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The Development of Intuitive Musical Understanding: A Natural Experiment by
Jeanne Bamberger

In this paper Bamberger explored the process during which musically untrained people intuitively discovered the basic music theories behind a sensible tune. The natural perception of tonality is always an arguable puzzle in music cognition studies. Krumhansl's probe tone experiment showed positive responses to tonality among people, in contrast to what Deliège et al. indicated that the tonal-harmonic structure derives largely from formal musical training.

Different from probe tone, Bamberger tried to discover people's sense of tonality through a series of decision making in active compositions. The experiment was conducted by Impromptu, a compositional software providing alternative representations of pitch and motif in terms of blocks. In the experiment, subjects were given several segments of a modal melody and were asked to reconstruct those segments into a song of which melody makes sense to them. Subjects were allowed to change the pitch and duration in the segments, rearrange the order of them, and decide the number of time each segment appears. Subjects were also asked to keep a log of every decision they made during the whole process.

Bamberger then represented two case studies among the results. Two subjects, Linz and Keven (students in MIT), showed two very different approaches for their composition and produced two different tunes. However, they shared a large amount of criterion in their decision-making, including balanced phrases, tonic cadence, motive development, antecedent/consequent phrases, and clear rhythm boundaries and contrasts. Bamberger concluded that these basic music theories are embedded in everyone in the culture, and people can learn or discover those by themselves through an active composition process.

Using impromptu as the composition software for creating a three-minute piece, I first got frustrated and lost with the interface which does not provide either the exact pitch information of multiple track for harmonization or the time signature for rhythm. I decided to trust my ears and tried to put some numbers in pitch and duration. Then I found that I could sense the unit of the beat and also I realized the harmonization I wanted to develop. Just as Bamberger said in her lecture that Impromptu is not a software for professional composition, instead it provides an opportunity to explore music perception in music making. The paper records and analyzes the process of intuitive music composition. It is very surprising to me that people without musical training can come up with several music terminologies in the process. I agree with Bamberger on her opinion of music theory education: it will be more effective for people to learn music theory when they figure out why and how than directly asking them to memorize all the terminologies.