

Sundberg, Johan, Anders Friberg and Roberto Bresin. "Attempts to Reproduce a Pianist's Expressive Timing with Director Musices Performance Rules." Journal of New Music Research. Vol. 32, No. 3, pp. 317-325. 2003.

This article describes the Director Musices (DM) as a system of context dependent rules that automatically introduces expressive deviation in performances of input score files. The DM rules contain two elements: 1) the context defines in what context the rule should be applied; and, 2) the quantity parameter states the degree of effects it should produce in the performance. The different rules of DM serve different purposes: 1) grouping rules mark which tones belong together and where the structural boundaries are; 2) differentiation rules increase the differences between tone categories such as pitch classes, intervals, and note values; and, 3) emphasis rules emphasize unexpected notes. The DM system has been found to be capable of adding various emotional colors to a performance. The DM system has been developed on the basis of effects generated on a limited number of music examples to which the authors admit that "the combination could be [only] successfully applied to that example, leaving the general applicability of the rule an open question."

The basic idea of this article was to compare the real pianist's performance with different performances produced by the DM system. The only thing tested for were the departure from nominal IOI, since this represents an important aspect of musical expressivity. The testing was done with downloaded MIDI files that were converting into a MUS file with editions that included grace notes and gruppetto notes. The testing was carried out for the top voice only, since the lower voices serve as accompaniment mainly. Also, mainly because of different realization of ornament notes, certain tones were excluded from the comparison.

Two tests were done on the DM system with varying levels of constraints. The correlation coefficient was then used as a measure of the agreement between the pianist's deviations from nominal and those produced by the DM system. The main problems discovered with the DM system were that: 1) the correlation coefficient only showed the level of agreement with regard to the sign of the overall deviations, not the quantity; 2) the correlation is highly sensitive to extreme values; and, 3) the correlation measure is much more sensitive to the agreement for single notes when the number of notes compared is small as compared to when it is large. The conclusions that the authors have come to are: 1) some rules applied in isolation failed to produce any substantial positive correlation in any of the sections and it is possible that these rules produce desirable effects only when combined with other rules and/or only in certain types of music; 2) better performances would emerge if rules were not applied with a fixed, constant quantity throughout a piece – the rule quantity should change depending on the musical character of the composition; 3) the Phrase Arch rules alone produce high correlations indicating that phrasing is a

truly basic aspect of music performance; 4) the performer paid particular attention to the slurs and tended to perform legato groups of tones as phrases, as indicated by the large level of correlation of the Phrase Arch rule at level 7; and 5) 100ms IOI appears to be a magical limit for whether or not tones are perceived as autonomous pitches since notes that are shorter than 100 ms appear to lose their autonomy.

I disagree with many of the statements and methods described in this article. Beginning with the capability of “emotional colors,” I think that the idea seems a bit stretching because “emotional colors” are psychological reactions that are determinate on the individuals’ perception. I am glad that the authors mentioned that the limited learning set made the generated rules not generally applicable. I was highly disappointed that they used only one pianist’s performance. I think that this limits the “generality” of the rules even more so. I also think that the fact that the authors used a downloaded MIDI file and edited it for grace notes and gruppetto notes also hindered the accuracy of the results. Wouldn’t the exclusion of such “ornamental” and “accompanying” aspects of the piece change the piece to begin with? Do the authors not think that these aspects are expressive since they are measuring expressiveness? The authors admitted that during the tests, the edited notes lowered the correlation values for all the combination rules and that perhaps they did not accurately represent the grace and gruppetto notes in their edited representation. During the tests, the authors do a horrible job explaining their steps or reasons which made the test results even harder to decipher. In the conclusion that phrasing is a basic aspect of music performance, the authors say that this idea is supported by the fact that musicians tend to reproduce phrasing patterns of timing even when asked to deliberately perform without any musical expressivity. Even though this stated is derived from a study by Sundberg et al. and Palmer, I do not think that the authors have a right to call this a “fact” for it clearly cannot be by definition. In the last part of the discussion section, the authors claim that the Duration Contrast rule can correspond with the emotional color of a piece with a negative quantity inducing a special character of performances of pieces that listeners identified as “sad” or “tender” while a positive quantity contributed to inducing classifications of “happy” or “angry.” Once again I must emphasize that I think this is highly dependent on the individual. Why this aspect is even included in this paper I don’t know. Isn’t this more of a psychological/cognitive/perceptual problem? Then again, this confused orientation of facts and ideas seems to be the theme throughout this paper.