

My Musical Mind

How does the mind turn changing sound into a coherent experience?

Amorphous

String Quartet No. 1

2024

Two violins, viola and cello

How much can change while something still seems to remain?

These three works ask how separate voices, uncertain sources and spoken phrases take form in listening. Musical Intelligence carries that compositional curiosity into an inspectable architecture for hypotheses about perception.

PROGRAMME NOTE

In Amorphous, I imagine the string quartet as a material whose shape never settles. Four players contribute to a shared sonority, yet their individual gestures keep disturbing its outline. The work inhabits the tension between a collective body of sound and the voices moving within it.

The bow gives this tension a physical vocabulary. Contact moves toward the fingerboard, onto the bridge and behind it; changes of pressure alter the grain of the sound. Glissandi, harmonics and microtonal inflections extend the play of unstable edges. Pitch, friction and resonance become materials through which the quartet can gather, fray and gather again.

Form emerges through changing relations between the players. More active writing gives way to sustained passages; coordinated gestures coexist with parts that move independently. I am interested in how attention might pass between an individual line and the ensemble's larger shape: how a voice recedes into a texture, and how a small difference might bring it into focus again.

Amorphous grows from a fascination with how much can change while something still seems to remain. The score holds that question in the physical actions of four musicians; listening gives it another life.

FROM THE COMPOSER

From motion to a sustained field.

Three annotations trace how rhythmic activity, sustained upper voices and continuing bow motion coexist within one system.

SCORE P. 2 / UPPER SYSTEM

THE APPROACH TO C

The image displays a musical score for 'Amorphous', specifically the upper system of page 2. It consists of four staves, each with its own set of annotations and dynamic markings. The first staff (Violin I) features a beamed figure with annotations (I), (II), (III), and (IV), and dynamic markings ranging from *mf* to *pp*. The second staff (Violin II) has annotations (II), (III), and (IV), with dynamics from *p* to *ppp*. The third staff (Violin III) includes annotations (II), (III), and (IV), with dynamics from *p* to *ppp*. The fourth staff (Cello) has annotations (III), (IV), and (IV) (vertical bowing), with dynamics from *mf* to *pp*. A large bracket labeled 'C' spans the right side of the score, indicating a specific section. Three numbered annotations (1, 2, 3) are placed on the score to highlight specific musical features: (1) 'Active subdivision' on the first staff, (2) 'Sustained upper voices' on the second and third staves, and (3) 'Motion within the field' on the fourth staff. The score also includes various dynamic markings such as *mf*, *p*, *mp*, *pp*, *ppp*, *f*, and *ppp* Stabile, as well as performance instructions like 's.t. No vib.' and 'm.s.p. No vib.'.

1 Active subdivision

Violin II's beamed figure divides the span into rapid events, while the neighbouring parts follow different rhythmic contours.

2 Sustained upper voices

Around C, the upper three parts settle into tied, sustained writing marked "Stabile" and "No vib." Their arrivals are staggered.

3 Motion within the field

The cello retains "vertical bowing" beneath the held upper parts: a distinct physical gesture continues within the sustained texture.

Listening question: can the texture feel unified while an individual gesture remains traceable?

Coloured marks are editorial annotations. Original score notation is preserved.

How does a sound hold together?

A quartet offers a precise starting point for auditory science: the physical sources are known, while their perceived organization can change. Research distinguishes the blending of simultaneous sounds from the linking of events over time; orchestral experiments show that timbral differences can help listeners hear separate streams. A shared musical gesture and a single perceptual source are therefore different questions. [1, 2]

Time is part of this problem. In controlled tone-detection experiments, temporal coherence and predictability in preceding sounds both influenced subsequent grouping. [3] Amorphous brings related questions into musical practice through overlapping actions, coordinated changes and sustained passages. Whether those written relations produce corresponding acoustic cues and perceptual effects requires a recording and listener measurements.

Neural representation adds another level. In a human fMRI study, variations in pitch and spectral brightness engaged largely overlapping auditory cortical regions, while multivoxel response patterns distinguished the conditions in most participants. [4] This offers a specific perspective on how different sound features can be represented within overlapping cortical territory. It does not assign a brain response to the quartet.

The next question is experimentally tractable: where do listeners report a unified texture, and where can they accurately follow a cued part? Measuring those outcomes separately would connect the compositional problem to perception. The score supplies structured contrasts; observation would establish what listeners actually hear.

SELECTED RESEARCH

01

McAdams, Goodchild & Soden · 2022
A taxonomy of orchestral grouping effects.
Music Theory Online, 28(3).

02

Fischer et al. · 2021
Instrument timbre enhances perceptual segregation in orchestral music.
Music Perception, 38, 473-498.

03

Sollini et al. · 2022
Temporal coherence, predictability and the build-up of auditory grouping.
Scientific Reports, 12, 14493.

04

Allen et al. · 2017
Representations of pitch and timbre variation in human auditory cortex.
Journal of Neuroscience, 37, 1284-1293.

05

Adler, Hasegawa & Rosner · 2026
Grouping and integration in the CORE ensemble.
Revue musicale OICRM, 13(1), 137-162.

Composition and listening research. Programme notes and scientific context prepared for this portfolio, October 2026.

This is a retrospective scientific perspective on the composition. No behavioural or neural measurements of Amorphous are reported.

Enigma in the Veil

Segment 1 (Eclipse)

2024

Orchestra and electronics

*When does a sound
cease to reveal
where it came from?*

PROGRAMME NOTE

In Enigma in the Veil, I begin with the recognizability of instrumental sound and gradually draw it into a less certain world. Orchestral materials and electronic transformations occupy the same space. Their meeting becomes the substance of the piece: a sound can retain a trace of its origin even as its surface changes.

The subtitle Eclipse gives this movement an image: one layer moves across another, concealing some features and revealing others. Recorded instruments and synthesized textures reshape resonance, density and motion. The orchestra persists where its outlines become difficult to follow.

The original portfolio places a spectrogram beside this account. It offers a second way of attending to the work: sustained bands, brief vertical events and crowded regions leave different traces across frequency and time. These traces make the changing material visible while leaving the experience of its continuity open to listening.

I am drawn to the moment when a listener revises an explanation of a sound. A familiar instrument becomes an unfamiliar texture. Recognition itself, including its uncertainties, enters the musical form.

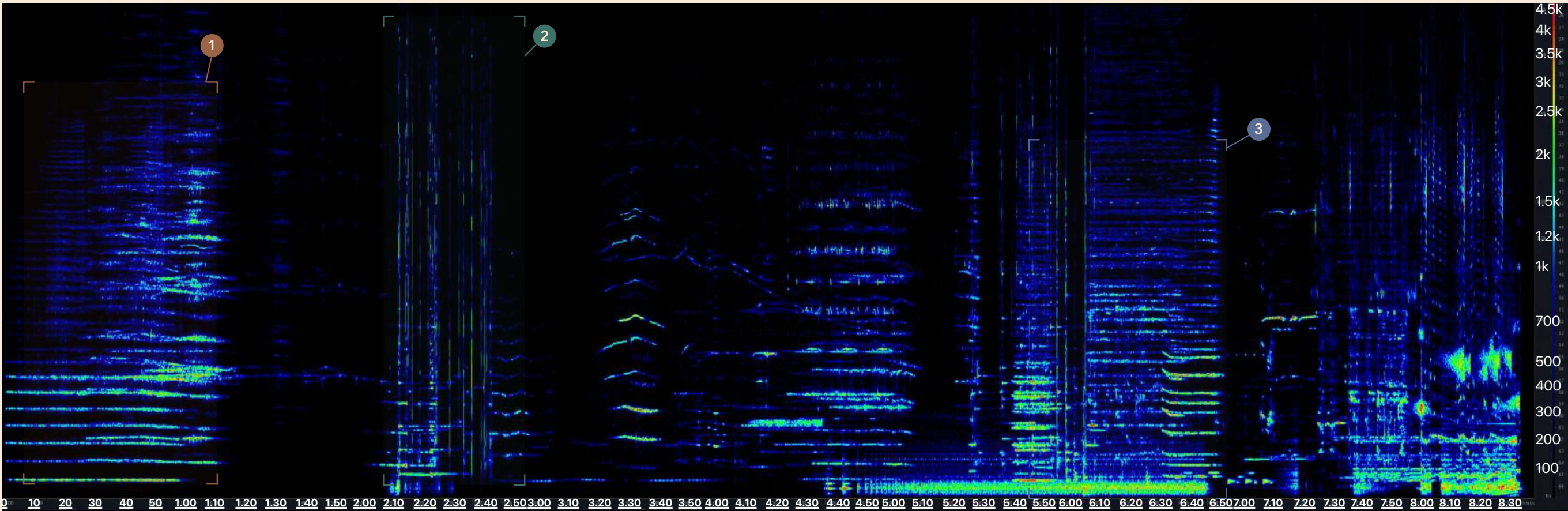
FROM THE COMPOSER

From a source to a shifting texture.

Three marks follow contrasting shapes in the original spectrogram: persistent bands, brief vertical events and a layered field.

ORIGINAL PORTFOLIO P. 4 / SPECTROGRAM DETAIL

FULL TIME SPAN · LOWER FREQUENCIES



1 Persistent bands

Early horizontal bands retain a stable outline while their intensity varies. They offer a visual point of reference for following continuity.

2 Brief vertical events

Near 2:10, narrow vertical structures spread across many displayed frequencies. Their geometry contrasts with the earlier sustained bands.

3 A layered field

Later banded detail and brief events sit above a persistent low-frequency region. The visible texture holds several time scales together.

Listening question: where does a change in texture also change what seems to be making the sound?

Frequency-cropped archival display; original time and frequency labels retained. Marks describe visible structure, not identified instruments.

AMAÇ ERDEM

What makes a source recognizable?

Enigma separates two questions that can be easy to conflate: how a sound changes, and what a listener thinks produced it. Timbre contributes to source identity, but a description of timbral quality and an identification of a source are different judgements. That distinction gives the acoustic-electronic transition a precise perceptual focus. [1]

Time changes the available evidence. In sound-texture experiments, longer excerpts improved discrimination between texture categories while making different examples of the same texture harder to distinguish. [2] This suggests a useful contrast for Enigma: attending to an individual event or to the texture formed by many events. The piece's changing orchestration would need to be tested in its own right.

Neural evidence adds a further distinction. Pitch and brightness variation produced overlapping auditory-cortical responses, while multivoxel patterns distinguished the conditions in most participants. [3] Such findings motivate questions about representation; a spectrogram alone cannot specify the neural organization of this composition.

Musical Intelligence separates acoustic features, temporal operations and listening-related calculations. [4] I would use that architecture to compare short-lived changes with longer texture summaries, then relate selected outputs to listeners' source judgements and confidence. The first step is an aligned recording and source-track archive. A compact acoustic baseline would establish whether the additional temporal account helps explain when recognition changes.

A prospective connection to Musical Intelligence. The archival spectrogram has not been recomputed here; no source-classification, behavioural or neural results for Enigma are reported.

SELECTED RESEARCH

01

Siedenburg & McAdams · 2017
Four Distinctions for the Auditory “Wastebasket” of Timbre.
Frontiers in Psychology, 8, 1747.

02

McDermott, Schemitsch & Simoncelli · 2013
Summary statistics in auditory perception.
Nature Neuroscience, 16, 493–498.

03

Allen et al. · 2017
Representations of Pitch and Timbre Variation in Human Auditory Cortex.
Journal of Neuroscience, 37, 1284–1293.

04

Erdem · 2026
Musical Intelligence: A Glass-Box Architecture for Computational Models of Music Listening.
Research manuscript, 8 October 2026.

Composition and listening research. Programme notes and scientific context prepared for this portfolio, October 2026.

An Unquiet Mind

2023

Instrumental ensemble
with spoken text

*A phrase becomes
part of a larger
musical texture.*

PROGRAMME NOTE

An Unquiet Mind brings spoken phrases into the changing texture of a chamber ensemble. Speech and instruments share the same musical time: an utterance can emerge from sustained sound, interrupt a gesture or pass between performers. Rhythm, register and timbre shape the relation between each part and the ensemble.

The score moves between long tones, brief articulations and more densely coordinated passages. Changes in bow contact, dynamics and rhythmic subdivision alter how the parts combine. Spoken material adds another layer of pacing and articulation, with its entrances written into the ensemble.

The selected system layers spoken phrases in the clarinet, saxophone and trombone parts over active strings. The phrases enter at different times before aligning near the end; vibraphone and timpani give the passage changing percussion colours. Speech becomes part of the ensemble's rhythmic and textural activity.

The central compositional question is how continuity emerges from distinct kinds of activity. A spoken phrase, a wind swell and a recurring percussion figure can remain identifiable while contributing to a larger musical shape. Attention can move between exposed details, a full tutti and the quieter texture that follows.

FROM THE COMPOSER

Spoken voices within the ensemble.

The complete chamber system preserves the overlapping spoken texts together with the instrumental writing.

SCORE P. 7 / COMPLETE CHAMBER ENSEMBLE

MEASURES 55-60

The musical score for measures 55-60 of 'An Unquiet Mind' is presented in a multi-staff format. The staves include: Clarinet (Cl.), Voice (multiple parts), Baritone Saxophone (Bar. Sax.), Trombone (Tbn.), Voice (multiple parts), Vibraphone (Vib.), Timpani (Timp.), Voice (multiple parts), Violin I (Vl.), Voice (multiple parts), Viola (Via.), Voice (multiple parts), Violoncello (Vc.), Voice (multiple parts), and Contrabass (Cb.). The score features overlapping spoken texts for the voice parts, which are highlighted in a light orange background. The instrumental parts are written in various musical notations, including notes, rests, and dynamic markings. The measures are numbered 55 through 60. The score is annotated with various musical terms and dynamics, such as *p*, *mf*, *f*, *pp*, *mp*, *ppp*, *ord*, *arco*, *sul pont.*, *sul tasto*, *O.P.*, and *N.P.*. The text is in both English and Turkish, reflecting the bilingual nature of the work.

All instrumental and voice staves are retained, including the original spoken texts. Only blank outer margins are trimmed.

AMAÇ ERDEM

1 Overlapping speech

Clarinet, saxophone and trombone voice lines exchange the same phrases in different orders. Their entries overlap across bars 57-59, then arrive together in bar 60.

2 Moving strings

All four strings remain active beneath the spoken phrases. Sustained tones alternate with short gestures, changing bow contact and varied rhythmic subdivisions.

3 Percussion transition

Vibraphone punctuates the early bars; timpani enters near the end and continues in triplets. This transfer helps carry the passage toward more coordinated activity.

How do spoken phrases and instrumental gestures form a shared musical texture?

How do speech and sound form a whole?

The score brings linguistic meaning and musical organization into the same interval of time. Repetition can change how speech is heard: in the speech-to-song illusion, repeating an unchanged phrase shifted judgements toward singing. [1] That result gives a clear example of listening history changing a percept; it does not establish that An Unquiet Mind produces the same illusion.

Neural work using the speech-to-song contrast further connects perceptual interpretation with pitch-sensitive auditory processing. [2] Here the compositional question is broader: whether attention follows the words, their vocal contours, a sustained instrumental field, or a relationship among them. These alternatives suggest separable listening judgements.

Density, dynamics and articulation invite questions about musical tension. Research distinguishes several dimensions of reported musical feeling and their neural associations. [3] Here, listeners' ratings would need to be aligned to a recording; notation alone does not establish a perceptual effect.

Within Musical Intelligence, I would begin with acoustic change and temporal persistence, then test their relation to reported continuity and tension. [4] Speech comprehension and text meaning would be recorded separately. Comparing matched passages with and without intelligible text could help distinguish contributions from the words and the ensemble, with acoustic differences controlled. Across these three works, MI offers a way to make my questions about listening explicit and revise them against observation.

Prospective questions for listening research. No listener measurements, brain recordings or MI analyses of this composition are reported in this edition.

SELECTED RESEARCH

01

Deutsch, Henthorn & Lapidis · 2011
Illusory transformation from speech to song.
JASA, 129, 2245-2252.

02

Tierney et al. · 2013
Speech versus song: multiple pitch-sensitive areas revealed by a naturally occurring musical illusion.
Cerebral Cortex, 23, 249-254.

03

Trost et al. · 2012
Mapping aesthetic musical emotions in the brain.
Cerebral Cortex, 22, 2769-2783.

04

Erdem · 2026
Musical Intelligence: A Glass-Box Architecture for Computational Models of Music Listening.
Research manuscript, 8 October 2026.

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