

Towards a Materialist Musical Expression

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Ming Tsao

“What percent of your composition is Arnold Schoenberg and what percent is Ming Tsao?” I was asked after the recent premiere of my *Triode Variations* which transcribes Schoenberg’s *Variations for Orchestra* in a radical way. What strikes me about this question is how much contemporary music still operates according to the marriage of Romantic sensibilities – such as authentic voice, personal sound world, original materials – with marketing strategies endemic to late Capitalism such as name identification and labels acting as “the *new* (fill in the blank)”. If one attends the several large contemporary music festivals today, one finds oneself in the box of a *capitalist realism* in which there seems to be no possibility of music outside of spectacle, fame, entertainment, loyalty, tradition, and the pernicious idea of “a freedom of choice” where there is something for everyone. Such a coupling of free-market capitalism with the habits of a well-worn humanism, that wants both spectacle and comfortable listening, creates an illusion of a democratic playing field that in reality is the opposite, where the rewards of festivals, prizes and careers become self-endorsing and hegemonic in that more marginalized voices are prevented from ever drifting into the centre.

The concerns that I have about this capitalist realism that dominates contemporary music today is that it privileges the subjective “I” that is often bounded by desire, appetite, greed, and all the other traits of a humanist orientation. The process of composing, I believe, is to move one closer to the world around us through a conception of agency and feeling that is *not* distinctly identified with a personal composing voice. Separating the compositional work from the intentions of a composer is essential toward appreciating what is discovered and invented by the composition itself. This implies that what is intrinsic to composition is the specific character of its discourse and its ability to innovate and experiment with the natural grain and rhythm of its language which is always apparent when sounds are brought together in temporal unfolding.

To compose means to bring into the same compositional space different materials that are energized through their proximity to one another and to confront these energies dialectically in the sense of a working encounter with their contradictory substances, an encounter which is open, experimental, and not in the service of a particular idea, concept, or goal. In my daily practice no single aspect of my material dominates but is rather a dialectical revealing of a possible truth in which its opposite is always present as an internal resistance. This can include negotiations between precise calculations applied within the context of rhythmic and metric grids, or by subjecting any number of decisions in each moment to chance procedures. Tensions between the creative drive for order and a sense of the chaotic and disintegrative aspects of musical material can open one’s daily experience of composing to something ungraspable and resistant to instrumental thinking.

Music composition has to do with geology and its sedimented layers of musical expression. Composers should examine music’s relation to language in order to break apart the rhetorical tropes that are so prevalent in the culture of today’s “new music” that is still dominated by Romantic sensibilities. Music can challenge a listener’s power of recognition not through unusual sounds or sound textures but through a

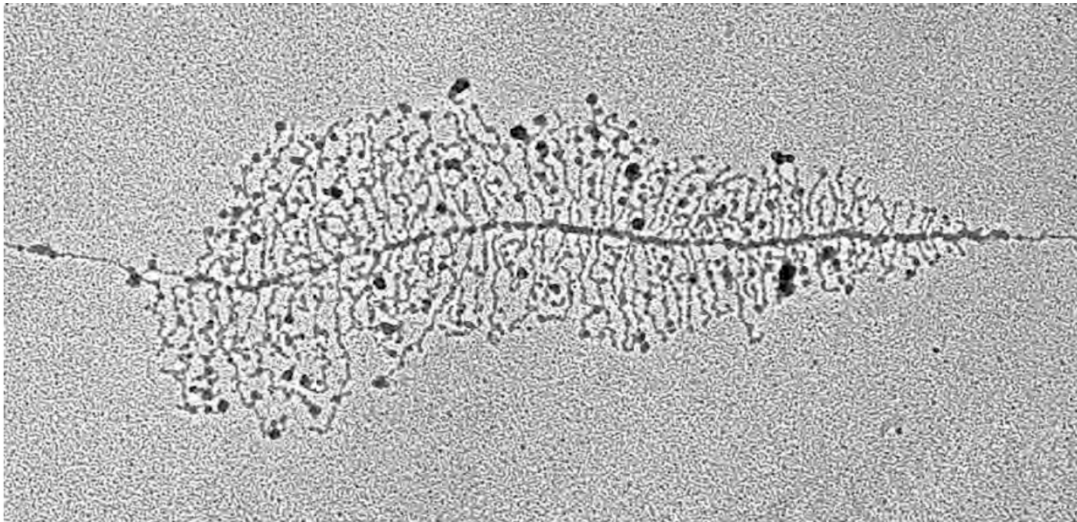
complication of its language that challenges music's "textual" qualities of phrasing and syntax, including its tonal patterns of cadence, tension and relaxation, rhythm and meter, and the expected hierarchical conditions under which these qualities occur. A truly radical musical language consists precisely of a de-hierarchization of musical syntactic structure so that listening becomes, under these transformed circumstances, a new experience.

The origin of music composition stems from its relationship to spoken or sung text (as with the rhythms and intonations of early Greek or Chinese music, for example), but the underlying nature of music composition can be found in mathematics, as was recognized in the "musica speculativa" of the Middle Ages. The language of mathematics can reveal in music a more fundamental *ontology* where expression has the capacity to achieve a lyricism beyond subjectivity as the desiring "I". Such a revelation can occur for a listener when music's textual aspects are broken and damaged and there is leakage between the compositional work and the larger world order.

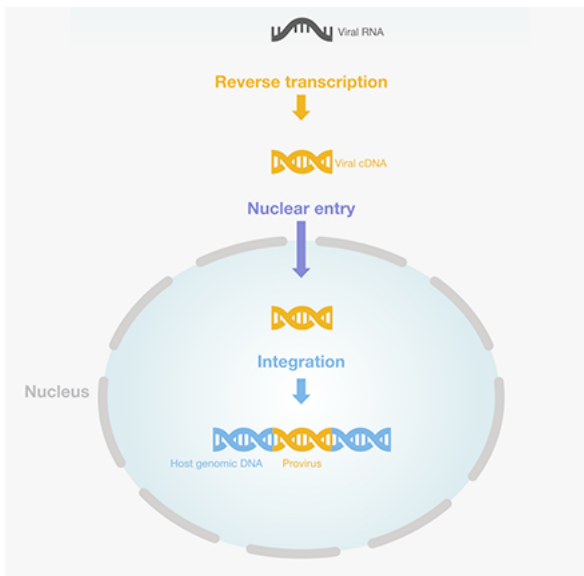
Music shares with poetry the essential parameters of rhythm and meter that can exert internal pressures on the musical material. Meter and rhythm have the potential to break music's textual aspects by becoming aggressively irregular in order to produce a contorted syntax and a compression of energy. By placing intense pressure on the sounds in this manner, music's sensual qualities are to be appreciated through its materiality and not through its language of expressive intent.

Such music can be experienced as "difficult" because with a materialist music difficulty in listening finds its counterpart in "resistance" on the part of the listener. Yet resistance reaffirms the ontological priority of the outside world, its conflicting and dynamic materiality that exceeds both expressive desire and conceptual thought. Difficulty in listening is tied to music's potential for complexity that can exceed human agency as if to reaffirm how things are.

Much of my material is derived from transcribing other music through the method of what biologists have called "reverse-transcriptions." Transcriptions came about through the central dogma of genetic mapping – the model of "unidirectional data flow" of DNA onto RNA – which was then challenged by the phenomenon of reverse-transcription (of RNA back onto DNA) where *noise* in the communication channel becomes part of the message and viruses can manifest. Reverse-transcription allows for noise in the transcription process to contaminate the musical materials, infecting their original musical language and thereby beginning a process of decoupling expression from intention.



The horizontal linear molecule is rDNA, the branches are rRNA molecules currently being transcribed.



Viral RNA is reverse-transcribed onto DNA and integrated into the host genomic DNA

I generally begin with a preexisting work – such as Schoenberg's *Variations* – as the primary text for the composition. This text is then destabilized by reverse-transcribing it through a rhythmic and metric grid that originates from a different source – such as J. H. Prynne's poem "Triodes" – which structurally transforms the topology of gestural materials from their shape of intent thereby placing pressure on the sounds as they no longer are in harmony with their original expressive purposes. Throughout this process, noise as a kind of virus is brought to the surface through an exaggeration of instrumental actions already latent in the original Schoenberg (such as *col legno battuta*, extreme bow pressure, overblowing and air sounds, multiphonics, etc.) that is then blended with quotations from other musical sources as a way of weaving together materials with radically different auras.

I reverse-transcribe various musical sources that lie outside of my immediate musical consciousness and whose language is fundamentally at odds with my own intentions. The sudden allusion to materials from other time periods through reverse-

transcription imposes shifts of scale which immediately disrupt any sense of personal, unmediated perception in which one expects stylistic continuity and the confidence of an authorial voice. These shifts of perception make a subject–position for listeners to orient themselves insecure and incomplete, thus providing a challenge to the humanist paradigm in which subject-positions are necessary for a listener to feel agency.



Guillaume Dufay: *Missa Se la face ay pale* (ca. 1450)

8. Tenor crecit in duplo

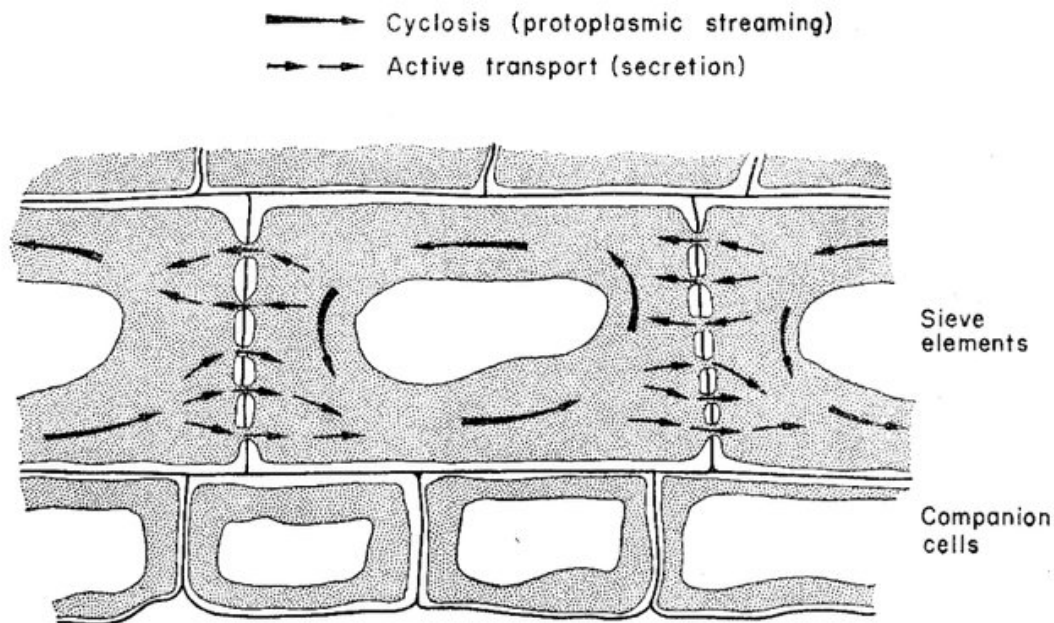
♩ = 52 ♩ = 63

S.
M.S.
A.
T.
Bar.
B.

Ming Tsao: *Das wassergewordene Kanonbuch* (Edition Peters, 2016 - 17). Reverse-transcription of the Dufay passage above for six singers.

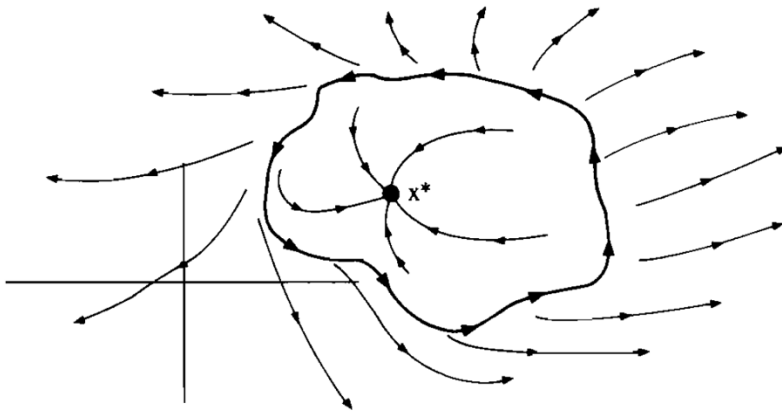
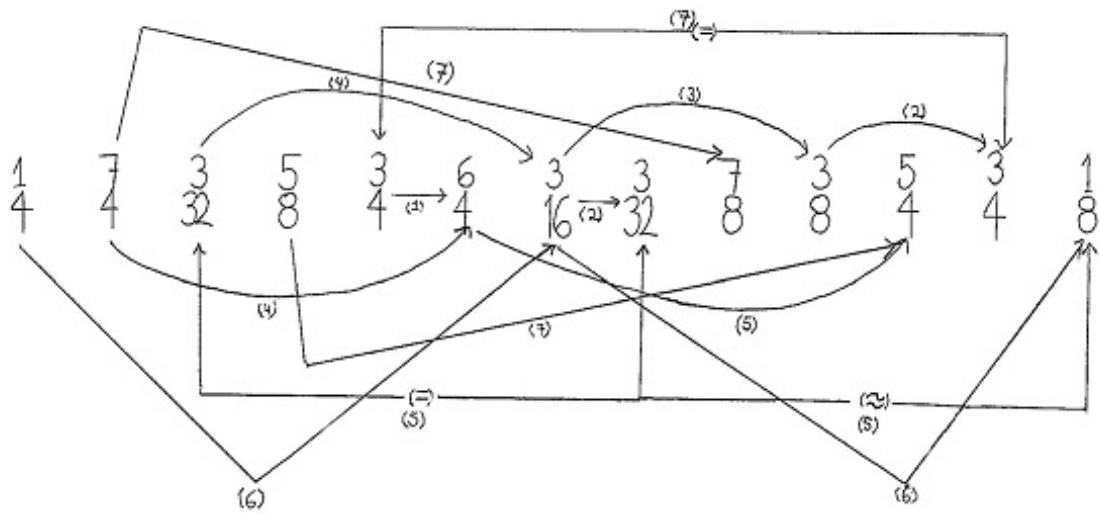
My music emerges from the contingencies that appear when one reverse-transcribes many layers of musical sources in counterpoint so that sounds begin to develop their own internal activity and separate themselves from my expressive intentionality as a composer. These organic networks can develop a different sense of language, one aware of relationships and connections that comprise sounds before they are recruited into the action of expressive intent. I try to stand outside the language of musical expression in order to understand its corruptions, and from its corruptions make some kind of temporary, working sense. In this way my compositions work against the idea

of an authorial voice intending to express, and act more as palimpsests in which many forms of expression have traces and contribute to the work's aura as something that lies outside of a single composing mind.



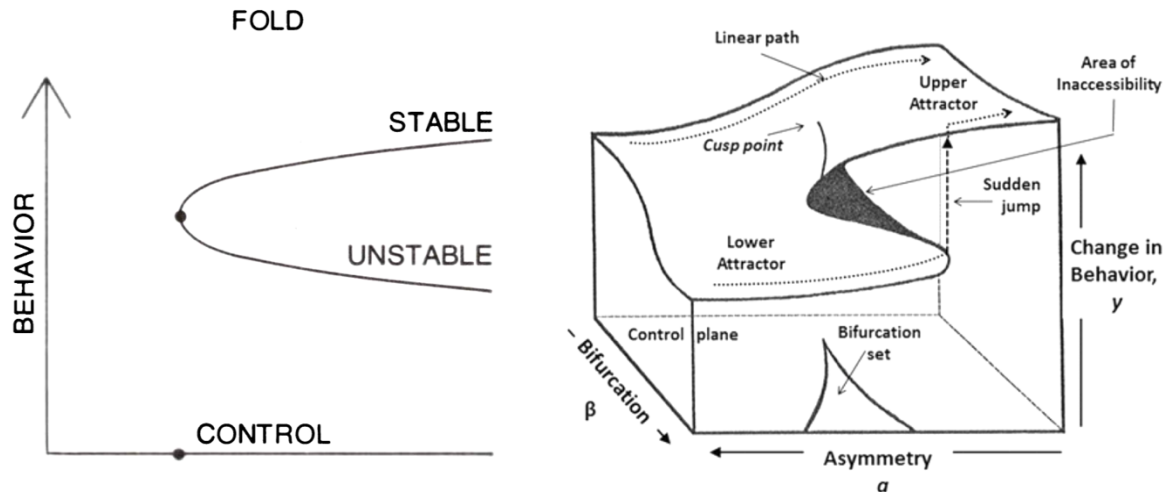
A different sense of language: cellular communication in plants where the arrows indicate the movement of protoplasm between cells.

It is through reverse-transcriptions that the *dialectic* qualities of music can be brought to bear. Electricity as energy can be managed on many different levels through the attraction and repulsion of their charges. Meter and rhythm in music can create a rhythmic grid that emphasizes the alternation between short and long measures, converging and diverging rhythmic impulses, so that "attractors" can emerge as a work-internal assembly of forces and a topology of possibilities. One can become sensitive to the energy inherent in the multiple "lines of force" of an attractor, each line suggesting its own direction, so that new perceptual spaces can be potentially opened for a listener. Polyphony, as signifying these textures and formalisms of multiplicity, resists conceptualization on the part of the listener and forces one to think dialectically by not filing sensations according to prior systems, which is a more genuine way of achieving freedom in the listening experience.



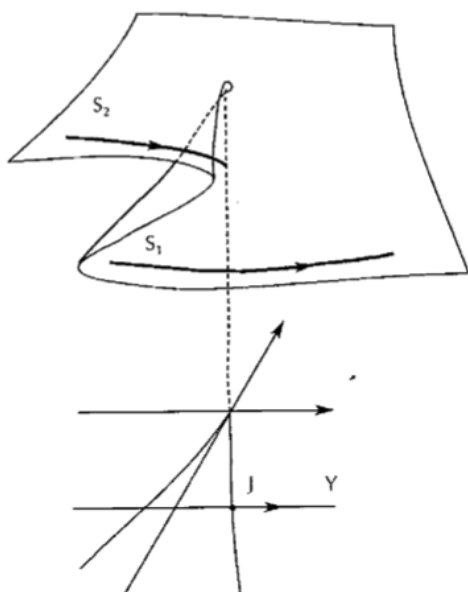
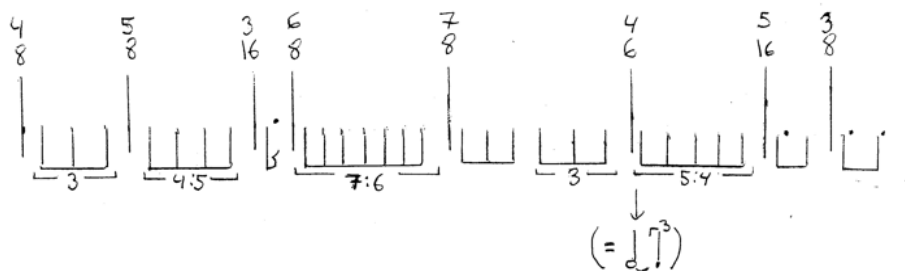
A topology of possibilities: the domain of attraction around a fixed point $X = 3/32$ in the meter scheme above.

With the presence of reverse-transcriptions from various musical sources, sudden shifts and changes are superimposed in a musical work that bring to the surface an inherent sense of contradiction in the materials as divergent and even conflicting lines of force. Lines of force can promote the onward-flowing projection of multiple, ambiguous and even contradictory perspectives. Such paradoxical perspectives can be represented in Catastrophe Theory by the concept of multiple attractors, creating zones of convergence and divergence from the transcribed musical material. In these zones, the stability of this material as expressive gestures is undermined by introducing opposing elements into its structure. I often use "irrational measures" (where the denominator is not an exponent of two), short measures, polyrhythmic groupings, or sudden tempo changes as local "catastrophes" to enact the constant slippage from what felt secure and to engage with a problematically intermediate position between stable and unstable forms of musical expression. Such instability that is built into the gestures prevents musical expression from having any *consistent* sense of first-person declamation or stable subject-position in which orientation and perspective can be maintained.



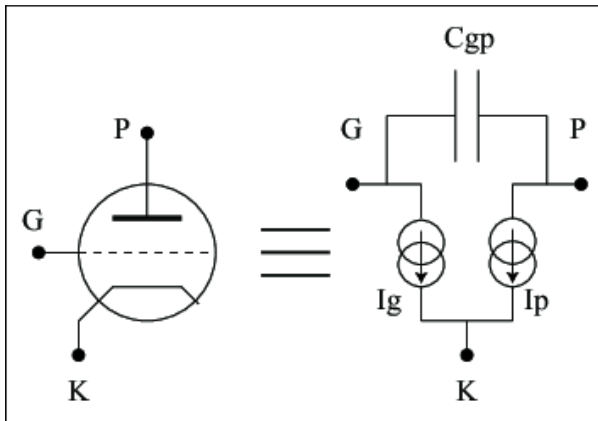
Catastrophe Theory as a model of musical expression where a musical figures or gestures can suddenly change between stable and unstable behavior.

The uses of irrational measure lengths, whose denominators cannot be expressed as powers of two (such as 3/10 or 5/24), as well as short measures whose denominator is different than its neighboring measures, are useful as local dissonances that open faults and cleavages within the textual domain of music. A sequence of proportional measures can create a morphogenetic field – as patterned rhythmic energy where short measures act as attractors – that draws energy towards its center. By keeping the denominators of sequential measures different (such as 16, 8, 32), it prevents a performer from subsuming the measures into a larger grouping pattern where a subject-position can be established for expressive purposes. The presence of irrational measures at the center of each sequence is a temporal discontinuity that can cause a catastrophic jump in the music's expressive flow. By projecting transcribed musical materials onto a destabilizing rhythmic and metric grid, a subject-position from which a declarative "I" can be established is made difficult, as the discontinuous transitions defeat any attempts for a listener to memorize connections and relationships central towards establishing perspective.



The irrational measure 4/6 in the meter scheme above acts as a discontinuous jump from one gestural state S_1 to another S_2 which makes the rhythmic grid unstable for clear, expressive musical intentions.

For *Triode Variations*, I reverse-transcribe Schoenberg's *Variations* into the context of electronic triodes where the transcription is affected by three simultaneous signals: meter, rhythm, and tempo. Such a transmission of three simultaneous signals informs the capacitance of the music. Sudden changes in voltage are applied to small fragments (one or two measures) of Schoenberg's original material so that electrical flow, resistance, and interference appear at every level of the variational structure. The electronic circuit of a triode keeps Schoenberg's music occasionally recognisable but also redirects and connects it to wider contexts that are quite remote. I use the poem "Triodes" by Prynne to generate the metric, rhythmic and tempo structure of my piece through its syllabic structure and line breaks, as well as degrees of indentation on the written page. As a general procedure, the number of syllables in each line determines the bar numerator (3, 4, 5, 6, 7, 11, etc.), accents, emphasis, pauses, and punctuation in each line determines the polyrhythmic grouping within each bar (7:9, 3:4, 5:6, etc.), and indentation of each line in the page determines the tempo (where further indented implies faster tempo). The denominator of a measure is freely chosen, usually through the roll of a die, that emphasize either size (long/short through values 4, 8, 16, 32) or irrationality (5, 10, 12, 7, etc.) in order to enact local catastrophes and attractors within the metric scheme.



Circuit diagram for a triode

The scores read like this: word ranking
 under the Sentences Act gives a choice
 of tempers, arbiter's freedom to set out
 where the deepest shadows shall fall.
 With blood on their hands is a terror attack
 on the Jewish state, Antrim west bank,
 lemon Kurds. Don't waver, in order
 to renounce the use of arms
 it is necessary to have weapons to hand
 and in hand, preferably
 bloodied beyond a doubt. The men
 who would use them must be free
 credibly to do so if not to do
 just that is to be a free choice.
 The crime of the rational script permits a script
 of crime in time to calibrate the forces
 of pent-up sentence: word by word.

J.H. Prynne, excerpt from "Triodes" (1999).



Some decisions are made by the roll of a die to separate them from my own desires.

The complexity of this circuit transmission situates the familiar world of Schoenberg's music into uninsured and insecure places. I achieve this transmission by displacing musical expression through transcribed shapes and gestures – in this case, from

Schoenberg's *Variations* – onto a rhythmic grid that is unstable with a continually shifting and unpredictable meter and tempo. Against this grid, the transcribed materials can never find a central point for intentionally clear expressions and declamations to manifest a stable “I”, particularly since tempo is never consistent for more than one or two measures of music. Yet the idea of triodes as a meeting place for varying levels of voltage and interference also invokes, in my work, echoes of Gérard Grisey's *Quatre chants pour franchir le seuil* suggesting that the short fragments of music are never enough to go on, to spin a web of associations and construct an argument or point of view. At times it only offers a threshold between the idea of holding on at the place where the force of all these musical gestures cannot be discounted, but equally, where they cannot be fixed, settled upon, and used for the immediacy of expression. With such a threshold, these gestures begin to undermine each other for the possibilities of a new form of musical expression in which the “speaking voice” as a marker of subjectivity is inherently complex and open to other forms of expression that challenge the dependence of lyricism on a humanist paradigm.

VARIATIONEN FÜR ORCHESTER

Aufführungsrecht vorbehalten
Droits d'exécution réservés

INTRODUKTION ARNOLD SCHOENBERG Op 31

Mäßig, ruhig $\text{♩} = 60$ ($\text{♩} = 120$) poco rit

Kl. 1.
Fg. 1.
Hfe.
I. Gg.
Br.
Kba.

Arnold Schoenberg: *Variationen für Orchester* (Universal Edition, 1926–28)

I ♩ = 80

III - D'après Erinna

Pendula. F.1731 en do

Mettez la soufflage bel

Dans le vi - de d'Er - ba

et

Sax. 1

Sax. 2

Vcl. 1

Vcl. 2

Viol. 1

Viol. 2

Clar. B. 1

Clar. B. 2

C. B.

Préc. 1

Tab. 1

Tab. 2

Préc. 3

alla corda (des coups d'archet sabbles)

CHROMES

CHROMES MÉTALLIQUES

p *f* *pp* *mf* *ppp* *mp* *mf* *pp* *mf* *pp* *mf* *ppp*

Gérard Grisey: *Quatre chants pour franchir le seuil* (Ricordi, 1997-98), Song III – “La mort de la voix”

Triode Variations

Ming Tsao
2020

The score is in C

$\text{♩} = 76$

Flute
Oboe
Bass Clarinet
Contrabass Clarinet
Contrabassoon
Horn
Trumpet
Trombone
Tuba
Percussion 1
Percussion 2
Piano
Electric Organ
Electric Guitar
Violin 1
Violin 2
Viola
Violoncello
Double Bass

34893

Ming Tsao: *Triode Variations* (Edition Peters, 2019 – 20). *Triode Variations* begins by reverse-transcribing Schoenberg's *Variations* with Grisey's "La mort de la voix" in superimposed counterpoint.

Refuse Collection, my composition for 18 musicians, reverse-transcribes Schoenberg's *Begleitungsmusik zu einer Lichtspielszene* through the rhythmic and metric structure of Prynne's poem "Refuse Collection" (2004). Under the pressure of the poem, my musical composition works against Schoenberg's original music by injecting a virus that disrupts the music's communicative and lyrical point of view. In biology, the virus integrates with the host cell's genome, replicating along with it but remaining dormant until the right sort of conditions emerge for it to reactivate. In my reverse-transcription, these conditions emerge through the rhythmic and metric violence enacted towards the music through Prynne's poem. This viral infection of Schoenberg's expressionist musical language under rhythmic and metric compositional conditions provides the basis for my composition.

Below is the syllabic structure of the first stanza of Prynne's poem and the resulting initial metric structure for *Refuse Collection*, where addition signs (+) indicate small breaks due to punctuation with occasional regroupings in order to generate more manageable metric lengths (such as $8 = 4 + 4$).

	Syllable Count per Line	Resulting Musical Meter
To a light led sole in pit of, this by slap-up	$8 + 4 = (4 + 4) + 4$	$4/4, 4/10, 4/3$
barter of an arm rest cap, on stirrup trade in	$7 + 5$	$7/20, [11/16], 5/10, [5/4]$
crawled to many bodies, uncounted. Talon up	$6 + 3 + 3$	$6/5, 3/16, [6/3], 3/5$
crude oil-for-food, incarnadine incarcerate, get	$4 + 8 + 1 = 4 + (4 + 4) + 1$	$4/12, 4/5, 4/4, 1/3$
foremost a track rocket, rapacious in heavy	$6 + 6$	$6/8, 6/8$
investment insert tool this way up. This way	$9 + 2$	$9/20, 2/5, [4/4]$
can it will you they took to fast immediate satis-	$14 = 7 * 2$	$7/12$
faction or slather, new slave run the chain store	$5 + 6$	$5/3, [5/16], 6/4$
enlisted, posture writhing what they just want	$3 + 8$	$6/5$ (doubling 3 and omitting 8)
we'll box tick that, nim nim. Camshot spoilers	$4 + 2 + 4 = 6 + 4$	$6/5, 4/12$
strap to high stakes head to the ground elated	11	$11/16$
detonator like a bear dancing stripped canny	$12 = 3 * 4$	$3/4$
sex romp, webbing taint. Confess sell out the	$2 + 3 + 5$	$2/3, 3/7, 5/8$
self input, yes rape yes village gunship by	$3 + 8 = 3 + (4 * 2)$	$3/12, 4/5$
apache rotor capital genital grant a seed trial	$16 = 4 * 4$	$4/5$
take a nap a twin.	5	$5/16$

Measures in square brackets are additional measures that lie outside the syllabic count of the poetic line that I added later for temporal reasons. The syllabic count generally informs the numerator of each measure and only occasionally the denominator. The denominator of each measure is generally freely chosen in such a way as to keep a musician counting *only* on each specific measure. Thus, rarely does the continuation of a beat continue across two or more measures such as $4/4$ followed by $3/4$. In such context, the denominator will be changed to enact a tempo change, for example, $4/4$ followed by $3/5$. Furthermore, when the denominator is the same for two or more successive measures, then the numerator is arranged in such a way as to prevent more global groupings. For example, $3/16$ followed by $5/16$ could easily be regrouped as $8/16$ or $4/8$. If the denominator is not changed, then another measure will be inserted between them such as $3/16, 4/16, 5/16$ thus preventing a more common metrical grouping to emerge. These changes force a musician to continually count and concentrate on the immediate measure at hand in order to prevent more global perspectives on the music's rhythm from materializing as a subject-position whereby a musician's concentration can relax. The formal structure of the poem interrupts the structure of Schoenberg's music in unpredictable ways, thereby preventing clear tension/relaxation relationships that mimic the rhythms and breathing of Schoenberg's expressive language. The result is a materialist music that refuses clear

subject-positions where musical expression is psychologized through the first person declarative "I".

Begleitungsmusik
zu einer Lichtspielszene

(Drohende Gefahr, Angst, Katastrophe)

Ausführendes
Verhältnis

Accompaniment to
a cinematographic scene
(threatening danger, fear, catastrophe)

Accompagnement d'une
scène cinématographique
(danger menaçant, peur, catastrophe)

Arnold Schönberg, op. 34

LANGSAM (♩=64) *poco rit..... a tempo* *poco rit..... a tempo*

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Arnold Schoenberg: *Begleitmusik zu einer Lichtspielszene* (Heinrichshofen, 1930)

The presence of the irrational measures produces continual, abrupt shifts in tempi and pacing that halts or deflects the forward movement of musical discourse by breaking off this movement before it can complete itself. Such ruptures in the continuity of discourse force upon us an awareness of the musical linguistic medium (gestures, phrasing, relations of antecedent/consequent) by denying a sense of completion and cadence. As with Prynne's poem where systematic spacing of the verse never coincides with syntactical cuts, the connections between the identifiable parts of musical phrases and gestures become difficult to grasp. My reverse-transcription of Schoenberg's music is composed of an interlacing of other quotations from various sources, often working anonymously below the work's surface which help to disrupt the lyrical intentions of Schoenberg's original, so that no consistent subject-position is ever maintained within the musical discourse (thus denying any gestures, phrasing,

and cadencing that come to represent clear emotional desires or psychological states in the music). My intention is to displace musical expression as something apart from individual desire and subjectivity, an expression that is materialist.

The rhythmic grid for my *Refuse Collection* is constructed from the meter scheme suggested by the poem. The following example shows the composite rhythmic sketch for the opening four measures in many stages of development:

Stages of derivation

1. $\frac{4}{4}$ | $\frac{4}{10}$ | $\frac{4}{3}$ | $\frac{7}{20}$
 Number of impulses: ④ | ④ | ④ | ④+③

2. $\frac{4}{4}$ | $\frac{4}{10}$ | $\frac{4}{3}$ | $\frac{7}{20}$
 ④ (line of force) → ⑤ → ⑥ → ⑦

3. $\frac{4}{4}$ | $\frac{4}{10}$ | $\frac{4}{3}$ | $\frac{7}{20}$
 ⑧ → ⑨ → ⑩ → ⑪

4. $\frac{4}{4}$ | $\frac{4}{10}$ | $\frac{4}{3}$ | $\frac{7}{20}$
 ⑬ → ⑮ → ⑯ → ⑱

5. $\frac{4}{4}$ | $\frac{4}{10}$ | $\frac{4}{3}$ | $\frac{7}{20}$
 ⑬ → ⑮ → ⑯ → ⑱

6. $\frac{4}{4}$ | $\frac{4}{10}$ | $\frac{4}{3}$ | $\frac{7}{20}$
 ⑬ → ⑮ → ⑯ → ⑱

7. $\frac{4}{4}$ | $\frac{4}{10}$ | $\frac{4}{3}$ | $\frac{7}{20}$
 Vin. I + Cello | Bass | Vin. I | Piano | C. Bssn | Vin. I | Flute
 ⑬ | ⑮ | ⑯ | ⑱

Rhythmic Sketch for the first four measures of my *Refuse Collection* based on the first four-syllable count of Prynne's poem "Refuse Collection."

Refuse Collection

Ming Tsao
2017

The score is in C

$\text{♩} = 76$

Ming Tsao, *Refuse Collection* (Edition Peters, 2017). A reverse-transcription of the first four measures of Schoenberg's *Begleitmusik* using the final stage of derivation from the rhythmic grid in the example above.

By decoupling musical expression from its traditional humanist paradigm, I hope to sensitize a listener to become more mindful of our history, environment, and the organic connection of music to world and to nature. The goal is not to avoid expression or to hide expression under the surface of non-traditional materials such as noise or electronics, but to reveal a material basis to musical expression once musical materials are removed from their original expressive intentions. Reverse-transcriptions allow me to untangle various music from their original coupling with subjectivity, such as intention, desire, and expression, and thereby attempt to remove it from a psychology of interpretation. I place my own role as a composer not in the transcribed materials which come from other sources but in their relations and how this vast amount of difference is counterpointed together into a polyphony that exceeds the comforts of clear subject-positions that help to steer our listening. Without these anchors, listening has the potential to engage a listener more openly without losing the potential complexity of the listening experience. A materialist musical expression brings a listener closer to the complexity of the world around them so that a listener's position is not within the world but of the world.

What percent of *Triode Variations* is Arnold Schoenberg and what percent is Ming Tsao? It depends on what you think music composition could be.