

Appendix 3: Time and Motion — Western and Eastern Perspectives — Train Journey as Allegory

Eastern and Western perspectives of time and motion

In this appendix, the proposed contrasting experiences of directional motion in Western and Eastern musical forms — and their correlation with Western linear and Eastern cyclic concepts of time — is allegorically represented by the contrasting experiences of motion on a train, from Western and Eastern perspectives.

In presenting this allegorical representation, two contrasting perspectives of motion are presented — those of a fictional *Western commuter* and a fictional *Indian conductor*.

In relation to the dissertation's listed RPs, the train journey analogy addresses RP 1A, RP 1B (Corollary), and RP 2A. The allegory also demonstrates the theoretical concepts on which RPs 3A and 3B (i.e., the application of concepts to the performance of music) are based.

It is noteworthy that allegory is a demonstrative literary device. It is used here strictly within this capacity — that is, to demonstrate a concept. There is no intention to use it to prove any proposition in any literal sense.

Why an allegory?

The purposes of the allegory are multiple.

Comparing the experience of musical motion with the experience of travel provides a way of contrasting implicit understandings of motion within Western and Eastern paradigmatic frameworks, particularly regarding monistic and dualistic concepts of time, and linear and cyclic concepts of Western and Eastern time and motion.

In the case of the Western commuter, the use of allegory permits the demonstration of RP 1A — the concept that experience of direction in music is representable as a *phenomenologically determined, hierarchically organised, multi-parameter, form-void vector field*.

In particular, the example provides an allegorical demonstration of specific concepts of the model — those of *phenomenological determination* and *hierarchical organisation of form-void vectors*, which collectively may be considered a *vector field* whose net direction and magnitude is conceptually representable in terms of vector addition.¹

The phenomenological experience of musical direction as being either forward moving (in a state of development) or backwards moving (in a state of resolution) based upon the vectorial addition of the contributing form-void vectors is a concept that lends itself to allegorical representation in terms of movement within the material realm — for example, the experience of movement on a train journey. The allegory thus also lends itself to demonstration of RP 1B (Corollary).

Correlation between Primary RP 1A and Appendix 7

Appendix 7 is an analysis of the submitted creative work *Oscillation 1* in terms of the components of RP 1A (i.e., phenomenological determination, hierarchical organisation, multi-parameter contribution,

¹ The concept of multiparameter contribution is not demonstrated in the example. In theory the allegory could also include a *stationmaster's* perspective — that is, the inclusion of multiple trains representing the multiple parameters of musical parameters that are representable as form-void vectors (the parameters of metre, melody, harmony, and, in more complex musical organisation, modulation and global form).

and representation of the experience of vectoriality in terms of form-void couplet cells), collectively representable as a *vector field*.

The representation of form-void vectorial motion on the train journey described in the allegory as it is from the Western commuter's perspective is thus comparable to the form-void vectorial motion described in the analysis of directional motion in the artefact, *Oscillation 1*, as described in Appendix 7.

Demonstration of concepts of Secondary RP 2A

Secondary RP 2A proposes that Western and Eastern musical forms may be considered metaphors for Western dualistic and linear concepts of time and Eastern monistic and cyclic concepts of time.

In reflecting the concepts in Secondary RP 2A, the allegory illustrates the concepts of Western *form-void duality, finiteness, teleologicality reproducibility rather than evolution of forms, and linearity of time* and the Eastern correlates of *form-void monism infiniteness, non-teleologicality, evolution of forms, and cyclicity of time*. These concepts are detailed in the sections that follow.

Rationale for the use of allegory and personification

The concept that contrasting experiences of motion in Western and Eastern musical forms may be seen as reflections of contrasting Western and Eastern representations of time is an abstract concept.

The purpose of presenting this concept in allegorical form — as the contrasting experiences of the same movement on a train, understood from Western and Eastern perspectives — serves the purpose of making this abstract concept more tangible.

The use of allegory and personification to *humanise* the representation of complex concepts in art and music is not a new thing. Pjait notes that “in fine arts personification is used for a variety of purposes” and that since “ancient times, artists evoked images to represent natural phenomena and abstract concepts in an attempt to help others as well as themselves understand these intangible ideas”.²

This appendix thus presents the contrasting experiences of directional motion on a train journey, as experienced by a *Western commuter* and an *Indian conductor*.

A Western commuter and an Indian conductor

The first perspective examined via the use of the allegory of a train journey is that of the experience of motion in *Western* music. In the example, this experience is represented as the phenomenological experience of music from the perspective of a Western commuter.

The second perspective is an allegory of motion in *Eastern* (i.e., North Indian) classical music. This experience is represented as the phenomenological experience of music from the perspective of an Indian conductor.

The experiences of these representative characters of the overall directional movement of the described train journey are proposed as analogous to the Western and Eastern perspectives of movement in each of their respective musical forms — Western-composed art music and North Indian classical music.

The following sections provide analysis of each of these contrasting perspectives.

² Pjait, *The Personification of Abstract Concepts in Art and Animation, Crossing Domains* (Blog, 2005). <https://medium.com/crossing-domains/the-personification-of-abstract-concepts-in-art-and-animation-6fc1b9ed7282>

The Western perspective — a business commuter

The example begins with an analogy of the experience of musical direction as a “phenomenologically determined, hierarchically organised, multi-parameter, form-void vector field”.

In this analogy, a Western man has recently arrived at Mumbai International Airport in India to attend a conference in New Delhi. He takes the overnight train from Mumbai to New Delhi, and he is now *returning* on the overnight train back to his airport hotel at Mumbai.

During the return train journey, the man leaves his sleeper compartment to go to the dining carriage. On the way down the aisle, he passes the conductor. He then sees an open window and leans over the seats to close it. As he does so, he asks himself:

Am I moving forwards [going somewhere] or backwards [returning home]?

This question is allegorical for the concepts of musical development and musical resolution.

There are three directional movements in the described scenario:

1. returning from a conference
2. walking to the dining car
3. leaning over to open a window

It is notable that the first of these movements is a *returning from* movement and the second and third movements are *going to* movements.

The analysis is thus presented as a way of examining the experience of vectoriality from the Western perspective in terms of the sub-propositions of RP 1A — the proposal that the experience of vectoriality in music is representable as a phenomenologically determined, hierarchically organised, multi-parameter, form-void vector field.

Sub-proposition 1 — The experience of vectoriality is phenomenologically determined

In the example described, for each of the three listed movements (returning by train from a conference, walking to the dining car, and leaning over to open the window) the Western commuter can represent these actions as directional movements.

Each of the phenomenologically determined positions have a home (*void*) position and an away (*form*) position.

Each of the movements are then phenomenologically represented as being movements either *towards something* or *away from something*.

Furthermore, that described *something* is phenomenologically attributed as functioning as either a home (void) or away (form) state.

The movements are thus representable within a polar couplet cell structure, within which there is a phenomenologically determined movement between a conceptual place represented as void and another conceptual place represented as form. Thus, each of the movements are representable as a form-void couplet cell, through which movements are possible *from void to form* or *from form to void*.

Notably, all conceptual movements are referenced against *phenomenologically determined* — and thus individual, personal, and subjective — concepts of home (as void) and away (as form).

It is thus apparent that each of the three described movements have a “home” state (functioning as void) and an “away” state (functioning as form).

From the perspective of the Western commuter, the concept of movement in each of these cases is represented as the *transition* that occurs between two states — one state phenomenologically functioning as home (void), the other state phenomenologically functioning as away (form).

It is apparent that the attributions of the meanings of “home” to the concepts of “airport hotel”, “sleeper compartment” and “aisle” and the contrary attributions of the meaning of “away” to the concepts of “conference”, “dining car” and “window position” are individual, personal, and subjective attributions within the commuter’s own phenomenological framework.

Otherwise expressed, home and away are meaningful only within the Western commuter’s own frame of reference.

As such, it is apparent that the experiences of directional motion, be that between cities, between train carriages or between aisle and window positions, are ultimately defined against the individual, personal, and subjective significances of *home* or *away* that the Western commuter attributes to them.

When the movements are *away* from a position that the Western commuter has attributed as *home* — and *towards* a position that the Western commuter has attributed as *away* — the movement is perceived as having moved in a *forward* direction.

Conversely, when the movements are *away* from a position that the Western commuter has attributed as *away* (or conversely, *towards* a position that the Western commuter has attributed as *home*) the movement is perceived as having moved in a *backwards* direction.

As such concepts relate to the experience of directional motion in music, the experiences of forward and backwards motion (at the local level) correspond to the experiences of musical *development* and musical *resolution*.

If the Western commuter changes his concept of what he attributes as home, then the direction to which he attributes his movement also changes.

Hence, the concept of direction is individual, personal, and subjective, and phenomenologically determined. It is relative rather than absolute.

The Western commuter’s concept of direction being forward or backward moving is based upon his own individual, personal and subjective map of his attributions of the concepts of home and away, and the phenomenological meanings they signify for him.

Regarding the *Am I moving forwards or backwards* question, the meaning can only be assigned relatively — that is, in reference to the Western commuter’s personal concepts within his own phenomenological framework. Sub-proposition 1 is thus consistent with Zuckerkandl’s (1956) proposition, reiterated below:

[Musical tones] bring to ... knowledge the things they signify ... the meaning of a tone lies not in what it points to but in the pointing itself.³

The Western human condition of “going somewhere”

Within his Western nature, the Western commuter is always “going somewhere”. The “going” may involve either “developing” movements towards a goal or “resolving” movements towards a completion. Either way, the nature of going somewhere reflects the dualism and linearity implicitly understood within Western time, as characterised by the Western concept of the arrow of time. The

³ Dahn, “A Summary and Reflection on Victor Zuckerkandl’s *Sound and Symbol*.”

nature of going somewhere defines the essence of the Western commuter's vectorial experience. The concept would seem to be a defining characteristic of the nature of the Western human condition. Such a characterisation reflects the *cultural conditioning* that characterises the Western paradigm itself. The Western commuter is thus always "going somewhere" — to another moment.

He is never still.

It is his very experience of *being and time*.⁴

The Western human condition of "going somewhere" in Western music

Just as the Western human condition of going somewhere is paradigmatic for Western culture, so too does it characterise Western music. Theorists such as Clayton and Dahn (referencing Zuckerkandl) have described this peculiarly Western concept in various ways. Clayton, for instance, asserts that Western music has the property of "going somewhere" when he notes that "[Western] music appears to go from A to B in a measured manner".⁵

Dahn's description (referencing Zuckerkandl) is as follows:

Meaning rests for VZ [Victor Zuckerkandl] in music's syntactical structure ... Tones succeed one another in a sensical manner. Scale degree 2 leads to scale degree 1 in the same way that a transitive verb leads to a direct object.⁶

The characteristic within Western music of "going somewhere", as described by theorists such as Clayton and Dahn, would thus appear to characterise Western music in the same way that it characterises the human experience of the Western human condition itself.

Sub-proposition 2: — hierarchical organisation of phenomenologically determined form-void movement

In the allegory described, the Western commuter undertakes the following three vectorial movements during his train journey:

1. returning from a conference
2. walking to the dining car
3. leaning over to open a window.

In addressing the Western commuter's question (*Am I moving forwards or backwards?*), both properties of vectoriality (i.e., magnitude and direction) must be considered.

Considering the property of *direction*, the three described movements may be characterised as:

- *returning from a conference* — movement in the *backward* direction: *away* (form) to *home* (void)
- *walking to the dining car* — movement in the *forward* direction: *home* (void) to *away* (form)
- *leaning over to open a window* — movement in the *forward* direction: *home* (void) to *away* (form)

Considering the property of *magnitude*, the same three described movements may be characterised as:

⁴ Martin Heidegger, *Being and Time*, trans. John Macquarrie and Edward Robinson (New York: Harper and Row, 1962).

⁵ Clayton, *Time in Indian Music*, 19.

⁶ Dahn, "A Summary and Reflection on Victor Zuckerkandl's *Sound and Symbol*."

- *returning from a conference* — movement in the *backward* direction, high magnitude
- *walking to the dining car* — movement in the *forward* direction, medium, magnitude
- *leaning over to open a window* — movement in the *forward* direction, low magnitude.

Considered in this way, the three movements may be understood to be, relative to one another, *hierarchically arranged*.

Net forward or backward movement as aggregate vector

Conceptually, the answer to the question is determinable by the vector addition of the contributing phenomenologically determined form-void vectors. Such a process incorporates consideration of both magnitude and direction.

For the case of the Western commuter and the three phenomenologically determined form-void vectorial experiences of movement between cities, carriages, and aisle-window positions, it is reasonable to assume (for the purposes of illustrating the concept) that the magnitude of the movement from Delhi back to the hotel in Mumbai — a *backwards* direction — is greater than the *combined magnitudes* of his movements experienced in the *forward* direction (i.e., the movements from sleeping car to dining car and from aisle to window).

In other words, the sum of the backwards movements (in this example there is only one backwards movement) is greater than the sum of the forwards movements. Thus, the Western commuter *overall* experiences himself as moving backwards (i.e., *returning home*).

Conceptual representation of movement as form-void couplet cells

In the example of the Western commuter, each of the three experiences of vectoriality share the same conceptual structure — that of a polarised couplet cell. This is because each of the movements are representable as movements between phenomenologically determined form and void states, the conceptual structure within which movement is represented.

Hierarchical organisation of form-void couplet cells

What is significant within such a representation is that form-void couplet cells are not equal in their vectorial capacity — rather, they would seem to be hierarchically organised. In demonstrating this concept, it is reasonable to assume that the sense of *arriving home* (in the case of arriving back in Mumbai) is more significant than the movement of *going away* from the aisle to the window, or of *going away* from the commuter's sleeper compartment to the dining car. Such hierarchical organisation is evidently phenomenologically determined. It is individual, personal, and subjective, thus meaningful only within the subject's frame of reference. So, too, it is proposed, is this the case in the experience of net vectoriality in music. Kramer describes this concept as follows:

A strong cadence tends to close off not only its phrase but also several preceding phrases ... a phrase group. Thus, closure like tonality itself is hierarchical.⁷

In the example described, there are three hierarchically arranged movements.

- The first, at the lowest level of the hierarchy, is the level of movement at the *aisle-window level*, the level at which the movement from aisle to window occurs.
- The second, at the middle level of the hierarchy, is the level of movement at the *carriage level*, the level at which the movement from sleeper compartment to dining car occurs.

⁷ Kramer, *The Time of Music*, 137–8, quoted in Clayton, *Time in Indian Music*, 24–25.

- The third and highest level is the level of movement at the *city level*, the level at which the movement from Delhi to Mumbai occurs.

In addressing the Western commuter's questions (*Am I moving forwards or backwards?*), the hierarchical organisation of the phenomenologically determined movements must thus be considered. Conceptually, such a *calculation* may be represented as the aggregation to produce a net directional result of the phenomenological vectors of *leaning over to open the window*, *walking to the dining car*, and *returning from a conference*.

Because the movements described are vectorial entities, their vector addition produces not only a net magnitude but also a *net direction*. Following the principles of vector addition, as such apply to the example, a vector addition of the contributing phenomenological vectors that is *positive* is associated with the experience of *forward* movement. Conversely, a vector addition of the contributing phenomenological vectors that is *negative* is associated with the experience of *backward* movement.

In accordance with RP 1B, as such concepts relate to the experience of directional motion in music, such experiences of *net* forward and backwards motion at the global level (i.e., at the level of overall experience of a composition) correspond to the concepts of musical *development* and musical *resolution* at the overall compositional level. Referencing the artefact, *Oscillation 1*, this concept is further explained in the following section.

Demonstration of hierarchical organisation of form-void couplet cells in Oscillation 1

Arising from RP 1A, the concept that musical vectoriality may be analysed as a *phenomenologically determined, hierarchically organised, multi-parameter, form-void vector field* is demonstrated in Appendix 7. This concept, for which the experience of overall movement on a train journey is allegorical is the central concept of RP 1A.

In the same way that the experience of directional motion on a train is conceptually determinable as the aggregate of the phenomenologically determined, hierarchically organised, form-void vectors, so too can this concept be applied to propose a conceptual model for the determination of net directional movement being forwards or backwards in the experience of music. RP 1B proposes such a concept as follows:

The phenomenological experiences of development and resolution at a given point of a composition are representable as, respectively, net positive (forward moving) and net negative (backward moving) aggregate vectorial sum of the phenomenologically determined vectors at that given point within the music.

For the analogy, and for demonstrating the application of the model to the conceptual representations of the musical concepts of development and resolution, the following substitutions can be made:

Material vector	Phenomenological musical vector	Magnitude
<i>leaning over to open a window</i>	<i>level 1 metre</i>	low
<i>walking to the dining car</i>	<i>level 2 metre (evident in compound metre)</i>	medium
<i>returning by train</i>	<i>level 3 metre (evident in more complex compound metres)</i>	high

In such a characterisation, metre is considered a *hierarchically organised* musical parameter.

As a conceptual framework for the musical concepts of development and resolution, the conceptual framework of RP 1B may be used both for intentional composition (i.e., the deliberate use of compositional devices for the purpose of creating the capacity for experience of directional motion) and for the purpose of analysing the development and resolution processes that may occur when experiencing a composition. This concept is discussed in Chapter 3.

Primary RP 1A as extension of Zuckerkandl's wave theory of motion

To be able to come back, one must first have gone away; now we understand why we count one-two, and not one-one. Here “two” does not simply mean “beat number 2” but also “away from”.⁸

As previously noted, RP 1A is an extension of Zuckerkandl's concept of vectoriality in metre.⁹ Though Zuckerkandl does not describe his theory using such terms, his concept is inherently vectorial. Thus, the concept of vectorial movement in music is not in itself novel. The current dissertation, however, in RP 1A and its associated RPs, extends the concept in several ways.

This extension of Zuckerkandl's concept is discussed in detail in Chapter 1 under *From wave theory to phenomenological mechanics — 10 steps*.

Western linear and Eastern cyclic musical motion

The perspective of the Indian conductor demonstrates the Eastern perspective of cyclic time, in contrast to the experience of linear time from the perspective of the Western commuter.

Western teleological and Eastern non-teleological musical motion

The current dissertation is *an intercultural musical perspective* of the novel concept of *phenomenological mechanics*. As such, the concept of linearity versus cyclicity of musical form — reflecting linear and cyclic concepts of cultural time — is an important concept in characterising the differences between Western and Eastern musical forms.

In reference to Secondary RP 2A, the submitted creative work, *Oscillation 1*, is a metaphor for this concept. Specifically, this is metaphorically represented in the linear and cyclic global forms of the tabla and guitar parts, respectively, and in the alternating linear and cyclic modulation that defines the equi-harmonic cycle.

Teleological nature of movement Western commuter as allegory for the teleological nature of Western music

In the allegory of the experience of vectoriality on a train from the perspective of the Western commuter, the *movements* represented are characterizable as teleological.

Teleological movement has a purpose and endpoint, ultimately arriving at a known fixed entity — *a finite and recognisable point of arrival*. Teleological motion is thus defined by its goal — the intent of the movement. In that regard, the movements described are teleological in way that is analogous to the experience of Western music, as described by Kramer.¹⁰

⁸ Zuckerkandl, *Sound and Symbol*, 168, quoted in Clayton, *Time in Indian Music*, 20.

⁹ These concepts, and the process of the extension of Zuckerkandl's concept of vectoriality in metre to the dissertation's concept of the experience of direction in music as akin to that of a phenomenological machine, are discussed in detail in Appendix 5.

¹⁰ Kramer, *The Time of Music*, 378–379.

In the same way, the three vectorial movements experienced by the Western commuter in the allegory are teleological movements — they are defined by the endpoint of their purpose.

In the case of the Western commuter, whether the *finite and recognisable point of arrival* is the airport hotel at Mumbai, the dining car on the train, or the window at the end of a seat, all his movements, as phenomenologically represented, are teleological in this way — they are all characterised as having defined or fixed starting points and endpoints.

Dahn's choice of analogy of music with language (as cited earlier in the appendix) is a suitable one because such an analogy invokes the concept of a *musical syntax*. The musical syntax that Dahn is referring to is *Western* musical syntax. Thus, it is proposed, just as Western language is characterizable by its syntax, so too is Western music characterizable by a musical syntax.

Inherent within the implicit teleological syntax of Western music is the representation of polarity of forms as characterised by the polar couplet cell and, with it, the concept of duality, which characterises the Western paradigm itself.

Additionally, for the Western commuter, movement is always explicitly forwards or backwards — a concept that invokes the representation of *time as linear*.

Such linearity corresponds with the concept of the *arrow of time*, representable on a Cartesian plane as horizontal time.¹¹

Artefact RPs 3A and 3B

Referencing the concept of *horizontal* time, Artefact RP 3A proposes a geometric model of musical form incorporating Western linear time as *helix*.

Referencing the Eastern concept of *cyclic* time, Artefact RP 3B proposes the alternative representation of musical form as *vortex*.

Eastern perspective — Indian conductor

Time and movement

In the example provided, the Western commuter, in walking to the dining car, passes an Indian conductor in the aisle. Just as the Western commuter is an allegory for Western music, the Indian conductor is an allegory for the Eastern perspective.

Whilst the Western traveller is a commuter returning to Mumbai from a business trip to Delhi, the Indian conductor has just commenced the first leg of her weekly round trip around India. On each weekly journey, the Indian conductor's travel itinerary is the same.

She starts her round trip each week on a Monday morning in New Delhi. From there, she travels south to Mumbai, then easterly across the continent via Hyderabad to Chennai. From Chennai, her train heads back north through Patna to Kolkata. From Kolkata, she heads West again, arriving back in New Delhi on the following Monday morning. On her arrival, and after the departure of passengers, she starts another round trip. The Indian conductor thus repeats the journey over and over as she has for many years.

One morning, in the course of her work, the Indian conductor walks the same path as that of the Western commuter, as he makes his way to the dining car. Since he is returning to his airport hotel in Mumbai, the Western commuter understands himself to be travelling in the backwards direction.

¹¹ Greene, *The Fabric of the Cosmos*, 143.

From the perspective of the Indian conductor, momentarily walking the same path, the train is simply travelling around India, without any endpoint. She does not have the impression that she is going somewhere — at least not to a fixed and defined destination. Nor does she feel that she is returning from anywhere.

The motion she experiences from her perspective is one of perpetual travelling around and around the continent. Furthermore, from her perspective she will continue to travel this round trip, repeatedly, over and over, week after week, year after year.

Over the years, however (despite, in her experience, not going anywhere), the repetition of the journey means that she will come to know the trip with more and more familiarity.

She will notice subtle differences in the way the journey is experienced over time.

She will make subtle changes here and there in the way that she conducts herself.

Over time, she will make progressively finer and more nuanced adjustments in the way she undertakes the journey.

She will aim for a kind of perfection in undertaking the journey, while understanding that such an endpoint does not exist.

Western and Eastern concepts raised by the Western commuter's and Indian conductor's linear and cyclic journeys

The concepts that characterise Western and Eastern musical forms via the described allegory of the contrasting experiences of a train journey from the perspectives of a Western commuter and an Eastern conductor are presented next.

Western concepts raised by the Western commuter's linear journey

Duality of form (away-ness) and void (home-ness)

The Western commuter has a home. He also has a *fixed destination*. In that sense, he has *somewhere to go to*. His definitions of home and away are polar and mutually exclusive — *that which is not home is away, and that which is not away is home*. In his states of motion, he is either moving *from home to away* or *from away to home*.

Finite, teleological, non-evolving movement

From the Western commuter's perspective, the train journey has a start and end point. It is either going forward (from home to away) or backwards (from away to home). The train journey has a fixed endpoint in time and space.

Linearity of time and movement

From the Western commuter's perspective, his movement occurs in *lines*. His experience of time is also that it is *linear*.

Eastern concepts raised by the Indian conductor's cyclic journey

Non-duality — that is, monism of form (away-ness) and void (home-ness)

The Indian conductor has no home, apart from the home on the train where she lives. In that sense, there is *nowhere to go*. She is always at home. Any concept she has of being away is contained within her concept of home. Her phenomenological experiences of home and away are *monistic* and *mutually inclusive*.

Infinite, non-teleological, forward moving, evolving movement

From the Indian conductor's perspective, the train journey never stops. It has no end destination. Each time she repeats the journey, there is variation towards an infinite unreachable goal of perfection.

Cyclicity of time and movement

From the Indian conductor's perspective movement occurs in *cycles*. Her experience of time is also that it is *cyclic*.

Western and Eastern musical forms as metaphors for Western and Eastern concepts of time and motion.

The experiences of time and motion and the associated vectorialities of the Western commuter and the Indian conductor are allegories for Western and Eastern paradigmatic representations of time and motion. Such characteristics also correlate with Western and Eastern musical forms.

Western and Eastern musical forms would thus seem to coincide in their structural organisation with these vectorial concepts, an idea consistent with the proposition of Secondary RP 2A. Thus, the Western commuter — or more precisely, the phenomenologically determined *vectoriality* of the Western commuter's experience of motion — is an allegory for the experience of Western music, reflecting the Western paradigm, including its representation in the Western paradigm of the linearity of time. Similarly, the Indian conductor's experience is an allegory for the cyclic nature of Eastern music (in the context of the dissertation, North Indian classical music). Such cyclicity corresponds with the representation of time within the Eastern paradigm.

The Western paradigm, reflected in its musical form, is characterizable by the qualities of *form-void duality, finiteness, teleologicality, reproducibility rather than evolution of forms, and linearity of time.*

Conversely to this, the Eastern paradigm and its music is characterizable in terms of *form-void monism infiniteness, non-teleologicality, evolution of forms, and cyclicity of time.*

Western and Eastern musical forms as cultural metaphors

From the Western perspective, the polar separation of the concepts of present and future permits, at the conceptual level, the possibility for movement “from A to B in a measured manner”.¹² Such a representation is a linear phenomenological representation of time, consistent with the understanding of time under the Western linear concept of the *arrow of time*.¹³

In contrast to this, within the Eastern perspective, the concepts of present and future are not separated. A point in time B (the future) is already contained within a point in time A (the present). Such a phenomenological representation of time is consistent with the Eastern cyclic concept of time.

Rowell captures the essence of this concept as it applies both to the Eastern experience of time and Eastern music symbolising such cyclicity, as follows:

The cyclic organization of the underlying “tal” [rhythm] is a microcosmic parallel to the macrocosmic cycles within which Indian time unfolds.¹⁴

¹² Clayton, *Time in Indian Music*, 19.

¹³ Greene, *The Fabric of the Cosmos*, 143.

¹⁴ Rowell, “Creation of Audible Time,” 192, quoted in Clayton, *Time in Indian Music*, 15.

More generally, Ravi Shankar describes this metaphorical relationship between music and philosophy as follows:

The highest aim of our music is to reveal the essence of the universe it reflects.¹⁵

Summary

As described in the previous section regarding vectorial movement within North Indian classical music, the experience of movement is cyclic, just as it is for the Indian conductor.

From a teleological perspective (i.e., in terms of a fixed endpoint), there is nowhere to go. Thus, the experience of North Indian classical music, be that as player or listener, is one not of *moving further* but of *going deeper*.

The consideration of such concepts provides possibility for the performance of music that is *cyclic in form, non-teleological, perpetually evolving, and infinite in variation*. Such a concept contrasts with the traditional Western view of music as *linear, teleological, fixed in form and finite*.

Concepts as they apply to RPs 3A and 3B

The current appendix concludes with the translation of these abstract concepts into simple geometric models for the purpose of expanding the probabilities for music performance.

These models — Western composition in accordance with linear time, and Eastern composition in accordance with cyclic time — are the proposals of the tertiary RPs 3A and 3B.

The models are represented as, respectively, “helix” and “vortex” — the concluding contributions of the current research.

These concepts are further discussed in Chapter 3 (Discussion) and summarised in Chapter 4 (Summary and Conclusion),

¹⁵ Ravi Shankar, *My Music, My Life* (New Delhi: Sangam Books, 1969) 17, quoted in Clayton, *Time in Indian Music*, 10.