Some Translational Representations on Elliott Carter’s Tempi Counterpoint
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Abstract

The aim of this paper is to formally analyze some passages from Elliott Carter’s repertoire of the end of the twentieth century, with special focus on time domain through a translational approach. About the first movement of Tempo e Tempi (1999) for violin solo, English horn and bass clarinet, is presented a graphical representation of the tempi counterpoint on the beginning of the piece. Second, we built a tempi modulation network of the first of the Two Diversions (1999) for piano solo, which evince some temporal relationships at general level. Finally, we present an analysis of the final passage of Shard (1997) for guitar solo, a fragment that constantly displaces our perception of the hypothetical time-point of reference.

1 Tempo e Tempi

Elliott Carter [3] thought that Eugenio Montale “[…] speaks of time in terms of parallel paths ‘that rarely intersect’. When these paths do cross, the observer experiences their intersection as a single moment, negating the multiplicity.”

Figure 1 illustrates the first measures of Tempo e Tempi, piece composed about Montale’s poem, where we can perceive two tempi (‘paths’) that still do not cross themselves.

Accordingly with a previous work (Baqueiro, [1]), we can characterize a speed (tempo) through a time-point $a \in \mathbb{R}^3$ and a fixed duration $d \in \mathbb{R}^3$, i.e., a time-span $(a,d)$ (Lewin, [6]) which generates a time-perception

$$\tau(a,d) = \{(x,y) : x \in [a,d]\}$$

where $[a,d] = \{x : a - d = x\}$ for some integer $n$. Thus we can represent the above illustrated tempi counterpoint as follows:

$$\tau(E_1, E_2) = \{\{E_1, E_2\}, \{E_1, E_2\}, \{E_1, E_2\}, \{E_1, E_2\}, \ldots\}$$ (English horn)

$$\tau(E_1, E_2) = \{\{E_1, E_2\}, \{E_1, E_2\}, \{E_1, E_2\}, \{E_1, E_2\}, \ldots\}$$ (bass clarinet)

where $E_i$ represents the time-point where precisely $E_i$ is presented.

In order to establish the interval between these tempi, we will analyze what kind of intervals exists between the durations involved, i.e.

Figure 2: Durations-counterpoint.

In other words, on $\mathbb{R}^3, 16(10) = 25(\tau, 5)$. The tempi counterpoint illustrated in fig. 3 is a consequence of the durational-counterpoint on fig. 2:

Figure 3: Tempi-counterpoint between bass clarinet, and English horn. (Tempo e Tempi)

2 Diversions

This section presents a general perspective within the first of the Two Diversions through proportional relationships among metrornomic marks of contrasting passages.

Carter [4] describes that:

"[The first Diversions […]] presents a line of paired notes, musical intervals, that maintain a single speed throughout, while the other very changeable material uses many different speeds and characters. […]"

Figure 4 evince which tempi are maintained through the entire piece and therefore function as a temporary reference during the corresponding fragment, e.g., MM 80 through mm. 1-15, and 15-30. One of the virtues of the defined intervals is that they also allow to relate the rational numbers used in the metronomic marks, e.g. on $Q$:

$$Q(5) = 5 \cdot Q(3) = 90$$ $Q(5) = 72, \text{ mm. 52-62}.$

Figure 4 also exhibits a coherent and balanced structural plan for the presentation of speeds, a kind of polyphonic melody of tempi

References