



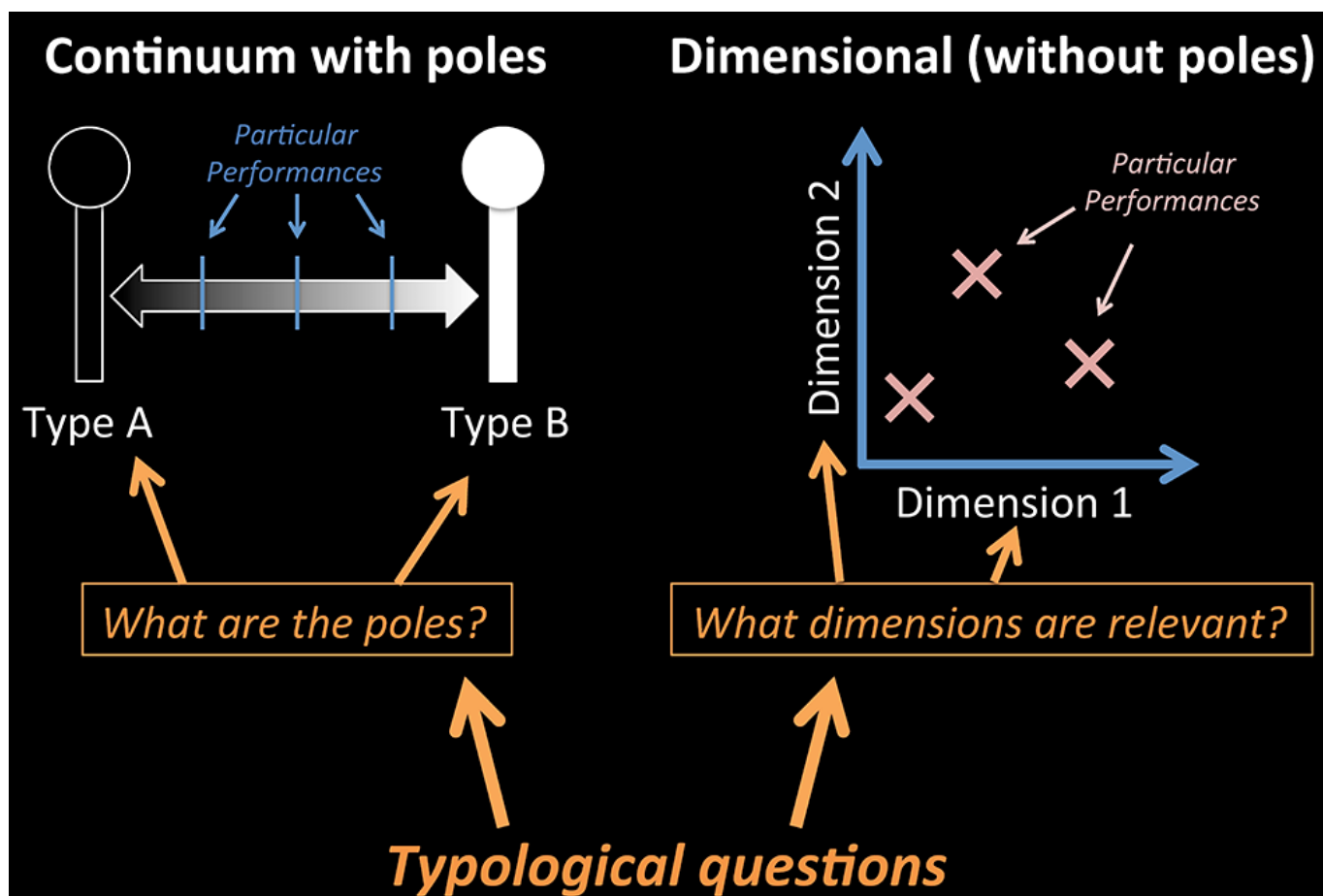
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### MTO 28.3 Examples: Goldman, Returning to the Continuum

(Note: audio, video, and other interactive examples are only available online)

<https://mtosmt.org/issues/mto.22.28.3/mto.22.28.3.goldman.html>

**Example 1.** Polar and Dimensional Continuum Models. Polar models (left) define extreme cases (the different types) and can place individual performances along a continuum connecting them. Dimensional models (right) define relevant features of performances (the different dimensions) and can place individual performances in a multidimensional space according to their values for each dimension. Typological questions motivate both kinds of models: for polar models, one must define the poles, and for dimensional models, one must define the relevant dimensions.



**Example 2.** Translating code to English text to music notation

## Code

```
ch = var([0,-1],[3,1])
```

```
ba >> banjo(ch) + var([7,4,4,2])
```

## Meaning

0 for 3 ♩, then -1 for 1 ♩.  
Store this pattern with the  
variable name “ch”.

Apply pattern “ch” starting at  
the pitch levels 7, 4, 4, and 2.  
Each iteration lasts for 4 ♩. Play  
it with the banjo synth voice.



**Example 3.** Examples of the three criteria in Kirkbride (2016)

Time	Principle	Comments
0:07	Temporal Disjunction, Discrete Decision	The mode, “Mixolydian,” is set at the beginning of the performance. The physical act of typing “Mixolydian” affects sounds at times throughout the performance. At 7:23, the scale is changed to “minorPentatonic”, affecting lines of code retroactively. This change of scale is also an example of a discrete decision.
2:16	Temporal Disjunction Content Disjunction	The hyphens in the line of code beginning “hh” indicate when in the metrical cycle the high hat will sound; the speed of typing the hyphens is unrelated to the timing of the actual high hat sounds when they are eventually sounded. Note that the hyphen key is also used in a very different way (to make a negative sign) in the line of code beginning “ch”—the content of this keystroke is highly variable.
4:28	Temporal Disjunction, Discrete Decision	“Clock.bpm = 24” is executed. The tempo change does not take effect until 4:38, and previous lines of code are affected retroactively. This change in tempo is also a discrete decision.
4:47	Content Disjunction	The performer types “Clock.bpm = 140”. The tempo will change back to BPM = 140 once a certain condition is met (“when ba.now(‘degree’) == 2”). Typing “Clock.bpm =” requires the same physical movements regardless of what value is set (24 vs. 140), and typing 24 vs. 140 is a negligible difference with no analogue mapping to the resultant sound; still, different sounds result. Note that if the tempo were already BPM = 140, running the code “Clock.bpm = 140” would have no effect, despite needing to produce the same physical typing movements.

**Example 4.** Characteristics of Embodied vs. Propositional Improvisation

Embodied Improvisation	Propositional Improvisation
Auditory feedback content is coupled to action	Auditory feedback content is not coupled to action
Auditory feedback is tightly temporally coupled to action	Temporal relationship between sound and action can be distorted in different ways
Discrete and continuous decision making	Discrete decision making only