

# Explaining the Technical Artifact Quarto!

## How Gestures are used in Everyday Explanations

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### Theoretical background:

Primary assumption: a technical artefact can be described by (1) focusing on the **Architecture** and/or (2) focusing on the function or **Relevance** (Vermaas, 2006; Kroes, 2009; Schulte and Budde, 2018)

### Hypotheses:

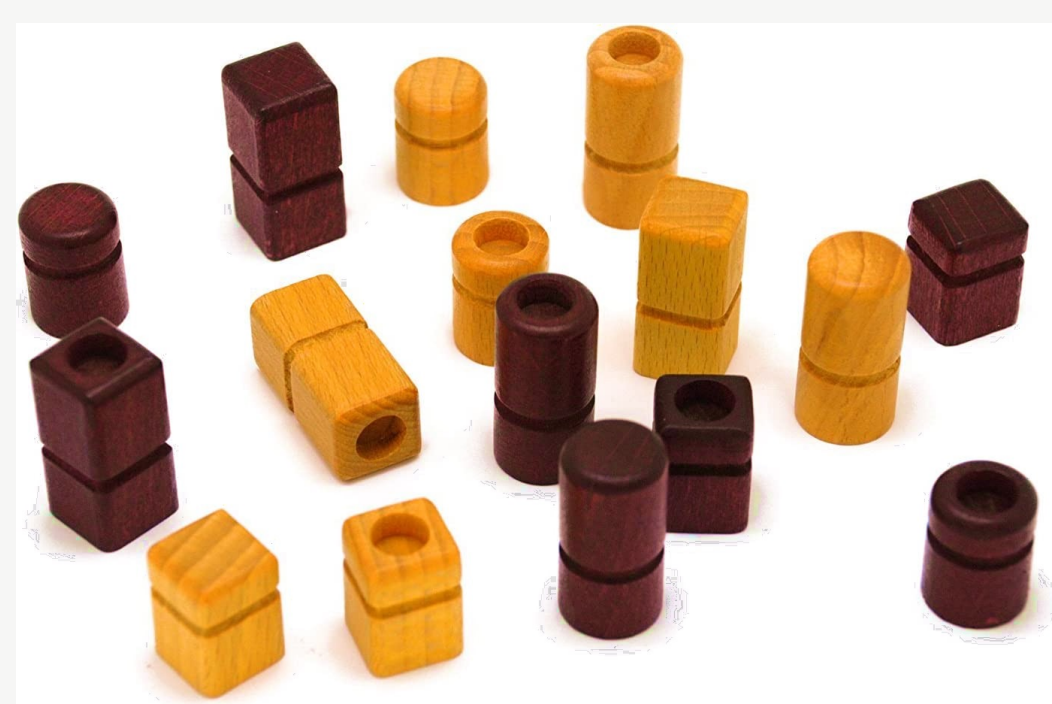
- (1) Participants employ more and predominantly **iconic** gestures when describing **Architecture**
- (2) Participants use more **pragmatic** gestures when talking about **Relevance**

### Method:

- (1) Qualitative content analysis (Kuckartz, 2018): explanations are coded with the two codes regarding utterances about **Architecture** and **Relevance**
- (2) Micro-analyses follows the principles and systematics of ethnomethodological conversation analysis (Garfinkel, 1984; Bergmann, 2019; Schmitt, 2015)
- Explanations were transcribed following the convention of GAT2 (Selting et al., 2009)

### Corpus & Setting:

22 dyadic explanations (Explainer (EX) & Examinee (EE))  
21 male, 21 female, 1 diverse, 1 no data  
Age: 19 - 39 years (Ø 27,1 years)  
Duration: 00:02:23 – 00:16:17 (Ø 00:07:24)  
Researchers were informed to not interrupt or stop the explanation.

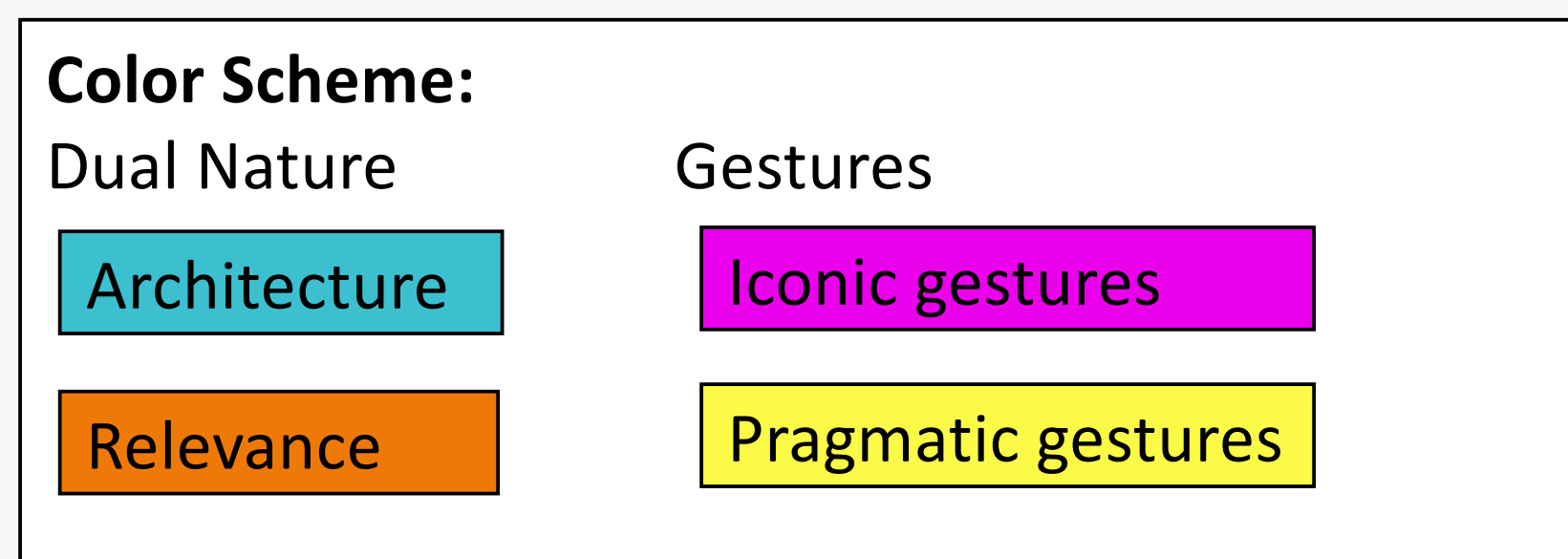


The board of the game Quarto!

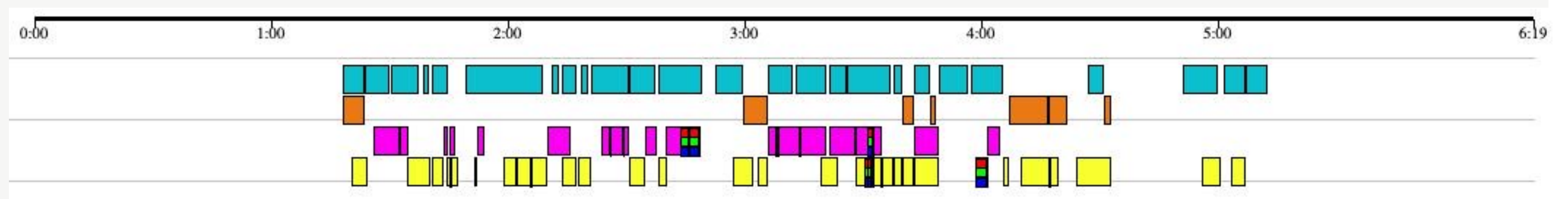
The game figures used in Quarto!

### Gestures in correlation with **Architecture** and **Relevance**

- Focus at **iconic** and **pragmatic** gestures (Kendon, 2004; McNeill, 1992; 2005; Bavelas et al., 1992)



VP24\_P2\_A04



### Case 1: Use of **iconic** gestures during talk about **Architecture**

033 EX diese SPIELfiguren  
*these game pieces*  
034 äh  
uh  
035 haben verSCHIEDene eigenschaften  
*have different properties*  
036 also zum BEIspiel sind die  
*so for example they are*  
037 GROSS o:der KLEIN  
*big o:r small*  
038 #RUND o:der VIEReckig  
*#round o:r rectangular*  
#00:00:35.5  
039 EE ja  
yes



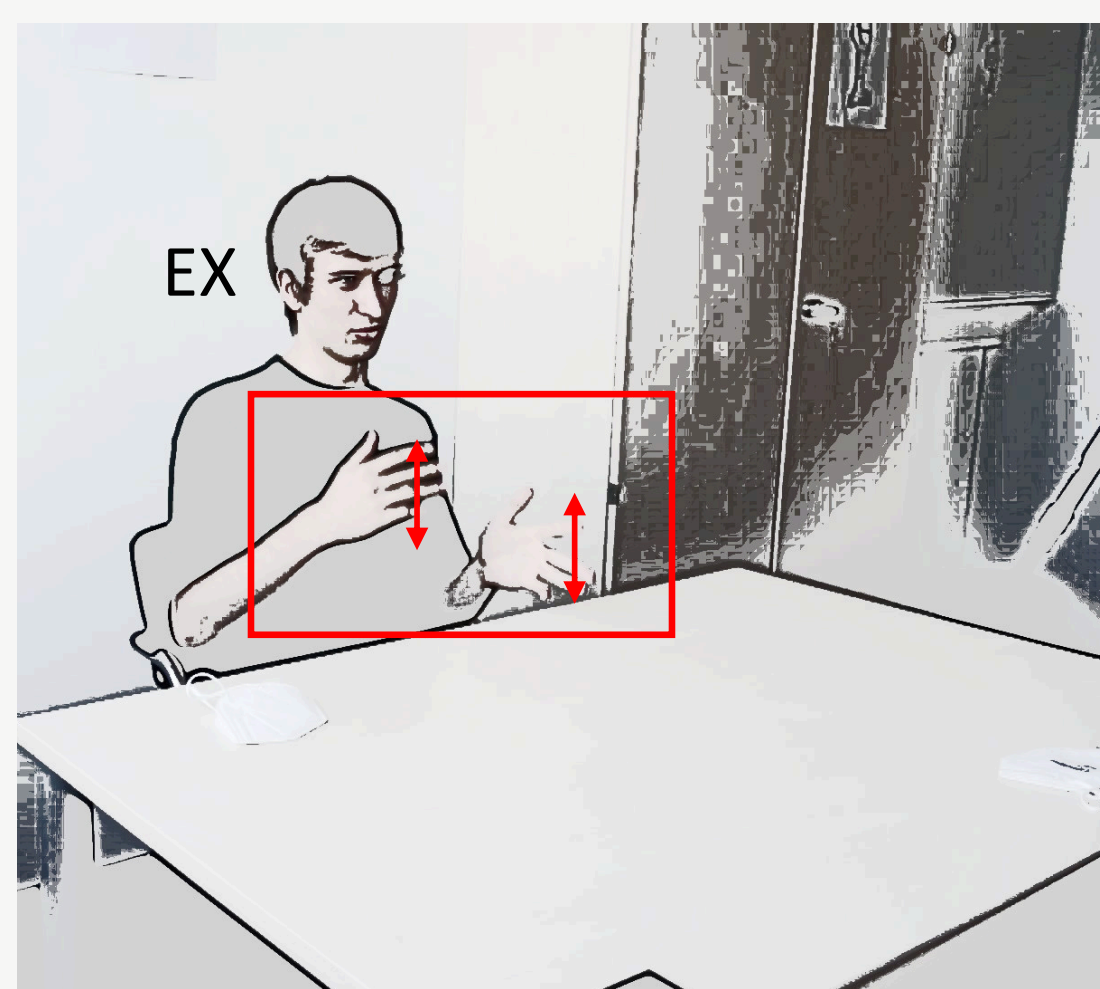
VP18\_P2\_A04: #00:00:35.5

- EX describes the four different properties of the game figures (cf. l.37-38) (**Architecture**)
- In detail: EX raises the hand (extended index finger) and performs a circled movement (cf. l. 038 & #00:00:35.5); he looks at the hand during this gesture

➔ **Iconic** gesture used to establish a shared imagination of the described and absent game figure

### Case 2: Use of **pragmatic** gestures during talk about **Relevance**

183 EX ähm und ja das is halt son BISschen ähm  
*uhm and yes that is just a bit uhm*  
184 (0.7) trickY weil man dann ja immer so antizipieren muss  
*(0.7) tricky because then you always have to anticipate*  
185 welche steine hat der ANdere gleich noch  
*which stones the other one has*  
186 die er MIR geben kann  
*that he can give to me*  
187 EE [MHM ]  
188 EX [so da ]ss ICH gewinnen kann und dann  
*[so that] I can win and then*  
189 muss man das so\_n bisschen mit #AUSschlussverfahren äh  
*you have to follow somehow #exclusion procedures äh*  
#00:04:17.8  
190 EE is wahrscheinlich komplizIERter  
*is probably more complicated*  
191 als man jetzt so DENKT;  
*than one might think now so*



VP24\_P2\_A04: #00:04:17.8

- EX describes a strategy when playing the game **Quarto!** (**Relevance**) (cf. l.184 – 188)
- Temporally aligned to "exclusion procedures" (cf. l. 189), he moves both hands several times towards his body (cf. #00:04:17.8: flat hand, palm vertical) (Bressemer, 2013)

➔ **Pragmatic** gesture for marking (and illustrating) abstract concept of exclusion procedures

### Case 3: Use of **pragmatic** gestures during talk about **Architecture**

078 EX also unsere SPIELsteine haben vier Eigenschaften (0.8)  
*well our game pieces have four properties (0.8)*  
079 ähm (0.3) die ei einmal is glaub ich #HELL und DUNkel  
*uhm (0.3) that is I think #bright and dark*  
#00:02:01.1  
080 (0.4) also es GIBT-  
*(0.4) so there are*  
081 (0.4) ACHT spielsteine die HELL sind,  
*(0.4) eight game figures that are bright*  
082 ACHT spielsteine die DUNKEL sind;  
*eight game figures that are dark*



VP24\_P2\_A04: #00:02:01.1

- EX describes one of the four different properties of the game figures (color cf. l. 079) (**Architecture**)
- Temporally aligned he moves the hand (crooked hand, palm vertical; cf. & #00:02:01.1) from left to right (cf. l. 079)

➔ **Pragmatic** gesture for illustrating and highlighting the disjunctive and abstract concept of color

### Conclusion:

- (1) Participants employ more and predominantly **iconic** gestures when describing **Architecture** (e.g., the size and shape of game figures, shape of a game board)

➔ **Iconic** gestures are predominantly used when talking about **Architecture**

- (2) Participants use more **pragmatic** gestures when talking about **Relevance**

➔ **Pragmatic** gestures are used during talk about **Architecture** and **Relevance**

### References:



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