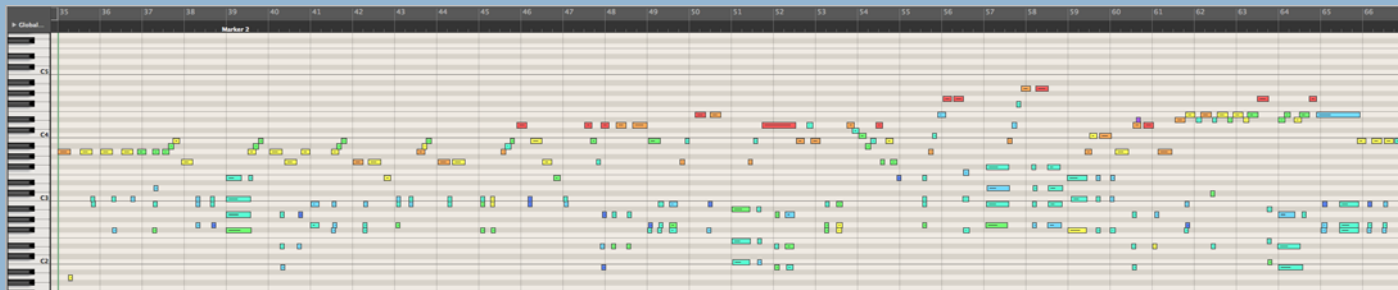


Shaping Jazz Piano Improvisation.

The Influence of Tempo, Tonality and Expertise on Improvised Musical Structures.



Research on Improvisation

- Approaches within music psychology focus on
 - Structure – Interaction – Cognition

→ BUT:

- little connection between main foci
- emphasis on cognitive perspective
- empirical evidence is rare

→ SO: Using potential of integrative experimental designs!
(e.g. Hargreaves, Cork & Sutton, 1991)

Aim, Methods and Analysis (I)

□ Aim:

Testing the influence of tempo, tonality and expertise on the construction of improvised musical structures

□ Methods:

1. Questionnaire about experiences in jazz improvisation
2. Improvising on play alongs of jazz-standards
Autumn Leaves, Impressions (each 70 and 280 bpm)
3. Interview on the improvisational process

Aim, Methods and Analysis (II)

□ Analysis:

□ Step 1: Thinking like pianists

- ▶ focus on middle level of musical structure
(c.f. Parncutt & Pascall, 2002)

□ Step 2: Categorising like social scientists

- ▶ segmenting ideational flow in open coding process (grounded theory), permanent revision by at least 2 coders, quantification of categories

□ Step 3: Analysing like statisticians

- ▶ MANOVA with factors tonality (2) x tempo (2) x expertise (2), N=3

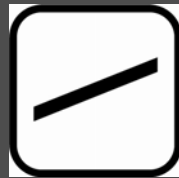
Results (I)

23 ideas systemised in
5 categories of basic forming schemes



pump

(pseudo-)
polyphonic
Gestalt



line

monophonic
Gestalt



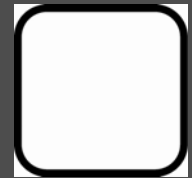
lick

prototypical
Bebop-phrase



theme

theme-like
motifs or
variations



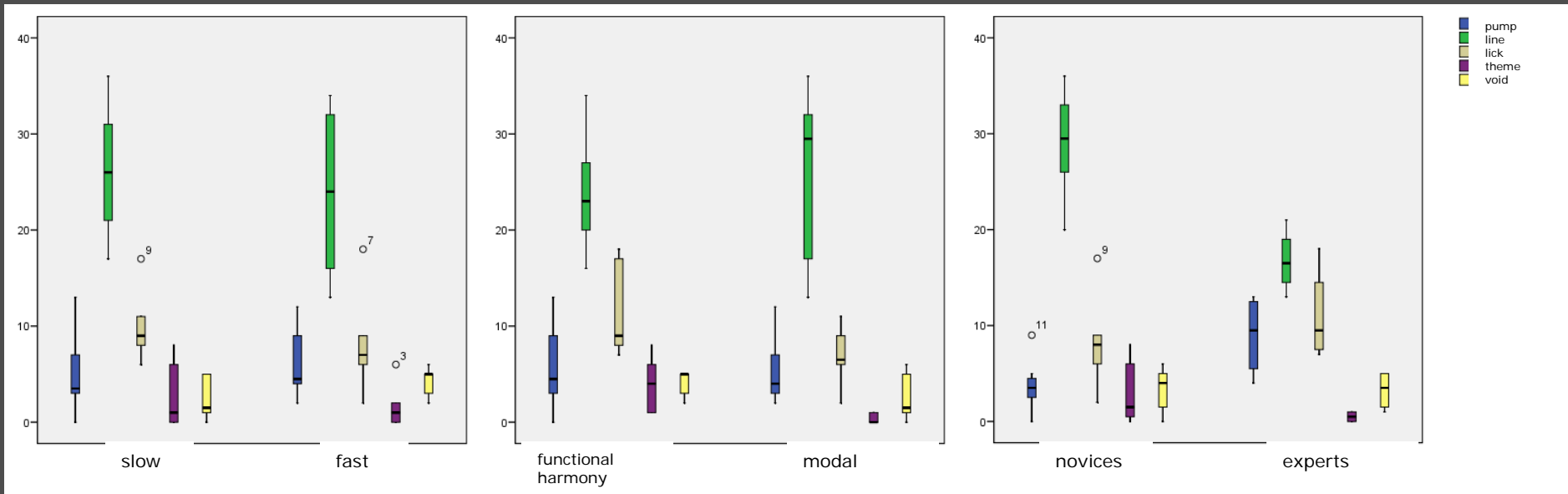
Void

non-melodic
phrase



Results (II)

Distribution of basic forming schemes



Tempo

Tonality

Expertise

Discussion (I)

- Basic forming schemes display creative processes
 - ▶ Verifying the categories (Dominance of „Line“ as artefact due to not sufficiently discriminating categories?)
- Tempo has strong influence
 - ▶ Testing length and duration of forming schemes regarding the given tempo (cf. Lehmann & Goldhahn, 2009).

Discussion (II)

- Tonality did not show any influence
 - ▶ Identifying formulas on a micro-level of tonal structures.
- Expertise shows in greater variability of forming schemes and enhanced planning horizon
 - ▶ Differentiating the underlying strategies of improvisational processes in music (cf. Hargreaves, Cork & Sutton, 1991).

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