

Philip Armstrong

Molly
the Miraculous Music-Theorist

for large orchestra

The programme note:

“Molly the Miraculous Music-Theorist” was written for Kirill Karabits and the Staatskapelle Weimar in 2017.

The music is a companion piece to the symphonic poem “Die Ideale” (The Ideals) by Franz Liszt, which was first performed by Liszt and the Staatskapelle Weimar at the unveiling of the Goethe and Schiller monument at the Weimar Theaterplatz in 1857.

The Liszt piece is inspired by passages from the poem of the same name by Friedrich Schiller, and in turn by the classical ideal of beauty and a depiction of the ancient Greek myth of Pygmalion pertaining to the sculptor who fell in love with the statue he carved of a beautiful woman. Similarly Philip Armstrong's piece looks to Schiller's theory of artistic taste and freedom as presented in his “Über die ästhetische Erziehung des Menschen” (Letters Upon The Aesthetic Education of Man), written in 1794.

Building on the work of Immanuel Kant, Schiller developed the concept of a play-drive (*spieltrieb*) whereby human mental capacities are able to combine seemingly antithetical opposites such as reason and aesthetic sensibilities, the necessary and the contingent, the empiricism of the Hume tradition and the rationalism of the Leibniz tradition, into one. This play-drive empowers the freedom of human agency to act as the unifying intermediary between the phenomenal experience of beauty and deliberative acts of morality.

In order to further develop these ideas, Philip Armstrong's piece was written in conjunction with a drama that features Molly the miraculous music-theorist in discussion with the Weimar Musaeus.

A link is revealed by way of the drama with Mary the super scientist, a thought experiment proposed by Frank Jackson in his article “Epiphenomenal Qualia”, written in 1982. Even though she was colour-blind, Mary was fully informed about the science and empirical facts pertaining to light perception. She knew the physics of photons and she knew the neurobiology of cognition. But when, one day, an operation restored her vision and she experienced colour for the very first time, suddenly she realised, despite her comprehensive knowledge of the physical world, that she was unable to explain the ‘feel’ of the experience of colour.

Jackson's knowledge argument sought to establish the coherency of a reduction of conscious experience and knowledge to non-physical properties. Similarly the Weimar Musaeus seeks to demonstrate that Molly the miraculous music-theorist is unable to describe music fully without recourse to an account of the phenomenal and aesthetic experience of music perception.

In the course of the drama, the Musaeus calls upon the Weimar heritage of metaphysical doctrine to affirm an idealist approach to substantiating truth conditions. Just as Schiller used a regulative

approach to contend that aesthetics entails ethics, so the Musaeus does the same. Hypotheses are justified in terms of two-dimensional semantics, of Bayesian probability, and of modality by way of possible-worlds theory. The Musaeus uses David Chalmers' scrutability thesis from his "Constructing the World", written in 2012, to examine the relationship between linguistic expressions and necessary essence, and thereafter to justify an ontological equivalency between the realms of physicalism and phenomenal experience, and accordingly between music formalism and music aesthetics.

Just as Schiller's poem is quoted in the Liszt score and emulated musically, so the drama invoking the Weimar Musaeus and Molly the miraculous music-theorist is carried into Philip Armstrong's music. While not programmatic in the manner of the Liszt, it emulates a naturalistic duality that links musical expression and universal essence, and that encompasses ontologies for both body and mind.

The drama:

WM: Molly, welcome to Weimar! Thank you for joining me today on the stage. I'm delighted you were able to come. You have distinguished credentials pertaining to a broad range of writing on music-theory.

Molly: It's a privilege to join the Weimar Musaeus. Yours is a beautiful city, as evidenced by the many visitors that come to enjoy it. I notice in particular there are many seventeen-year-olds here on various school tours exploring the cultural identity of the nation.

WM: Yes, there's an assortment of memorials and museums and archives in the city associated with this cultural heritage.

Molly: Memorials to the likes of Goethe, Schiller, Wieland, Herder, and so forth.

WM: It's a remarkable literary endowment, but it's sometimes forgotten that these well-known and highly-regarded figures existed in a social and political context, including that of the French Revolution, and in particular a philosophical context too.

Molly: You're referring to those who worked at the University of Jena; you're including them as a part of the Weimar tradition, then?

WM: Yes, I am. Weimar was the seat of government on the one hand and the university at neighbouring Jena was the seat of learning on the other, but both were a part of the same tiny duchy of Saxe-Weimar, and they interacted with each other considerably.

Molly: The relatively liberal political environment drew intellectuals to both towns.

WM: Yes, and the likes of Goethe were deeply influenced by the ideas of their peers. By the 1790s, the duchy of Saxe-Weimar was not only a focal point for individuals focused upon the ongoing Enlightenment, and upon the early Romantic Movement, but it was also the centre of Idealism.

Molly: I'm not sure why you invited me onto your stage, then. I suppose I would describe myself as a realist.

WM: You've written a little disparagingly about the efficacy of aesthetic judgments.

Molly: Well, as you know, my focus has been formalist matters. I've written on twelve-tone technique in Webern, and pitch organisation in Lutosławski, and super-formulae in Stockhausen, and recently I've become interested in elements linking various generations of Hungarian music.

WM: Hence the recent publications. You've looked at technical features in the music of Ligeti and Kurtág, and in that of Bartók and Kodály, and also of Liszt.

Molly: Yes, I've wanted to explore Liszt's approach to tonality and structure both in terms of the Hungarian tradition but also what this meant vis-à-vis his relation to his contemporaries in the mid-nineteenth century. Mendelssohn and Schumann in repressed and conservative Leipzig had continued to write symphonies in the classical style of Beethoven's first and fifth symphonies whereas Liszt, after he settled in liberal Weimar, looked to the modernist tradition of dramatic symphonic poems as represented by Berlioz and Beethoven's sixth symphony.

WM: Yes, Liszt was a modernist, yet, as you say, his music was innovatory not only because of its formal elements but because of its reference to an extra-musical program. It's idealism of a kind.

Molly: *[chuckle]* So, you're going to challenge me about the formalist approach. That's fine! How would characterise idealism, then?

WM: Well, I recognise that the term can have different meanings, just like realism. I don't mean it in the sense of being idealistic, whereby a person is committed to a particular altruistic set of values; this is a sociological extrapolation of the notion that human beliefs and values shape society. The traditional meaning associated with the Weimar tradition might be better called idea-ism.

Molly: The doctrine of ideas!

WM: Yes. It posits that knowledge entities are dependent on the activity of the mind rather than on some objective reality beyond the mind. Following on from the Platonic tradition, it posits that knowledge and understanding are fundamentally mental rather than material. For instance, mathematical numbers are not considered as mere linguistic conventions but possessive of a metaphysical explanation. Similarly, all phenomena, including tables and chairs and people's physical bodies, are constituted of archetypal Ideas, with a capital I.

Molly: This implies that all phenomena are mere appearances existing only for the subjective consciousness. It means that the flexible approach to form used by Liszt is known to us as personal belief rather than as objective reality.

WM: Perhaps these things might be better described as embodiments of the archetypal. Absolute Idealism, as developed in Weimar in the 1790s by the likes of Novalis, Hölderlin, Friedrich Schlegel, Schelling, and thereafter Hegel, added a vitalistic or teleological element to the monistic ideal to explain the ever-changing, evolving characteristics of mind and nature.

Molly: Modern science doesn't have much respect for teleology, or idealism in general.

WM: Yes, that's true! I read a 2013 survey conducted by Bourget and Chalmers of various professional philosophers - those working as professors in universities - called "What Do Philosophers Believe?" which reported that 81% of responders described themselves as non-sceptical realists while only 4% described themselves as idealists.

Molly: Idealism is an idea whose time has come and gone.

WM: *[chuckle]* Perhaps you're right, but if idealism lies at the heart of the heritage of this city, and accordingly of national identity, then at least it's something worth pursuing.

Molly: I suppose that's reasonable.

WM: And how would you characterise realism, then?

Molly: In general, or in terms of my writing?

WM: Either.

Molly: Well, I suppose it's the opposite of the archetypal approach you describe. It means that music and linguistic conventions in general don't reduce to idealist realms, or to mental realms. Realism argues that thoughts in the head are explained by biology, which reduces to physics, and quantum mechanics, and the laws of nature, and so forth.

WM: And ultimately a collapsed wave-function?

Molly: These are the things that science can justify as coherent. I suppose I'm a Quinean empiricist.

WM: A Quinean?

Molly: Having said that, I'm open to listening to other arguments. Clearly it's important to remain open-minded. That's the whole point of Quinean empiricism! I'll be pleased to hear your point of view too. But generally I see myself as a kind of a musical botanist. If I'd been a biologist I would have certainly appreciated the beauty of nature, but my work would have pertained to how nature works. I have the greatest respect for aesthetical matters, but, as you said, my critical work pertains to the formalist techniques employed by music composers. I ask about the structures that underpin any particular piece of music, and how composers handle such things pragmatically.

WM: Accordingly you don't discuss the role of clocks and clouds in Ligeti, or the psychological elements in Bartók, or the programmatic elements in Liszt.

Molly: Well, as I said, I'm an empiricist at heart. I stick to the facts. If there are two notes in the score that are a minor second apart, then I say there's an interval of a minor second, or that there's the context of a chromatic tone cluster, but not that there's a cloud.

WM: Aren't you missing something important? You've been writing about a figure who looked to the heritage we've discussed associated with the Weimar Golden Era. Among other things, he looked to Schiller's aesthetics. One of Liszt's last symphonic poems was based on Schiller's poem "Die Ideale", the Ideals. It was commissioned for the unveiling of one of those monuments in the city centre, for the Goethe and Schiller statue at the Theaterplatz in 1857. Liszt celebrated the literary and intellectual heritage of this city by emulating the classical ideal of beauty.

Molly: Which he expressed in terms of musical notes on a page. That's my focus in the world!

WM: [*chuckle*] Well, this is what Schiller, quoted by Liszt in section three of his score, says of the world:

*Da lebte mir der Baum, die Rose,
Mir sang der Quellen Silberfall,
Es fühlte selbst das Seelenlose
Von meines Lebens Wiederhall.*

*Then living seemed each tree, each flower,
Then sweetly sang the waterfall,
And e'en the soulless in that hour
Shared in the heavenly bliss of all.*

And in section four:

*Wie einst mit flehendem Verlangen
Pygmalion den Stein umschloß,
Bis in des Marmors kalten Wangen*

*Empfindung glühend sich ergoß,
 So schlang ich mich mit Liebesarmen
 Um die Natur, mit Jugendlust,
 Bis sie zu athmen, zu erwarmen
 Beginn an meiner Dichterbrust,*

*As once Pygmalion, fondly yearning,
 Embraced the statue formed by him,
 Till the cold marble's cheeks were burning,
 And life diffused through every limb,
 So I, with youthful passion fired,
 My longing arms round Nature threw,
 Till, clinging to my breast inspired,
 She 'gan to breathe, to kindle too.
 (translation: Project Gutenberg)*

Molly: These are beautiful words, but if this is the era of the Enlightenment we're talking about, then it had a heritage of its own, the empiricism of Locke and Hume.

WM: I have no doubt that the Weimar heritage has the greatest of respect for the work of Hume. The tradition of this town is no doubt more Humean than Necessitarian when it comes to such matters as interpreting the laws of nature. But the point I'm making is that the idealist tradition doesn't reject empiricism. Instead it seeks to explain the empirical world more fully than prevailing materialistic explanations.

Molly: Subjective idealism is not known for its materialist explanations.

WM: Many of the figures who participated in intellectual culture in Schiller's era, including Fichte, were heavily influenced by the transcendental idealism of Kant, which sought to fuse the eighteenth century empirical tradition with the analytic rationalism of Spinoza and Leibniz.

Molly: Kant argued for the impossibility of knowing anything about reality.

WM: Well, he argued that the law and order of the empirical world are expressions of the law and order fashioned by epistemics, by the mind.

Molly: It amounts to the same thing.

WM: Kant didn't argue against the possibility of contingent knowledge about the world known *a posteriori*, by way of experience, but he also identified two types of logically necessary statements known *a priori*, that's to say by way of deduction, known without further recourse to the world. Firstly there are analytic propositions where the predicate is embodied within the subject concept, such as the unmarried bachelor, and secondly there are synthetic propositions where the predicate is not contained in subject concept, such as the messy bachelor. He says all of metaphysics, including the metaphysical reality of arithmetic, is a part of the second type. When we add $1 + 2 = 3$, the predicate comprising the addition procedure is not embodied within the numbers 1 and 2, which are the subject. The process of

adding is discovered by experience and thereafter taken to be a necessary feature.

Consequently arithmetic knowledge is synthetic *a priori*.

Molly: But we're discussing music and language, not mathematics.

WM: The same applies to linguistic statements too. Following on from Aristotle, Kant argued that sentence predicates, such as the condition of transparency in the statement "the music is transparent", are bound by the subject and logically necessary, even if not embodied within the subject itself. In this case, the transparency would not exist without the music. Accordingly knowledge of this transparency is synthetic yet known by inference. It is a necessary and universal condition given that if the condition of transparency is false then the statement "the music is transparent" is also false.

Molly: Am I right in thinking that you're aiming to link formal knowledge with that of the aesthetic?

WM: Well, my point is only that the approach to metaphysics and epistemology that was inherited and thereafter given constitutive status by the Weimar tradition asserts that empirical and rational truth share an analytic justification. It's this very justification that enabled absolute idealism to link Kant's unknowable noumenal realm with the notion of the absolute.

Molly: I don't associate Schiller with analytic justifications.

WM: [*chuckle*] No, of course not! He was more interested in how poetry and art elevate the mind to the level of sublimity and to awareness of the absolute, hence the reference to the myth of Pygmalion, the sculptor who fell in love with a statue he had carved.

Molly: Schiller is also known for his dramas. He's a master at utilising an accelerating structure that embodies both a complex network of causalities and the expression of deeply-felt passion.

WM: And he wrote philosophy of sorts too. Schiller wrote *Die Ideale* in 1795 only one year after his "Über die ästhetische Erziehung des Menschen", his *Letters Upon The Aesthetic Education of Man*, which was focussed upon the apparent lack of connection between aesthetics and moral responsibility in Kant's transcendental idealism.

Molly: I admire his determination to provide thorough justifications for his work.

WM: Schiller's arguments were unusual for the time because they employed a kind of conditional syllogism. He posited that if aesthetic sensibility leads to freedom, and if freedom leads to moral integrity, then aesthetic sensibility leads to moral integrity. His argument is not concerned with constitutive metaphysics and matters of mind-body identity, like those of his contemporaries; his argument is regulative. It says if we take arts and drama as leading to moral worth then we have a justification for doing art and drama.

Molly: As I said, his resolve and conviction are admirable. Nevertheless we must concede that it's a rationalism that's essentially empty. Aristotelian syllogisms say nothing of the world whatsoever. When I assert that "If music A is louder than music B and music B is louder than music C, then music A is louder than music C", I'm not contributing anything to our knowledge of circumstances. I'm merely describing a mental convention. Similarly if I say Liszt's symphonic poem *Die Ideale* sounds like some Platonic ideal of beauty, I'm not saying anything whatsoever about the world at all.

WM: The Saxe-Weimar heritage also includes the work of Frege who advanced the analytic possibilities of logic and also the notion of reaching across the boundaries between

analyticity and empiricism, of aesthetics and formalism, and of establishing the legitimacy of both as a unity.

Molly: But Frege was upstaged by Quine, and even before then by Russell and consequently the Logical positivists. Idealism withered during the Weimar Republic when intellectual thought was driven out of Weimar along with the Bauhaus and relocated in university cities such as Oxford and Vienna. I realise that Carnap worked at Jena too before National Socialism drove him to the US, where he met and worked with Quine. Yes, he argued that analytic knowledge includes additional logical properties beyond the features of containment posited by Aristotle and Kant, such as symmetry, substitutability, and negation, but all that means is that a statement such as “all bachelors are unmarried” is reinterpreted as “all unmarried men are unmarried”.

WM: This means that all of Kant’s synthetic *a priori* are reclassified as analytic *a priori*, but it still represents an assertion of the legitimacy of both.

Molly: Although it doesn’t leave much scope for the *a priori*!

WM: I concede to you the point that the Vienna Circle, like most of the twentieth century tradition, became weighted against idealism and in favour of empiricism.

Molly: It’s not surprising really. It doesn’t help us very much at all if all we’re able to affirm is tautologies of the likes “all As are As” and “all Bs are Bs”.

WM: [*chuckles*] Yes, of course.

Molly: Carnap and his colleagues defined analytic truth, including all statements that are necessary and *a priori*, as being confirmed not by cognitive content but by linguistic convention, which is a point Quine picked up on. He argued that all coherent knowledge statements must by definition be empirical. All knowledge is synthetic; there is no such thing as analytic knowledge. In his “Two dogmas of empiricism”, written in 1951, building on the work of Carnap and Gödel, Quine argued that no knowledge claims are ever infallible; no knowledge statements are exempt from revision. Accordingly they cannot be taken as necessarily true and cannot be treated according to the so-called rules of analytic rationality posited by Aristotle and Kant.

WM: Yes, he did.

Molly: Statements such as “All oak trees are trees” may *prima facie* seem indubitable too. But let’s say science unearths a conspiracy whereby some of our oak trees have been planted by aliens and are only masquerading as trees, but are actually artificial life-forms designed to appear as trees. In this case, it would no longer be possible to say “all oak trees are trees”. We would have to change the sentence to “some oak trees are trees and other oak trees are only masquerading as trees, but are actually artificial life-forms designed to appear as trees”.

WM: Yes, the meaning of the concept “trees” would have changed.

Molly: Exactly! Here’s another example pertaining to music. The statement “all music is sound” may on the face of it look undeniable, but let’s say my best friend decides to melt her last CD, having finally put all of her music collection in the cloud, and claims that this last CD, to which she has a particular affinity, is itself a piece of music. In this case, it would no longer be possible to say “all music is sound”.

WM: I suppose we would have to change the sentence to something like “all music is sound and/or melted plastic”.

Molly: [*chuckle*] It’s important to note that the second example deals with human convention rather than natural objects, and is therefore even more subject to revisability. But Quine’s point is that there is not a single statement of any kind, whether pertaining to the natural or human realms, which is not subject to revisability. Formal statements might possess a relatively stable foundation given their level of correspondence with reality or to a coherent web of knowledge at least, but non-formal aesthetic statements are always going to be ambiguous.

WM: As you alluded, this goes back to Aristotle’s *Categories* and the rules he postulated that govern the construction of deductive inferences. He said that all non-substances owe their existence to substances and exist only in terms of a fundamental inherence relation. Music exists only in sound, grammatical structure only in sentences, and knowledge is to be located only in the mind.

Molly: Quine posited that if a knowledge statement is to be subject to deductive inference, and thereafter analytic rationality as postulated by Aristotle and the entire rational tradition, then it must be true in all circumstances. As you said, it must have *a priori* status; it must be knowable prior to ongoing experience involving such things as aliens and the fate of old CDs. There should be no circumstances where the statement fails to be the case and becomes rejected as false.

WM: Exactly! It must be immune to revisability.

Molly: But Quine argues there are no such sentences. He adds that this means knowledge cannot ever be known by inference, whatever Aristotle might have presumed. All sentences that the Aristotelian and Platonic traditions have previously considered analytic must be taken as synthetic, and known *a posteriori*, known from experience.

WM: The linguistic turn has ended in ambiguity and relativity.

Molly: Yes, I agree. His argument has supported the main movement in intellectual culture that has governed thought for the past fifty years or so; post-structuralism and post-modernism. There is no fixed structure to the world. There is no view from nowhere able to justify either objectivity or analytic rationality.

WM: Accordingly science argues realism lies in quantum indeterminism and social science argues knowledge is grounded only by interpretation, by phenomenal hermeneutics.

Molly: And that the truth of a statement depends upon something physical that’s external to the mind. The statement “sound is a mechanical wave” is true by virtue of the fact, irrespective of the mind perceiving it, that sound is a mechanical wave.

WM: But this correspondence approach to truth doesn’t explain aesthetics, not unless you’re prepared to reduce to the same physicalism and thus eliminate the efficacy of the knowledge.

Molly: Aesthetics is explained as linguistic convention derived of evolution and natural selection. This is not only Quinean empiricism. The semantic externalism of Kripke and Putnam has also undermined the necessary status of *a priori* knowledge statements. Admittedly, Kripke says externalist knowledge enables rigid designation by way of the necessary *a posteriori*, but these things are not knowable by inference.

- WM: Yes, that's what he argued, but there's a contradiction there. Kripke argued that statements such as "sound is a mechanical wave" are necessary truth known *a posteriori*. However this argument is refutable by Quinean empiricism, which posits all truth known *a posteriori* is contingent and falsifiable.
- Molly: I agree and I think most of your 81% respondents would agree too. For instance, Williamson reasserted in 2007, in his "The philosophy of philosophy", that semantic externalism makes analytic truth redundant. The argument, simple stated, is that so-called analytic truth pertaining to matters knowable in terms of meaning rather than in terms of empirical fact fails to meet the criteria for truth established by positivism, such as truth by convention known *a priori*.
- WM: Not everybody in the twentieth century accepted the positivist and empiricist accounts. There have been many refutations of Quine's work and one of the most powerful has been levelled by way of the semantics of two-dimensionalism, which claims that each knowledge statement has two meanings, or two intensions.
- Molly: This is another Weimar tradition, isn't it?
- WM: It is! Two-dimensionalism looks to Frege's separation of expressions into their reference and sense. For instance, the names "Novalis" and "Georg Philipp Friedrich Freiherr von Hardenberg" refer to the same person, but the sense of meaning associated with the two names is quite different. One is the pen-name associated with his literature and the other pertains to his life. In this case, the reference is fixed, but there are other cases where the reference is more obviously subject to revisability, as Quine describes.
- Molly: Quine described all reference as subject to revisability.
- WM: Well, two-dimensionalism doesn't disagree with this, but it argues that the sense of an expression behaves in an entirely different manner to that of the reference.
- Molly: You're going to argue that the sense is always known by inference?
- WM: I am! The semantics of the primary intension are *de dicto*, pertaining to belief in an expression rather than the actuality of the expression itself; accordingly it reveals the contingent sense of a word. Sound can be perceived by the mind as speech, or as music, or as annoying noise, and these experiences are all determined by the subject; accordingly they're contingent. The experience of sound carries the proviso that it might have been otherwise.
- Molly: While the semantics of reference are *de re*.
- WM: Yes, that's right. The semantic of the secondary intension pertains to the object under discussion itself rather than any belief in an expression of that object; accordingly it reveals the essence referred to by a word, true in this world and true in all worlds, and consequently the necessary condition. For instance, sound is a mechanical wave of pressure and displacement and could not have been otherwise. If the phenomenon causing music is not a mechanical wave of pressure and displacement then it would not be sound.
- Molly: Yet even a concept such as sound is subject to revisability.
- WM: Yes, of course. As I said, two-dimensionalism doesn't deny this. The necessary state pertains to its inclusion of associated contingent states and not as a denial of revisability.

- Molly: So in the case of your sound example, your separating the reference, whereby the empirical truth of sound is defined as a mechanical wave of pressure and displacement, from the sense of the word, whereby sound can be perceived by the mind as music, acts to insulate the *de dicto* from the *de re*.
- WM: Exactly! The knowledge statement “sound is a mechanical wave” is accordingly a synthetic statement, necessary *a posteriori*, and subject to revisability by way of, for instance, scientific advance, while conversely the knowledge statement “sound can be perceived as music” is given truth value by separate means.
- Molly: The latter is given truth status by way of its epistemological status.
- WM: In the same way, the statements “two minutes of music plus two minutes of music played consecutively make four minutes of music”, and “the music has started or it hasn’t started”, and “if music A is longer than music B, and if music B is longer than music C, then music A is longer than music C” assert truth not in terms of matters of empirical fact, as we don’t need to verify facts in the world to ascertain their truth, but in terms of their meaning alone, which is contingent *a priori*.
- Molly: This brings us back to Williamson’s argument. And furthermore, there is much debate about the ontological status of modalities, the necessary and the contingent. As I said, Quinean empiricism is sceptical about the necessity of essential properties.
- WM: As I said, necessity is used only as a metaphysical tool in this case, not as an empirical truth in itself. As I’ve already alluded, it’s used in terms of possible-worlds semantics. Furthermore, it’s not important to consider matters of ontology, not in this case. We might not have been able to come together on the stage like this, but we did, and the statement “we’re here together” is contingent but true in the actual world. Possible-worlds semantics are important because, in general, it enables a statement to be interpreted as a function that converts a contingent world into a truth value.
- Molly: So each primary intension represents a single possible world, one of perhaps many, while a secondary intension encompasses all the possible worlds included in the primary intension.
- WM: Yes, each and any statement I make describing the contingent state of sound, the possibility to perceive it as music and so forth, all are contingent possible worlds, while the fact that sound is a mechanical wave encompasses all of these particular possible worlds.
- Molly: You’re going to claim that this modal approach to semantics has an impact on music theory, then?
- WM: Certainly, it does. Music formalism, like science knowledge, is to be considered as a form of secondary intension. It deals with matters of empirical fact.
- Molly: You’re suggesting the empirical truth of a music score, the written notes and the relationships between them, is necessary *a posteriori*?
- WM: Yes, I am, at least as regards formalist matters. For instance, perfect or imperfect cadences are a necessary component of tonality discovered from experience.
- Molly: And the beauty of a perfect cadence?
- WM: The semantics of knowledge statements pertaining to music aesthetics are to be considered as a form of primary intension, given these matters are epistemic.

- Molly: And you're arguing that most knowledge pertaining to music is epistemic.
- WM: And excluded from your writing.
- Molly: I avoid writing easily refutable nonsense for the sake of my reputation and my own sense of integrity.
- WM: What about statements pertaining to indexical judgments such as "I find the music to be well-balanced", and to counterfactual claims such as "the music could have been more balanced", and to phenomenal-based expressions such as "the sense of balance in this music has a distinguishable feeling".
- Molly: These are the very lines of reasoning that generated the metaphysics of the past and that the twentieth century positivists needed to denounce as nonsense.
- WM: But they're not nonsense, are they! Although I respect that we need to find a means to justify them satisfactorily. Building on the work of Frege, the seeds of this two-dimensional approach was developed by Grice and Strawson. Their article "In Defence of a Dogma", written in 1956, seeks to demonstrate how Quine's revisable sentences are completely compatible with a distinction between analytic and synthetic knowledge. It points out that the revision of a knowledge statement in the light of experience can have different conditions. On the one hand it might be the case of a changing concept, implying the reference of the words changes and the statement must be regarded as synthetic, as empirical, and accordingly known *a posteriori*. But on the other hand it might merely be a case of merely acknowledging an inaccuracy, in which case the sense of an expression would be seen to change but the analyticity that governs the statement would remain intact. It asserts that analytic rationality can be sustained in cases whereby meaning remains constant and where there is not a case of conceptual change.
- Molly: You give a lot of credence to matters of epistemic belief.
- WM: Yes, I do, and it's possible to employ the techniques of Bayesian analysis to support these claims. This approach can offer a set of criterion for identifying cases of conceptual change.
- Molly: The quantification of belief is never going to remove its subjective status.
- WM: Well, let's explore this further, then. If I believe that all oboes and clarinets are music instruments utilised for making music, but then I discover that some oboes and clarinets are intended only for glass-case displays, and not for making music at all, then I must reject my original premise not because of any underlying change in what is meant by the expression "oboe" or "clarinet" or "making music", but because the application of these concepts has changed. Indeed, in this case, the belief that oboes and music are linked always had a conditional premise built into it. Oboes and music-making were linked in a provisional sense based upon the evidence available, until the evidence changes. In this case, the credence of the premise drops to a lower level following on from the additional evidence made available. But the reason for the drop is the conditional status of the pre-existing knowledge. If, on the other hand, the credence is affected by the discovery that oboes and clarinets are actually not musical instruments at all, as was previously thought, but types of furniture, then we must revise our understanding of the expressions "oboe" and "clarinet". This would be a case of concept change, of essence change as described by Quine's empiricism, which is very

different to the first case whereby there is merely an adapting of concepts to new circumstances based on the conditional status built into them. These expressions are not subject to revisability and, consequently, never lose their analytic rational status.

Molly: Assuming they had analytic rational status in the first place.

WM: [*chuckles*] The point is that the function of concept-revision does not inevitably refute the existence of analytic sentences. Quine's argument doesn't address epistemic truth. It would have needed to demonstrate the possibility of concept revisability above and beyond the inherent conditional status built into epistemics. He would have needed to refute the possibility of a constitutive connection between rational entailment and conceptual constancy, and show that rationality fails despite the inherent conditional status of an expression holding true.

Molly: You're going to suggest that this principle has significant implications, then.

WM: Of course it does! Establishing the rational status of epistemic knowledge is critical to the idealist tradition, otherwise, as you suggested, all metaphysics is nonsense. This lies at the very heart of the Weimar heritage, which looked to make a constitutive link between mind and nature in terms of identity and equivalency. Whether it's the ontology of Fichte's subjective idealism or of Schelling's absolute idealism, his nature philosophy, or of Hegel's dialectic idealism, always there is the assertion of rational truth known by inference. These principles were renewed by Frege when he argued that the analysis of meaning itself is grounded in analytic rationality, known *a priori*.

Molly: They refute the approach of Russell then, and that of the entire twentieth century whereby analysis is grounded exclusively in reference and the external world.

WM: Yes, they do. These principles assert internalism above externalism and the efficacy of the analytic/synthetic distinction, and, most significantly, the possibility of metaphysics and non-physical ontologies.

Molly: You're suggesting that the Weimar Musaeus stage and the Weimar tradition in general, and accordingly the nature of national cultural identity, is inextricably interlinked with the heritage of metaphysics.

WM: I am! Of course I recognise that these principles have often been misapplied. When the National Socialists and the Gestapo, and thereafter the Democratic Socialists and the Stasi claimed Weimar as their spiritual home, their interpretations were contrived and inauthentic. When Hitler encouraged the crowds from the balcony of the Deutsches Nationaltheater, or of the Elephant Hotel in the Marktplatz, this was the ultimate misconstrual and betrayal of this philosophical heritage.

Molly: They argued in their turn that the Weimar Republic was a misconstrual of the tradition.

WM: And in a sense they were right about this. Weimar metaphysics, with its focus on defining the constitutive link between mind and nature in terms of identity, has its roots in Stoicism, which, as you know, was prevalent in Ancient Greece after the time of Aristotle and thereafter in Ancient Rome. It was a tradition that identified reason and order in nature with reason and order in the mind. The postwar Geist of the Weimar Republic, as represented by the Bauhaus and by Neue Sachlichkeit, or New Objectivity, reasserted the ascetic approach

of Stoicism, yet the identity metaphysics that underpinned intellectual thought was not based on reason and order, or anything rational at all. Instead the era saw both nature and mind as driven by repressed subjugation. The equivalency of ‘survival of the fittest’ naturalism, and ‘Oedipus complex’ psychoanalysis, and ‘materialist dialectics’ social science was a paradigm far removed from the Enlightenment principles of the original Weimar tradition, as expressed by Schiller’s quest for freedom and ethical responsibility.

Molly: I must take exception to this, my friend. Establishing the rational status of epistemics, and of metaphysical speculation, doesn’t have a bearing upon the real world at all. And most certainly it doesn’t refute realism. It doesn’t mean anything in itself at all. It doesn’t mean anything to say a certain brand of politics is a misconstrual if there’s nothing for it to be a misconstrual of.

WM: I’m going to argue that the constitutive status of epistemic rationality is able to justify regulative ideals.

Molly: Your argument is merely that epistemics use a rational structure, whereas knowledge of the external world does not. This implies that epistemics are separate to the external world, but it’s not the way to establish regulative ideals.

WM: This is where resource to two-dimensional semantics becomes particularly useful again. It can be used to examine the link between epistemics of primary intension and the necessary truth of secondary intension.

Molly: Go on; I’m listening!

WM: Chalmers, who I mentioned before, is one of the leading voices in these matters. He and his colleagues are a part of the Weimar idealist tradition in the sense that they refute a sole reliance upon materialist explanations of mental experience and argue instead that consciousness is ontologically distinct from that of physical systems.

Molly: On what grounds?

WM: To support this he argues that it’s feasible to link primary to secondary intension by way of introducing certain caveats to possible-worlds semantics. I can illustrate this by returning to the statement "sound is a mechanical wave", which is classified as secondary intension, true in all possible worlds even while subject to concept change, and to the statement "sound can be perceived by the mind as music", which is primary intension, contingent yet known by inference. Chalmers recognises that I could also say sound is melted CDs, or sound is the thinking processes of aliens from outer space in disguise, and various other speculations too, at least some of which won’t be compatible with the respective secondary intension pertaining to sound. His scrutability framework, which he introduced in his “Constructing the World”, written in 2012, addresses this problem by distinguishing between metaphysical possibilities and authentic epistemic possibilities.

Molly: Authentic epistemics?

WM: Chalmers does this by placing constraints upon the scope of primary intensions. He argues that expressions must be actual possibilities. For the purpose of the link between necessary and contingent truth made available by way of possible-worlds semantics, a valid primary intension must be a) coherent in terms of its context, b) able to satisfy the laws of logic and

rationality, and c) able to satisfy the laws of nomic counterfactuality. Chalmers' point is that only when the metaphysical world associated with a statement matches these standards can it be considered a possible world within the bounds of all possible worlds represented by the respective secondary intension.

Molly: I had thought you were trying to establish the truth of all epistemics.

WM: The principle doesn't deny this possibility, but the important point is that the primary intension must supervene upon, or in other words be scrutable from the secondary intension. Primary intensions are feasible only if the respective secondary intension encompasses them. A piece of music is a non-cognitive form of expression yet it too could be accommodated as primary intension if it is part of a possible world embodied in a secondary intension that encompasses all the associated possible worlds. But in the case of asserting "sound is a mechanical wave" as the secondary intension, the statements "sound might have been an electromagnetic wave" or "sound is necessarily inaudible" might represent legitimate metaphysical worlds but they do not satisfy the criteria for possible worlds associated with the necessary essence of the secondary intension.

Molly: How does this support the assertions of regulative ideals?

WM: Well, it's important to acknowledge that Chalmers' scrutability thesis is constructed on two foundations, firstly the veracity of the conditional structure "if and only if x, then y". It aims to identify what x might be in the most general sense. It argues that if particular truths, y, are scrutable from other truths, x, then knowledge of those particular truths, x, can be deduced from the other truths, y. Secondly, the thesis is also constructed upon the regulative premise that all truths are knowable. It asserts that there is nothing in the universe that is necessarily beyond human comprehension. Combining these foundations together, the scrutability thesis asserts that all truths about the world, let's call them capital Y, are scrutable from some compact set of truths, capital X. The thesis argues that if and only if the compact set of truths is known, then all other truths are known by inference.

Molly: This is not so different to deterministic naturalism, which, at least in some versions, argues that if all the laws of nature are known, coupled with the complete state of the universe at a particular instant upon which the laws of nature will act, then all events preceding and proceeding from that particular instant can be known.

WM: Yes, that's true. However, the scrutability thesis allows more generally for a compact set of truths associable with the epistemics of primary intension semantics.

Molly: So, it's a constitutive principle rather than an ontological principle.

WM: Yes, and furthermore the scrutability thesis also differs from deterministic naturalism in that it embodies conditionalization, which I described before. There is, of course, one possible world whereby the compact set of truths does *not* entail all truths. The principle of conditionalization means that the scrutability thesis is a regulative premise, rather than a constitutive one. In terms of all possible worlds it could be taken as an assertion that if a compact set of truths entails all truths, then all truths are known by inference from a compact set of truths, which is a circular argument but a legitimate one when applied to a single contingent world, which might or might not be our world.

Molly: You argued that the Weimar metaphysical tradition sought constitutive truth?

WM: My point is that if our world is not the contingent world described by the scrutibility thesis, we can still know the scrutibility relationships of this contingent world, which in turn allows for the answering of metaphysical questions in this single contingent world by way of a rational approach.

Molly: You're arguing that the scrutibility thesis creates a contingent world where all truth is entailed from a set of compact truths and where further empirical evidence beyond that set of compact truths is not required for the establishment of all truth. Accordingly the regulative status of the thesis ensures the validity of analyticity, known *a priori*.

WM: Yes, that's right. And in answer to your question about the constitutive status of the approach, Chalmers again looks to the modal tools made available by possible-worlds semantics. He asks what happens if materialist realism, previously associated with secondary intension, is made subject to the domain of epistemology.

Molly: Science as an expression of mental thought?

WM: He maintains that if an overarching paradigm such as reductive materialism, with its assertion of closed causality and accordingly of universalism, is moved away from the role of secondary intension and, instead, made contingent theory and accordingly given the role of primary intension, then the realm of constitutive necessity can be defined in a manner that is broader than that of reductive materialism alone.

Molly: Constitutive necessity?

WM: Again this is a regulative approach, but it's a tool that can be used for exploring the characteristics of the constitutive. Chalmers asks what happens when physicalism is made subject to the popular theory of functionalism, which is often used to justify physicalism. He points out the paradox whereby prevailing materialist theory asserts that the supervenience of mind upon body is subject to the contingency of functionalism, and then functionalism asserts that the material substance of the body is irrelevant. It asserts that mind requires a material body that is not necessarily of a material constituent.

Molly: I suppose so.

WM: Chalmers adds that the modern theory of materialism has an explanatory gap as regards explaining the phenomenal aspect of mental states, of consciousness, the 'feel' of experience. He goes on to argue that if the theory of materialism as an explanation for all truth is made contingent according to possible-worlds semantics, and accordingly associated with primary intensions according to two dimensional semantics, then there are two alternatives for handling the necessary reference. Firstly it could be taken as necessarily true that physicalism is not necessary, based upon the contingent fact that not all epistemic states associable with the empirical world are explained by the physical. This fits the two-dimensional structure; however non-physicalism is not an essence - revisable or otherwise - in itself. Chalmers said the other alternative is panpsychism whereby the explanation of consciousness - perhaps some form of proto-consciousness - is a necessary component or base truth of all things. Chalmers describes this as natural dualism, natural in the sense it's an integral part of nature, of existence, and not of some supernatural realm, but dualist in the sense that this more broad

appeal to naturalism is not defined by physicalism alone. Reasserting idealist sentiment, he argues that this proto-consciousness must permeate the universe as a fundamental property that is ontologically autonomous of physicalist properties.

Molly: Well, there must be other explanations.

WM: Chalmers argued this is not only a coherent response to the question of how consciousness might arise from non-conscious things; it's the only explanation that fits the functionalist account.

Molly: So, it's a naturalism formed of materialism and proto-consciousness combined.

WM: This is the constitutive explanation asserted by Neutral Monism, but Chalmers goes further. Having posited that the explanatory gap left by the theory of materialism might be filled by affording ontological commitment to entities beyond the realm of materialism, he goes on to speculate on what these entities might be. His approach is to identify the nature of the explanatory gap. Given materialism is not able to explain a great many things, not only phenomenal truth but also the essence of indexical truths and counterfactual truths, he speculates on a set of core truths, which he calls PQTI.

Molly: PQTI?

WM: He reasserts the Weimar tradition, which says that non-physical truths, including indexical and counterfactual and aesthetic truths, are not merely linguistic convention supervening upon the material but that they possess an ontological status of their own equivalent to that of physical substances. It says there is a counterfactual world where there exists a certain Molly the miraculous music-theorist who emulates the legendary Mary the super-scientist.

Molly: The legendary Mary? Should I be familiar with her?

WM: [*chuckles*] Yes, you should. Even though she was colour-blind, Mary was completely up-to-date with the science and all the empirical facts of light perception. She knew the physics of photons and she knew the neurobiology of cognition. But when, one day, an operation restored her colour vision and she experienced colour for the very first time, suddenly she realised, for all her knowledge of empirical science, she was unable to explain the 'feel' of the experience of colour, not without an eliminative reduction to quantum physics and wave function that refuted the validity of the experience in the first place.

Molly: Yes, reductionism implies eliminativism.

WM: Until Jackson came along and said materialism and the notion of a self-contained causal physicalism is insufficient to explain consciousness; it requires a further explanatory principle.

Molly: You're implying that, just as Mary the super-scientist was unable to explain her science until the intervention of a certain Jackson character, so Molly the miraculous music-theorist is unable to explain music without the intervention of the Weimar Museum.

WM: I hope I'm not sounding overly patronising.

Molly: [*chuckles*] No, not at all! Tell me the story of Molly, then?

WM: Molly was a super-advanced music theorist. She could explain a wide variety of theories of how music worked. She could explain tonality in Bach and Hummel, and the use of 12-tone

chromaticism in Liszt, but she couldn't explain why music was so important to her; she couldn't explain the *feel* of music aesthetics.

Molly: No, she couldn't!

WM: If there is a counterfactual world whereby there is a piece of music called Molly the Miraculous Music-Theorist and the linguistic statement that is this music is as scrutable to a particular set of core truths as statements concerning natural kinds, then this particular set of core truths reaches beyond the purely materialistic to incorporate something equitable to a form of proto-consciousness, or panpsychism.

Molly: Nothing you've said contradicts the basic premise of my original argument, my justification for open-mindedness.

WM: No, it doesn't. And nothing I've said pertaining to the Weimar heritage of music and art and literature, as well as its philosophy, or to a renewal of the analytic/synthetic divide between types of knowledge, or to a broadening of ontological commitment to include the veracity of aesthetic statements contradicts your basic premises either.

Molly: However, you're proposing that formal and aesthetic elements of music supervene upon the same scrutibility base and that therefore aesthetic expressions are as justifiable an expression of music as formal ones.

WM: The Weimar tradition asserts that aesthetic statements supervene on PQTI as much as statements pertaining to natural kinds; they both have a common base. Accordingly aesthetic judgments are as much an expression of core truths as judgements pertaining to formal matters.

Molly: And which in turn are all constituted in some equivalent of the doctrine of ideas.

WM: In the broadest sense, yes. Chalmers argues that contingent truth encompasses all epistemically-possible situations encompassed by PQTI-like constitutive statements and by an associated set of epistemic statements that are known *a priori*.

Molly: You believe with a high degree of credence that these constitutive statements can have ethical implications too.

WM: Yes, I do.

Molly: You haven't been convincing about this, even though you've mentioned various aspects of twentieth century history.

WM: The simultaneity of the Weimar tradition with Enlightenment principles is no coincidence. It's a tradition that asserts ethical values that are not merely deontological, like those of Kant, or utilitarian, but that are virtue-based. Although what those virtues are is, I think, a matter for another time. We'll need to finish soon.

Molly: Yes, however it's possible to acknowledge that if Schiller used a regulative approach to justify that aesthetics entails ethics, then the Weimar Musaeus has done the same.

WM: Yes, I have. Liszt did the same too and, as musicians, we follow in his footsteps, you and me. I trust that the counterfactual world whereby Ligeti's music can be expressed in terms of clouds and Liszt's in terms of classical ideals might be the actual world.

Molly: Well, thank you for your thoughts and your suggestions.

WM: Thank you for visiting Weimar.

The music:

Instrumentation

1 piccolo

2 flutes

2 oboes

1 cor anglais (F)

2 clarinets (Bb)

1 bass clarinet (Bb)

2 bassoons

1 contra bassoon

4 horns (F)

3 trumpets (C)

2 tenor trombones

1 bass trombone

1 tuba

1 timpani (5)

3 percussion

I) bass drum, tenor drum, tam-tam, hand crash-cymbals

II) pedal bass drum, pedal hi-hat, suspended and hand tambourines, cowbells, small suspended cymbal, triangle, snare drum, glockenspiel

III) large suspended cymbal, marimba, vibraphone

1 harp

strings

The score is written in C (with standard octave transpositions)

Duration: 15 minutes

Written during 2017

Molly, the Miraculous Music-Theorist

Philip Armstrong

Adagio ♩=68

Piccolo

Oboe 1

Oboe 2

Clarinet 1

Clarinet 2

Bass Clarinet

Horn 1

Horn 2

Horn 3

Horn 4

Trumpet 1

Trumpet 2

Trumpet 3

Trombone 1

Trombone 2

Bass Trombone

Tuba

Timpani

Tam-tam

Small Cymbal

Marimba

Harp

Adagio ♩=68

Violin I

Violin II

Violin II

Viola

Viola

Violoncello

Contrabass

10

16

Picc.

Fl. 1

Fl. 2

Ob. 1

Ob. 2

C. A.

Cl. 1

Cl. 2

B. Cl.

Bsn. 1

Bsn. 2

Cbsn.

Hn. 1

Hn. 2

Hn. 3

Hn. 4

Tpt. 1

Tpt. 2

Tpt. 3

Tbn. 1

Tbn. 2

B. Tbn.

Tba.

Timp.

B. D.

Mar.

Hp.

Vln. I

Vln II

Vln. II

Vla.

Vla.

Vc.

Cb.

Philip Armstrong: Molly, the Miraculous Music-Theorist

17

Picc.

Fl. 1

Fl. 2

Ob. 1

Ob. 2

C. A.

Cl. 1

Cl. 2

B. Cl.

Bsn. 1

Bsn. 2

Cbsn.

Hn. 1

Hn. 2

Hn. 3

Hn. 4

Tpt. 1

Tpt. 2

Tpt. 3

Tbn. 1

Tbn. 2

B. Tbn.

Tba.

Timp.

B. D.

Mar.

Hp.

Vln. I

Vln. II

Vln. II

Vla.

Vla.

Vc.

Cb.

24

26

Picc.

Fl. 1

Fl. 2

Ob. 1

Ob. 2

C. A.

Cl. 1

Cl. 2

B. Cl.

Bsn. 1

Bsn. 2

Cbsn.

Hn. 1

Hn. 2

Hn. 3

Hn. 4

Tpt. 1

Tpt. 2

Tpt. 3

Tbn. 1

Tbn. 2

B. Tbn.

Tba.

Timp.

B. D.

Cow B.

S. Cym.

Mar.

Hp.

Vln. I

Vln. II

Vln. II

Vla.

Vla.

Vc.

Cb.

mf

Philip Armstrong: Molly, the Miraculous Music-Theorist

42

Picc.

Fl. 1

Fl. 2

Ob. 1

Ob. 2

C. A.

Cl. 1

Cl. 2

B. Cl.

Bsn. 1

Bsn. 2

Cbsn.

Hn. 1

Hn. 2

Hn. 3

Hn. 4

Tpt. 1

Tpt. 2

Tpt. 3

Tbn. 1

Tbn. 2

B. Tbn.

Tba.

Timp.

B. D.

Hi hat

B. D.

Mar.

Hp.

Vln. I

Vln. II

Vln. II

Vla.

Vla.

Vc.

Cb.

47

Picc.

Fl. 1

Fl. 2

Ob. 1

Ob. 2

C. A.

Cl. 1

Cl. 2

B. Cl.

Bsn. 1

Bsn. 2

Cbsn.

Hn. 1

Hn. 2

Hn. 3

Hn. 4

Tpt. 1

Tpt. 2

Tpt. 3

Tbn. 1

Tbn. 2

B. Tbn.

Tba.

Timp.

B. D.

Hi hat

B. D.

Vibraphone

Vib.

Hp.

47

Vln. I

Vln. I

Vln. II

Vln. II

Vla.

Vla.

Vc.

Vc.

Cb.

51

59

[illegible]

65

Picc.

Fl. 1

Fl. 2

Ob. 1

Ob. 2

C. A.

Cl. 1

Cl. 2

B. Cl.

Bsn. 1

Bsn. 2

Cbsn.

Hn. 1

Hn. 2

Hn. 3

Hn. 4

Tpt. 1

Tpt. 2

Tpt. 3

Tbn. 1

Tbn. 2

B. Tbn.

Tba.

Timp.

B. D.

Hi hat

Cow B.

S. Cym.

B. D.

Vib.

Hp.

65

Vln. I

Vln. I

Vln. II

Vln. II

Vla.

Vla.

Vc.

Vc.

Cb.

69

Picc.

Fl. 1

Fl. 2

Ob. 1

Ob. 2

C. A.

Cl. 1

Cl. 2

B. Cl.

Bsn. 1

Bsn. 2

Cbsn.

Hn. 1

Hn. 2

Hn. 3

Hn. 4

Tpt. 1

Tpt. 2

Tpt. 3

Tbn. 1

Tbn. 2

B. Tbn.

Tba.

Timp.

Hp.

69

Vln. I

Vln. I

Vln. II

Vln. II

Vla.

Vla.

Vc.

Cb.

77 Andante $\text{♩}=80$

81

Ob. I

Tri.

Vib.

Hp.

Vln. I

Vln II

Vla.

Vc.

Cb.

p

Vibe

p



91

91

Glock.

Tamb.

Mar.

Vib.

Hp.

Vln. I

Vln II

Vla.

Vc.

Cb.

p

Sus. Tamborine

p

Glockenspiel

p

Mar.

p

p

5

112

Ob. I

Glock.

Tamb.

Tri.

Mar.

Hp.

117

Tri.

117

Vln. I

Vln II

Vla.

Vc.

Cb.

pizz.

p

mp

p

mp

pp

div.

pp

118

Ob. I

C. A.

Cl. 1

Cl. 2

B. Cl.

Glock.

Tri.

Mar.

Hp.

121

121

Vln. I

Vln II

Vla.

Vc.

Cb.

div.

pp

mp

pp

mp

pp

mp

unis.

p

p

[illegible]

129

Picc.

Fl. 1

Fl. 2

Ob. 1

Ob. 2

C. A.

Cl. 1

Cl. 2

B. Cl.

Bsn. 1

Bsn. 2

Cbsn.

Hn. 1

Hn. 2

Hn. 3

Hn. 4

Tpt. 1

Tpt. 2

Tpt. 3

Tbn. 1

Tbn. 2

B. Tbn.

Tba.

Timp.

T. D.

Glock.

Vib.

Hrp.

129

Vln. I

Vln. II

Vla.

Vc.

Cb.

139

144

148

Picc.

Fl. 1

Fl. 2

Ob. 1

Ob. 2

C. A.

Cl. 1

Cl. 2

B. Cl.

Bsn. 1

Bsn. 2

Cbsn.

Hn. 1

Hn. 2

Hn. 3

Hn. 4

Tpt. 1

Tpt. 2

Tpt. 3

Tbn. 1

Tbn. 2

B. Tbn.

Tba.

Timp.

B. D.

Glock.

Tri.

B. D.

Mar.

Hp.

Vln. I

Vln. II

Vla.

Vc.

Cb.

152

152

156

160

Picc.

Fl. 1

Fl. 2

Ob. 1

Ob. 2

C. A.

Cl. 1

Cl. 2

B. Cl.

Bsn. 1

Bsn. 2

Cbsn.

Hn. 1

Hn. 2

Hn. 3

Hn. 4

Tpt. 1

Tpt. 2

Tpt. 3

Tbn. 1

Tbn. 2

B. Tbn.

Tba.

Timp.

T. D.

Glock.

Mar.

Hp.

Vln. I

Vln. II

Vla.

Vc.

Vc.

Cb.

165

173

174

Picc. *f* *mp* *f* *mp* *f* *mp*

Fl. 1 *f* *mp* *f* *mp* *f* *mp*

Fl. 2 *f* *mp* *f* *mp* *f* *mp*

Ob. 1 *p* *p* *p*

Ob. 2 *p* *p* *p*

C. A. *p* *p* *p*

Cl. 1

Cl. 2

B. Cl.

Bsn. 1

Bsn. 2 *p* *p*

Cbsn.

Hn. 1

Hn. 2

Hn. 3

Hn. 4

Tpt. 1

Tpt. 2

Tpt. 3

Tbn. 1

Tbn. 2

B. Tbn.

Tba.

Timp.

Hp. *p*

Vln. I *p*

Vln. II

Vla.

Vc.

Cb.

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192

Picc.

Fl. 1

Fl. 2

Ob. 1

Ob. 2

C. A.

Cl. 1

Cl. 2

B. Cl.

Bsn. 1

Bsn. 2

Cbsn.

Hn. 1

Hn. 2

Hn. 3

Hn. 4

Tpt. 1

Tpt. 2

Tpt. 3

Tbn. 1

Tbn. 2

B. Tbn.

Tba.

Timp.

B. D.

Mar.

Hp.

194

Vln. I

Vln. II

Vla.

Vc.

Cb.

200

204

Picc.

Fl. 1

Fl. 2

Ob. 1

Ob. 2

C. A.

Cl. 1

Cl. 2

B. Cl.

Bsn. 1

Bsn. 2

Cbsn.

Hn. 1

Hn. 2

Hn. 3

Hn. 4

Tpt. 1

Tpt. 2

Tpt. 3

Tbn. 1

Tbn. 2

B. Tbn.

Tba.

Trmp.

B. D.

S. D.

B. D.

L. Cym.

Hp.

Vln. I

Vln. II

Vln. II

Vla.

Vc.

Vc.

Cb.

211

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215

Picc. *f* *mp* *f* *mp* *f* *mp*

Fl. 1 *f* *mp* *mf* *f* *p* *f* *mp* *f* *mp*

Fl. 2 *f* *mp* *mf* *f* *p* *f* *mp* *f* *mp*

Ob. 1 *f* *mp* *f* *mp* *f* *mp*

Ob. 2 *f* *mp* *f* *mp* *f* *mp*

C. A. *f* *mp* *p* *f* *mp* *f* *mp*

Cl. 1 *mp* *mf* *f* *p* *f* *mp* *f* *mp*

Cl. 2 *mp* *mf* *f* *p* *f* *mp* *f* *mp*

B. Cl. *mp* *mf* *f* *p* *f* *mp* *f* *mp*

Bsn. 1 *f* *mp* *p* *f* *mp* *f* *mp*

Bsn. 2 *f* *mp* *f* *mp* *f* *mp*

Cbsn. *f* *p* *f*

Hn. 1 *mp* *f* *mp*

Hn. 2 *mp* *f* *mp*

Hn. 3 *mp* *f* *p* *mp*

Hn. 4 *mp* *f* *p* *mp*

Tpt. 1 *mp*

Tpt. 2 *mp*

Tpt. 3 *mp*

Tbn. 1

Tbn. 2

B. Tbn.

Tba. *mp* *f*

Timp.

B. D. *mp*

Hi hat *p*

B. D. *p*

Hp. *p*

Vln. I *f* *p* *p* *f*

Vln. II *f* *p* *p* *f*

Vla. *f* *p* *p* *f*

Vc. *mp* *f* *mp* *mp* *mp* *f*

Cb. *mp* *f* *mp* *mp* *mp* *f*

225

227

Picc. *f* *mp* *f* *mp* *f*

Fl. 1 *f* *mp* *f* *mp* *f*

Fl. 2 *mp* *f* *mp* *f* *mp*

Ob. 1 *p* *p* *p*

Ob. 2 *p* *p* *p*

C. A. *p* *p* *p*

Cl. 1 *p* *p* *p*

Cl. 2 *p* *p* *p*

B. Cl. *p* *p* *p*

Bsn. 1 *p* *p* *p*

Bsn. 2 *p* *p* *p*

Cbsn. *p* *p* *p*

Hn. 1 *f*

Hn. 2 *f*

Hn. 3 *f*

Hn. 4 *f*

Tpt. 1 *f*

Tpt. 2 *f*

Tpt. 3 *f*

Tbn. 1 *f*

Tbn. 2 *f*

B. Tbn. *f*

Tba. *f*

Timp. *f*

S. D. *p* *f*

B. D. *f*

L. Cym. *f*

Hp. *f*

Vln. I *f*

Vln. II *f*

Vla. *f*

Vc. *f*

Cb. *f*

233

234

Picc.

Fl. 1

Fl. 2

Ob. 1

Ob. 2

C. A.

Cl. 1

Cl. 2

B. Cl.

Bsn. 1

Bsn. 2

Cbsn.

Hn. 1

Hn. 2

Hn. 3

Hn. 4

Tpt. 1

Tpt. 2

Tpt. 3

Tbn. 1

Tbn. 2

B. Tbn.

Tba.

Timp.

B. D.

S. D.

B. D.

L. Cym.

Hp.

234

Vln. I

Vln II

Vln. II

Vla.

Vc.

Vc.

Cb.

238

241

Picc.

Fl. 1

Fl. 2

Ob. 1

Ob. 2

C. A.

Cl. 1

Cl. 2

B. Cl.

Bsn. 1

Bsn. 2

Cbsn.

Hn. 1

Hn. 2

Hn. 3

Hn. 4

Tpt. 1

Tpt. 2

Tpt. 3

Tbn. 1

Tbn. 2

B. Tbn.

Tba.

Timp.

B. D.

S. D.

B. D.

L. Cym.

Hp.

Vln. I

Vln. II

Vln. II

Vla.

Vc.

Vc.

Cb.

244

Picc.

Fl. 1

Fl. 2

Ob. 1

Ob. 2

C. A.

Cl. 1

Cl. 2

B. Cl.

Bsn. 1

Bsn. 2

Cbsn.

Hn. 1

Hn. 2

Hn. 3

Hn. 4

Tpt. 1

Tpt. 2

Tpt. 3

Tbn. 1

Tbn. 2

3. Tbn.

Tba.

Timp.

Hi hat

B. D.

Vln. I

Vln. II

Vla.

Vc.

Cb.

249

Picc. *mp*

Fl. 1 *mp*

Fl. 2 *mp*

Ob. 1 *mp*

Ob. 2 *mp*

C. A. *mp*

Cl. 1 *mp*

Cl. 2 *mp*

B. Cl. *mp*

Bsn. 1 *mp*

Bsn. 2 *mp*

Cbsn. *mp*

Hn. 1 *mp* *f* *mp* *f* *mp* *f* *mp* *f*

Hn. 2 *mp* *f* *mp* *f* *mp* *f* *mp* *f*

Hn. 3 *mp* *f* *mp* *f* *mp* *f* *mp* *f*

Hn. 4 *mp* *f* *mp* *f* *mp* *f* *mp* *f*

Tpt. 1 *senza sord.* *mp* *f* *mp* *f* *f* *mp* *f* *mp* *f*

Tpt. 2 *senza sord.* *mp* *f* *mp* *f* *f* *mp* *f* *mp* *f*

Tpt. 3 *senza sord.* *mp* *f* *mp* *f* *f* *mp* *f* *mp* *f*

Tbn. 1 *f* *f* *f* *f* *f* *mp*

Tbn. 2 *f* *f* *f* *f* *f* *mp*

B. Tbn. *f* *f* *f* *f* *f* *mp*

Tba. *f* *f* *mp* *f* *mp* *f* *f* *mp*

Timp. *f* *f* *mp*

B. D. *p* *f* *p* *f*

S. D. *f* *p* *f* *p* *f*

B. D. *f*

L. Cym. *p* *f* *p* *f*

Vln. I *f*

Vln. II *f*

Vla. *f*

Vc. *f*

Cb. *f*

p *p* *p* *p* *mp* *f* *mp* *f* *mp* *f* *mp* *f* *mp* *f* *mp* *f*

255

Picc. *f* *mp* *f* *mp* *f* *mp*

Fl. 1 *f* *mp* *mf* *f* *p* *f* *mp* *f* *mp*

Fl. 2 *f* *mp* *mf* *f* *p* *f* *mp* *f* *mp*

Ob. 1 *mf* *f* *p* *f* *mp* *f* *mp* *f* *mp*

Ob. 2 *f* *mp* *mf* *f* *p* *f* *mp* *f* *mp*

C. A. *p* *f* *mp* *p* *f* *mp* *f* *mp*

Cl. 1 *mf* *f* *p* *f* *mp* *mf* *f* *p* *f* *mp* *f* *mp*

Cl. 2 *mf* *f* *p* *f* *mp* *mf* *f* *p* *f* *mp* *f* *mp*

B. Cl. *mf* *f* *p* *f* *mp* *mf* *f* *p* *f* *mp* *f* *mp*

Bsn. 1 *f* *p* *f* *mp* *p* *f* *mp* *f* *mp*

Bsn. 2 *f* *p* *f* *mp* *p* *f* *mp* *f* *mp*

Cbsn. *f* *p* *f* *p* *f*

Hn. 1 *mp* *f* *mp*

Hn. 2 *mp* *f* *mp*

Hn. 3 *mp* *f* *p* *mp*

Hn. 4 *mp* *f* *p* *mp*

Tpt. 1 *mp*

Tpt. 2 *mp*

Tpt. 3 *mp*

Tbn. 1

Tbn. 2

B. Tbn.

Tba. *mp* *f*

Timp.

B. D. *mp*

Hi hat *p*

B. D. *p*

Hp. *p*

Vln. I *mf* *p* *f* *p* *f*

Vln. II *mf* *p* *f* *p* *f*

Vla. *mf* *p* *f* *p* *f*

Vc. *f* *mp* *f* *mp* *f* *mp* *mf* *mp* *f*

Cb. *f* *mp* *f* *mp* *f* *mp* *mf* *mp* *f*

261

Picc.

Fl. 1

Fl. 2

Ob. 1

Ob. 2

C. A.

Cl. 1

Cl. 2

B. Cl.

Bsn. 1

Bsn. 2

Cbsn.

Hn. 1

Hn. 2

Hn. 3

Hn. 4

Tpt. 1

Tpt. 2

Tpt. 3

Tbn. 1

Tbn. 2

B. Tbn.

Tba.

Timp.

B. D.

C. Cym.

L. Cym.

Hp.

Vln. I

Vln. II

Vla.

Vc.

Cb.

266

Picc.

Fl. 1

Fl. 2

Ob. 1

Ob. 2

C. A.

Cl. 1

Cl. 2

B. Cl.

Bsn. 1

Bsn. 2

Cbsn.

Hn. 1

Hn. 2

Hn. 3

Hn. 4

Tpt. 1

Tpt. 2

Tpt. 3

Tbn. 1

Tbn. 2

B. Tbn.

Tba.

Timp.

B. D.

C. Cym.

L. Cym.

Hp.

Vln. I

Vln. II

Vla.

Vc.

Cb.

267

Picc. *mf* *f* *mf* *f* *mf* *f* *mf* *f*

Fl. 1 *mf* *f* *mf* *f* *mf* *f* *mf* *f*

Fl. 2 *mf* *f* *mf* *f* *mf* *f* *mf* *f*

Ob. 1 *p*

Ob. 2 *p*

C. A. *p*

Cl. 1

Cl. 2

B. Cl.

Bsn. 1

Bsn. 2 *p*

Cbsn.

Hn. 1

Hn. 2

Hn. 3

Hn. 4

Tpt. 1

Tpt. 2

Tpt. 3

Tbn. 1

Tbn. 2

B. Tbn.

Tba.

Timp.

C. Cym.

Hp.

Vln. I

Vln. II

Vla.

Vc.

Cb.

271

Picc. *f* *tr* *mf* *f* *tr* *mf* *f* *tr* *mf* *f*

Fl. 1 *f* *tr* *mf* *f* *tr* *mf* *f* *tr* *mf* *f*

Fl. 2 *f* *tr* *mf* *f* *tr* *mf* *f* *tr* *mf* *f*

Ob. 1 *f*

Ob. 2 *f*

C. A. *f*

Cl. 1 *f*

Cl. 2 *f*

B. Cl. *f*

Bsn. 1 *f*

Bsn. 2 *f*

Cbsn. *f*

Hn. 1

Hn. 2

Hn. 3

Hn. 4

Tpt. 1 *f*

Tpt. 2 *f*

Tpt. 3 *f*

Tbn. 1 *f*

Tbn. 2 *f*

B. Tbn. *f*

Tba. *f*

Timp.

C. Cym. Crash cymbal *f*

Tamb. Tamb. *f* *tr*

S. D. Snare *p* *f*

L. Cym. *f*

Hp. *f*

Vln. I

Vln. II

Vla. *f*

Vc. *f*

Cb. *f*

276

284

288

Picc. *p* *mf* *p* *mf* *p*

Fl. 1 *p* *mf* *p* *mf* *p*

Fl. 2 *p* *mf* *p* *mf* *p*

Ob. 1 *p* *mf* *p* *mf* *p*

Ob. 2 *p* *mf* *p* *mf* *p*

C. A. *p* *mf* *p* *mf* *p*

Cl. 1 *p* *mf* *p* *mf* *p*

Cl. 2 *p* *mf* *p* *mf* *p*

B. Cl. *p* *mf* *p* *mf* *p*

Bsn. 1 *p* *mf* *p* *mf* *p*

Bsn. 2 *p* *mf* *p* *mf* *p*

Cbsn. *p*

Hn. 1

Hn. 2

Hn. 3

Hn. 4

Tpt. 1

Tpt. 2

Tpt. 3

Tbn. 1

Tbn. 2

B. Tbn.

Tba.

Timp. *tr* *p*

B. D. *tr* *p*

T.-t. *tr* *p* *mf*

Mar. *p*

Hp. *p*

Vln. I *p* *mf*

Vln. II *p* *mf*

Vla. *p* *mf*

Vc. *p* *mf*

Cb. *p* *mf*

Weimar, March 2017