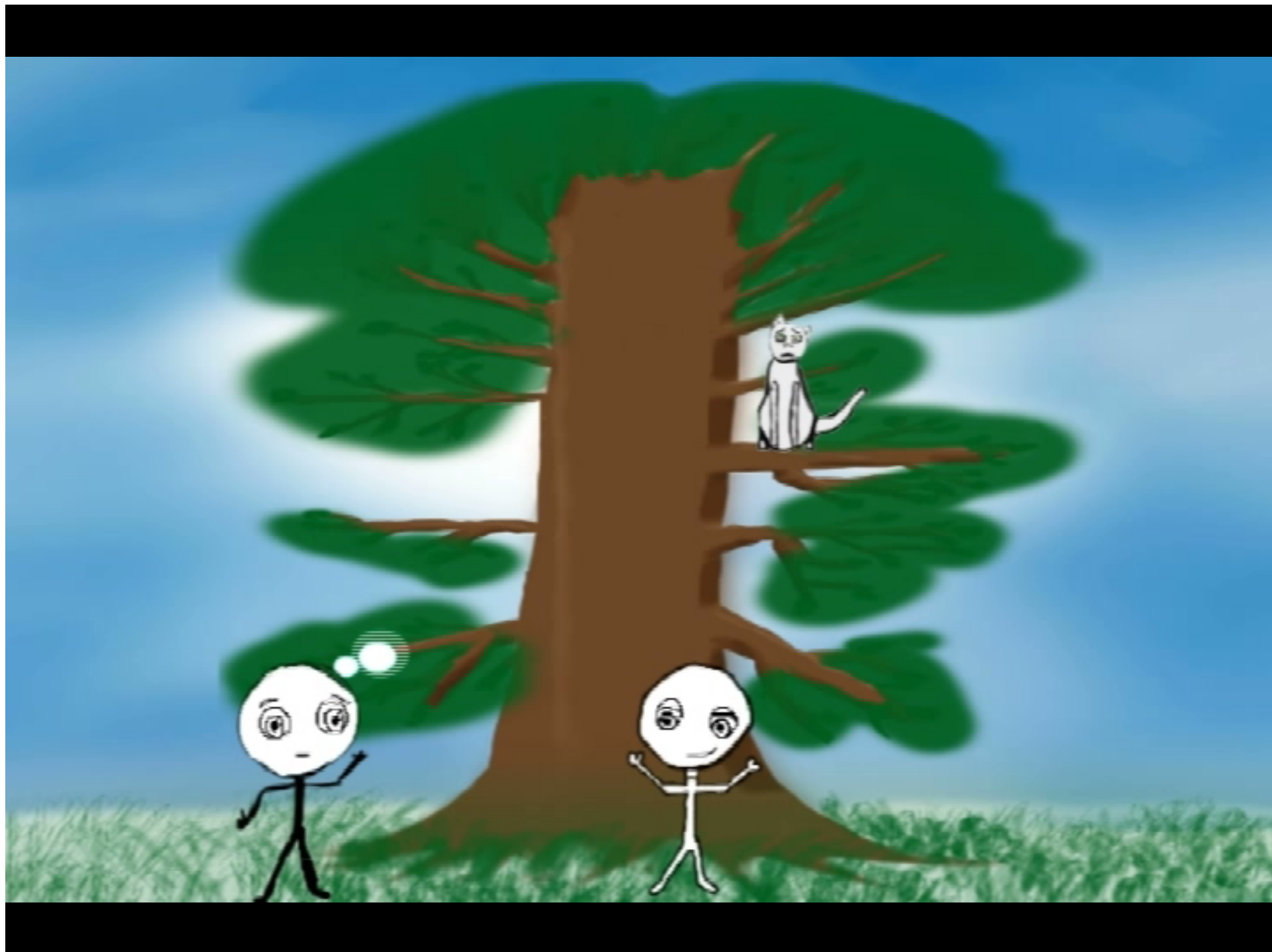
Prototype	Is Strong	Wears Cape	Wears Mask	Wears Armor	Is Naked	Smells Bad
	Description	Apparel	Apparel	Apparel	Apparel	Bodily Feature
Dragon	0.8	0	0	0.8	0.8	0.8
Drunk	0.3	0.1	0.1	0.1	0.7	0.8
Knight	0.7	0.7	0	1	0	0.2
Ninja	0.4	0.2	0.9	0.3	0	0
Pirate	0.4	0.3	0.2	0.3	0.1	0.8
Robot	0.7	0	0	0.9	0.8	0
Sumo Wrestler	0.9	0	0	0	0.9	1
Superhero	1	0.9	0.8	0.4	0.2	0.1
Thief	0.2	0.3	1	0	0	0.1
Vampire	0.7	0.8	0	0.1	0	0
Wizard	0.2	0.7	0.2	0.1	0	0.1
Zombie	0.5	0	0	0	0.2	1







micro-agent  
examples







party quirks





current  
issues

why is this a  
motivating  
topic?



thanks


nsf creativeIT

adam lab

magerko@gatech.edu


<http://adam.lcc.gatech.edu>





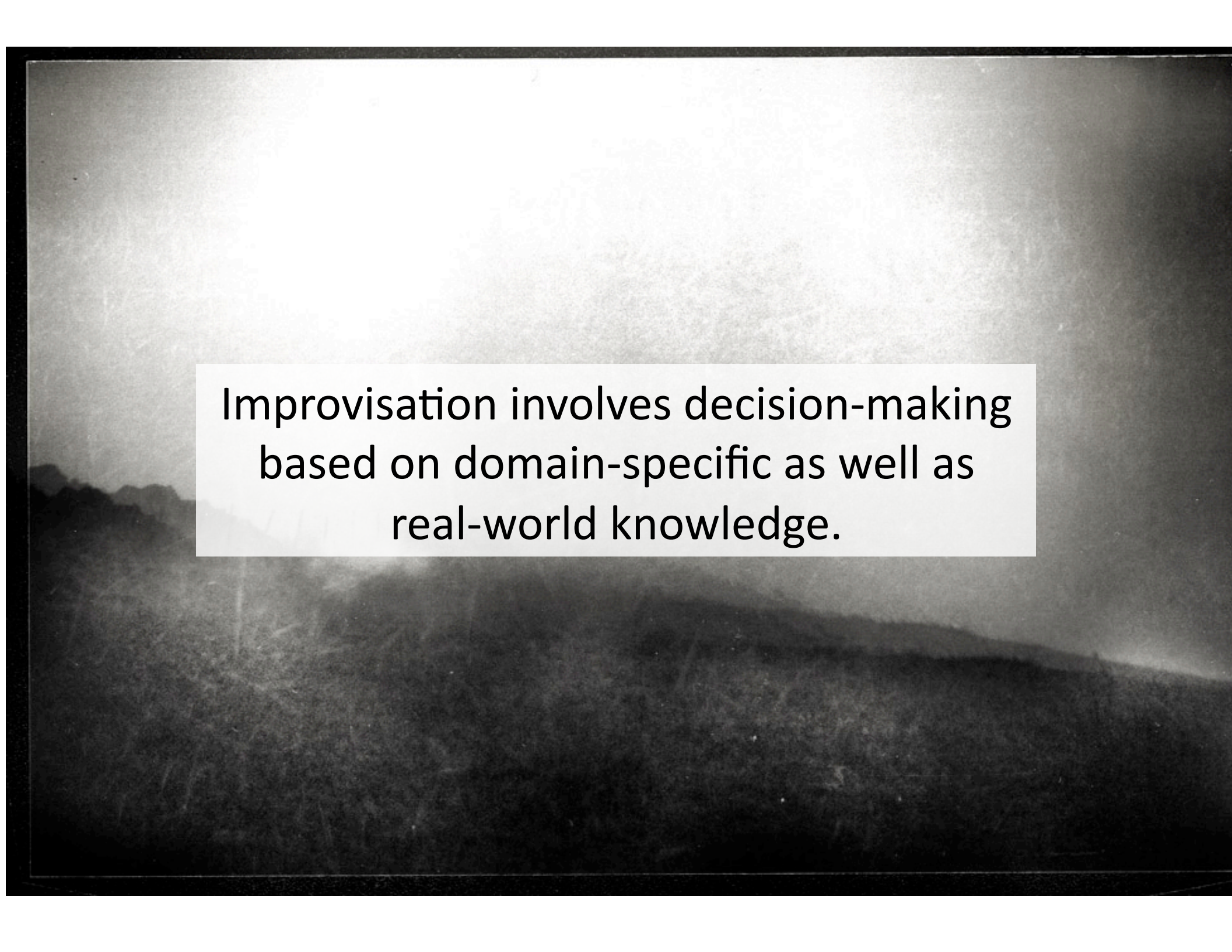
Improvisation is a constant process of  
receiving new inputs and producing new  
outputs






Improvisation is a “continuous and serial process as opposed to one that is “discontinuous and involving iteration,” such as music composition





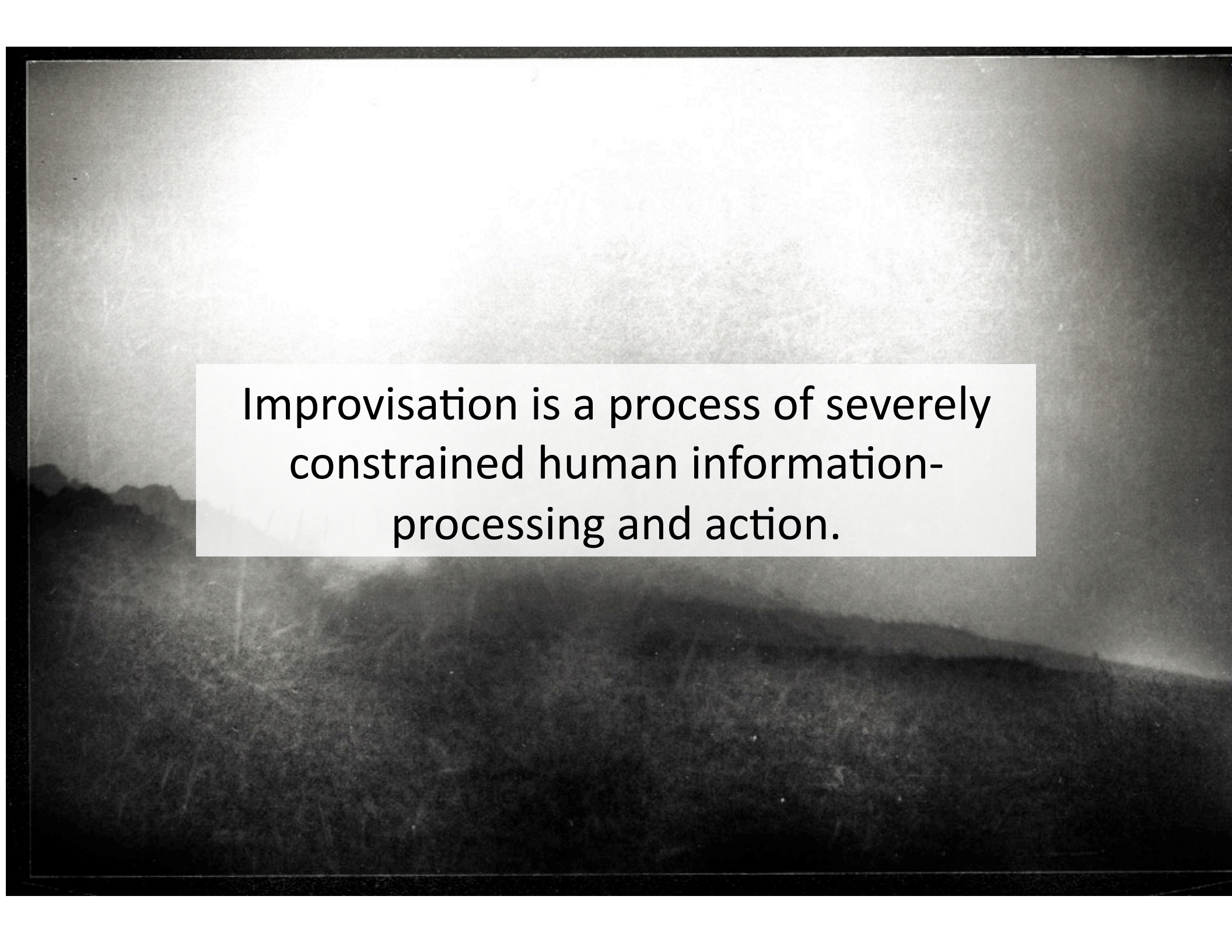
Improvisation involves decision-making based on domain-specific as well as real-world knowledge.





Collaborative improvised pieces (as opposed to solo works) may involve both explicit and implicit communication.





Improvisation is a process of severely  
constrained human information-  
processing and action.