PORTFOLIO 2021–2026

ILYAS BAQA

Tuğan İlyas Anlıak
Transdisciplinary Artist & Engineer · Berlin
Biosensing · motion and face tracking · kinetics · soft robotics

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ABOUT

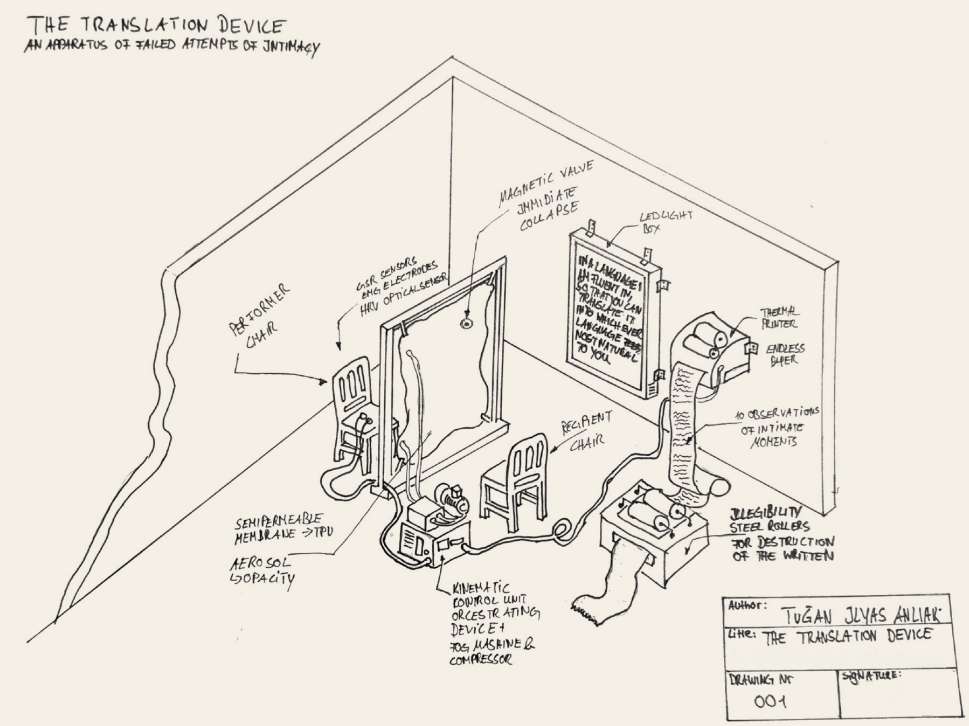
Ilyas Baqa

Tuğan İlyas Anlıak · Transdisciplinary Artist & Engineer

Ilyas Baqa (Tuğan İlyas Anlıak) is an artist and engineer who approaches art as a researcher and seeker: less as someone who knows, more as someone who searches. He turns the instruments of measurement (biosensors, motion capture, pneumatics, soft robotics) toward what they cannot reach: the felt inside of a moment. Each work is another attempt to translate what cannot be translated one to one, and the failure belongs to the work. What a measurement captures says more about the one who measures than about the one measured.

The work runs in two series. Attempts (Series I) turns inward: touch, arousal, a heartbeat, a voice are carried into mechanics, data and space, and each translation breaks somewhere. What interests him is what that break sets free. Hesap (Series II) turns the same instruments outward, onto algorithms that score, count and categorise bodies. There the question is no longer whether the translation succeeds, but who is counting and whom the number serves. Between the two stands one question: who sets the threshold, and what does it reveal about them?

How to read the work pages: each work lists what the instrument measured, what the artist set (thresholds, parameters, mappings), and what was not captured.





SERIES I · ATTEMPTS · ATTEMPT 03 · MAIN PROJECT

The Translation Device

An Apparatus of Failed Attempts of Intimacy

Since 2026 · in development · Kinetic spatial installation & biosensing performance

Two chairs, a membrane between them. Only one body is measured; the translation runs in one direction.

Only the performer is connected to the apparatus via sensors (GSR, EMG, HRV); the translation runs in one direction. The presence of the other person still writes itself into the measurement. Bodily states stretch a transparent membrane in a steel frame, a magnetic valve makes it collapse abruptly, fog turns it opaque.

MEASURED	Skin conductance, muscle tension and heart rate variability of the performer
SET	How bodily states tension the membrane, and when the valve lets it collapse
NOT CAPTURED	The other person. They see the tension but cannot answer.

MATERIAL	Transparent membrane, steel frame
TECHNOLOGY	Biosensing: GSR sensors, EMG electrodes, optical HRV sensor; control unit with microcontroller; pneumatics with compressor & magnetic valve; fog machine; LED light box; thermal printer; steel roller mechanism



SERIES I · ATTEMPTS · ATTEMPT 03.1

Obedient Tremor

an involuntary motor response

2026 · Performance study · 1:10 prototype of The Translation Device

A performance study at night. Lit from behind in deep red, the membrane hangs in the dark. The artist, in a suit jacket and a white collarless shirt, kneels before an open circuit board and a small electric motor. With slow gestures of devotion he presses a button, and a cable draws the membrane taut.

MEASURED

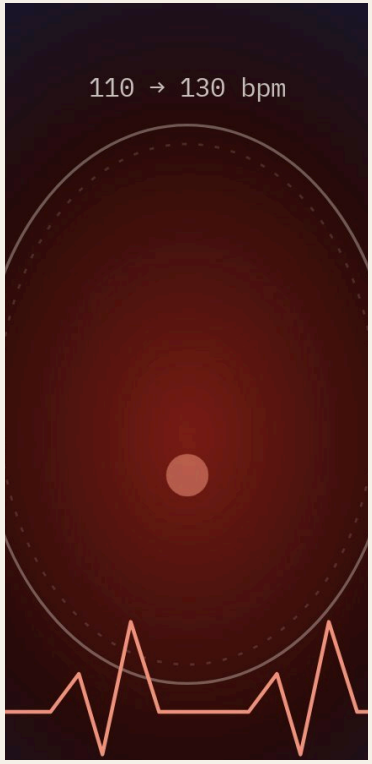
Nothing. A button press takes the place of the sensors.

SET

Button press: the membrane tensions. Valve: the air escapes.

NOT CAPTURED

The trembling of a nervous system that cannot be commanded



SERIES I · ATTEMPTS · ATTEMPT 03.2

Kalp / Gönül

a study in measuring the heart that loves

2026 · Feasibility study for The Translation Device · Biosensing, mirror

The instrument shows that the heart responds, never what it responds to.

He sits before a mirror that is not quite clean. A sensor at his wrist sends his pulse to a microcontroller, and a red light held before his chest beats with his heart across his face.

MEASURED

Pulse and heart rate variability at the wrist

SET

One beat, one flash of red light

NOT CAPTURED

What the heart is responding to. Body signals are non-specific: the same pulse can be joy, fear or exertion.



SERIES I · ATTEMPTS · ATTEMPT 03.3

sil baştan

residual evidence

2026 · Feasibility study for The Translation Device · Voice, projection, face tracking, kinetic membrane, light

Erasure too leaves residues.

He stands in a room lit red. A recording made on a ferry crossing the Bosphorus (his own voice, wind, engine, water, seagulls) is cut into a poem and played back to the body that once spoke it. Beside him, a technical construction drawing is projected onto the wall: a tulip and two carnations after an İznik motif, measured and dimensioned like an engineering plan. Every line that hurts writes a crack into it. Above him hangs the membrane of The Translation Device, moved by stepper motors, a heartbeat of light inside it.

MEASURED

Tilting, turning and nodding of the head

SET

Everything else: the score, the cracks, the values beside each verse, light and motors

NOT CAPTURED

What the voice does to the body that once spoke it



SERIES I · ATTEMPTS · ATTEMPT 03.4

olsaydı

The encounter before the printer

2026 · Interactive work · Simulated annealing

Interactive work: 99 moments of a short encounter, searched by simulated annealing for the world in which it would have worked out; study for the thermal printer of The Translation Device

MEASURED

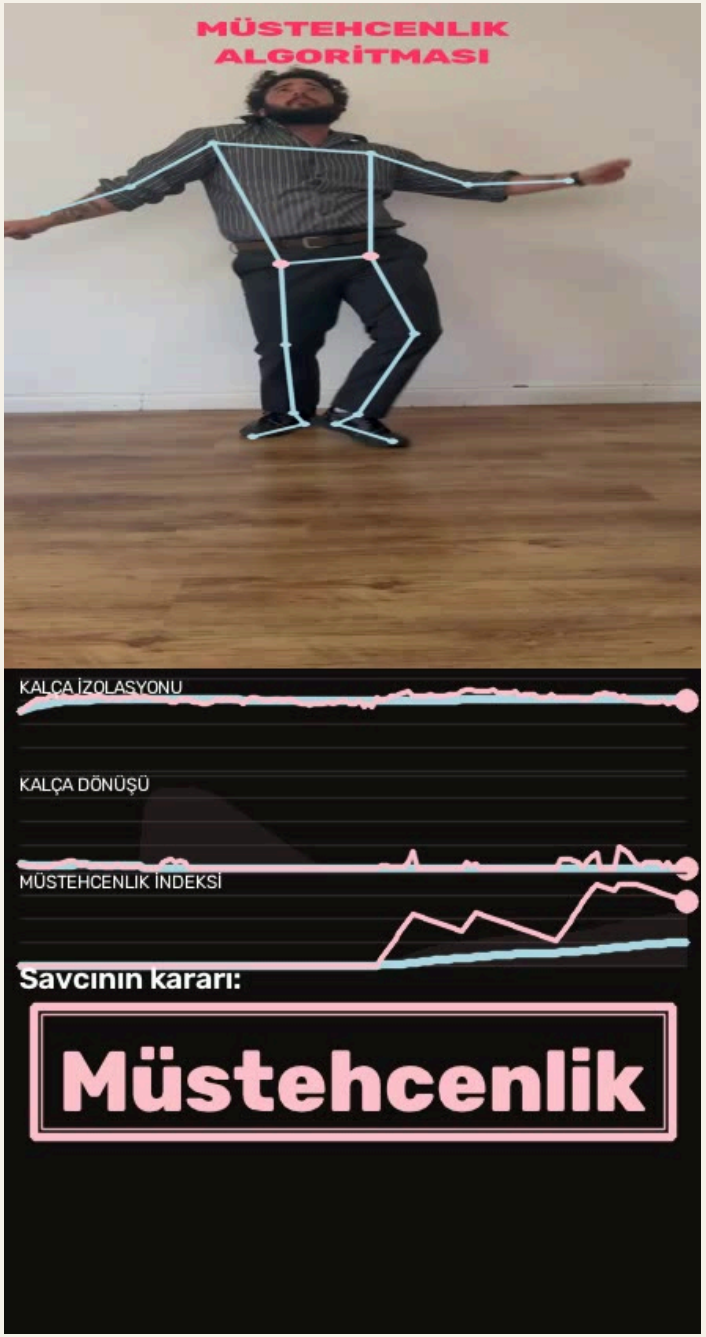
Nothing. The probabilities are invented.

SET

Probabilities, weights and dependencies of the 99 moments

NOT CAPTURED

The world in which it would have worked out



SERIES II · HESAP · II / 01

Müstehcenlik Algoritması

The Obscenity Algorithm

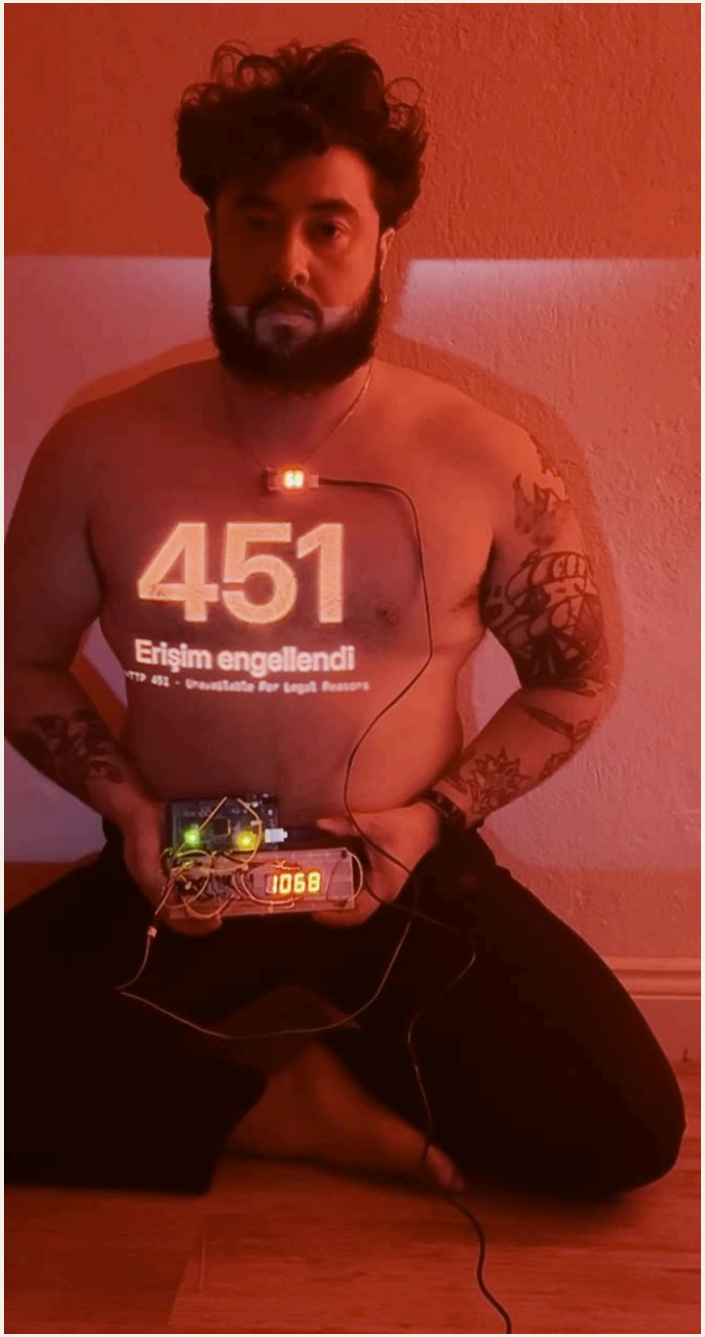
2026 · Dance, pose estimation, live charts · Music: Mabel Matiz, Ha Leylim

The number is invented; the gaze behind it is real.

He dances to Mabel Matiz's Ha Leylim while an algorithm measures hip isolation and hip rotation and adds them up to an "obscenity index". In August 2026, the Istanbul Chief Public Prosecutor's Office opened an investigation into Mabel Matiz for "obscenity" over the music video for Ha Leylim. Below, the verdict keeps changing: "in line with morality", then "obscenity", then back again.

MEASURED	Hip isolation, hip rotation
SET	The obscenity index: the formula from isolation and rotation, and the line between “morally appropriate” and “obscenity”
NOT CAPTURED	Obscenity. Construct validity asks whether an index measures what it claims to measure; here there is nothing to check it against.

TECHNOLOGY	Pose estimation (Python), live charts
RESONANCE	Instagram reel, 165,000+ views (as of 13 October 2026); published jointly with Kaos GL, Özgürlük İstiyoruz and velvele; shared by TGEU (Transgender Europe), Uykusuz and others.



SERIES II · HESAP · II / 02

HTTP 451

Erişim engellendi

2026 · Performance, projection, pulse sensor, microcontroller, 7-segment displays

A machine counts. A heart remembers.

He kneels in the dark, shirtless. A projector writes the error onto his chest: 451. Erişim engellendi. In his hands, two counters he built himself. The counters wait for no one: in seconds they run to 1,270 and 81, slowly at first, then faster than the eye can follow. Both arrive at the same moment, then they stop. From then on, the numbers appear only when his heart beats. Between two beats: darkness.

MEASURED	Heartbeat at the wrist
SET	The two final counts, 1,270 and 81, and that they appear only with a heartbeat
NOT CAPTURED	Who stands behind the numbers

TECHNOLOGY	Pulse sensor, Bluetooth, microcontroller, shift register, driver module, two 7-segment displays, projector



SERIES II · HESAP · II / 03

DURAK 12022

a recursive gaze

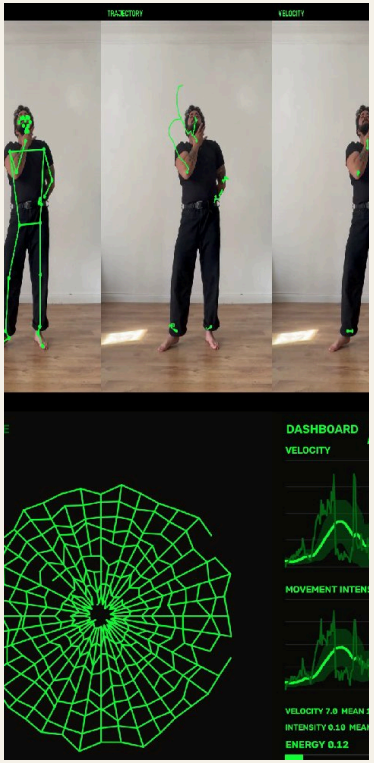
2026 · Performance, projection, pose tracking, TouchDesigner, Python, GLSL, TPU membrane

A stop is a number. A body, a data point. Some get on. Some stay at the stop.

A grid of light lies over the artist's body and the room. A camera reads his body in real time, and every gesture deforms the grid. Behind him, a translucent membrane glows red. When he stands still, the grid calms and brightens. When he leaves, it disappears. The camera also sees its own projection: what is measured is thrown back onto the measured body and measured again.

MEASURED	Hands, arms, hips, torso, feet, height, stillness
SET	Which gesture becomes which force in the grid
NOT CAPTURED	The body outside the grid

TECHNOLOGY	Camera, MediaPipe Pose, TouchDesigner, Python, GLSL, projector, TPU membrane, red backlight
IN DEVELOPMENT	Two stepper motors will pull the membrane via cables, driven by the same tracking values. The membrane will bend physically as the grid bends digitally.
SERIES	Series II · Hesap, third work after Müstehcenlik Algoritması and HTTP 451. The membrane comes from Series I.



SERIES I · ATTEMPTS · ATTEMPT 01

Algorithmic Somatics & Collapse Analyses

The body in data: motion capture, dance and code

Since 2026 · ongoing · Motion analysis · Python / MediaPipe

The membrane gives way until it collapses.

Velocities from the landmarks of his own dance push a simulated membrane toward collapse.

MEASURED

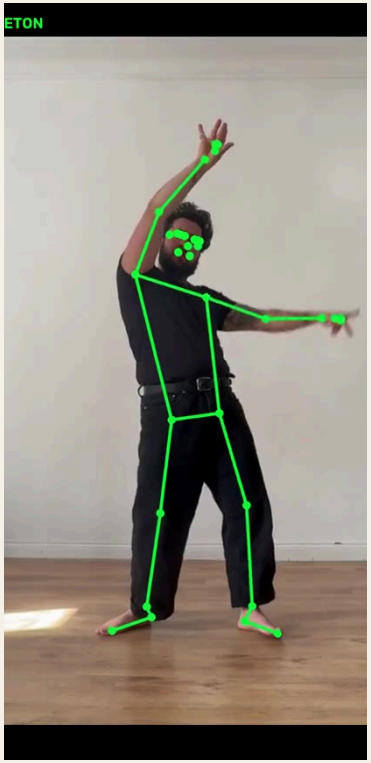
Body landmarks in every frame of the dance; from them, velocities and trajectories

SET

The thresholds at which the simulated membrane begins to give way

NOT CAPTURED

The body in motion, before and beyond the data



SERIES I · ATTEMPTS · ATTEMPT 01.1

Zahr & Tiryāq

Poison and antidote, a paradox of Rumi, read through movement data

Who sets the line above which a body "collapses"?

At 0.5 this dance contains two collapses, together 0.9 seconds, against 62.7 seconds of build-up. At 0.3 there are seven, at 0.7 only one. The movement stays the same; the count changes. The threshold is not measured but chosen, and with it the story the numbers tell.

MEASURED

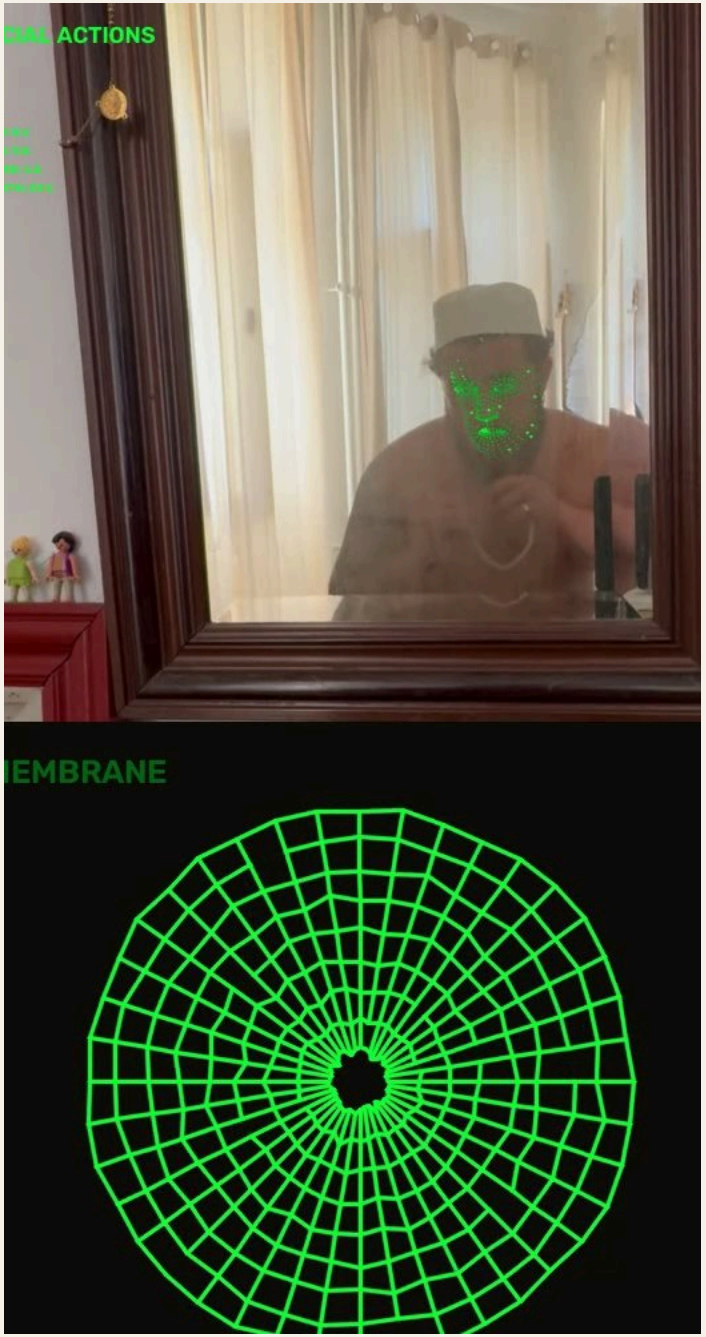
How far the fastest of six points (wrists, elbows, ankles) moves from frame to frame, in pixels

SET

The six points, the one-second window, the spike rule (μ + 2σ), +0.06 and −0.015, the threshold

NOT CAPTURED

Whether a body collapses



SERIES I · ATTEMPTS · ATTEMPT 02

Gel Gör Beni

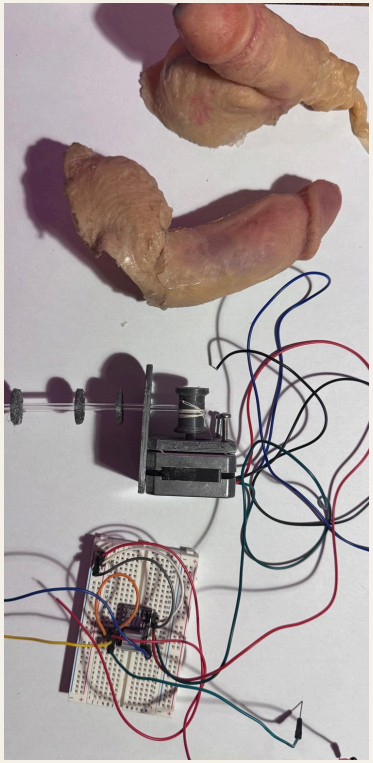
Those Who Remained in Kadıköy

2026 · Studio, Berlin · Performative mirror work · Face landmark analysis

Prayer beads against the count.

He sings Yunus Emre with a tespih in his hand while 468 facial landmarks try, and fail, to count what happens.

MEASURED	The positions of 468 points on his face
SET	The face as a mesh of 468 points
NOT CAPTURED	The song, the prayer beads in his hand, what the singing means



SERIES I · ATTEMPTS · ATTEMPT 00

Penile Transplant

The body in mechanics: silicone casts and cable mechanics

Since 2021 · ongoing · Kinetic object · Soft robotics

Failure here is not a remainder but part of the work.

A failed attempt at bionic extension: hand-cast silicone bodies and a cable mechanism that was meant to translate arousal into movement, and never moved them.

MEASURED

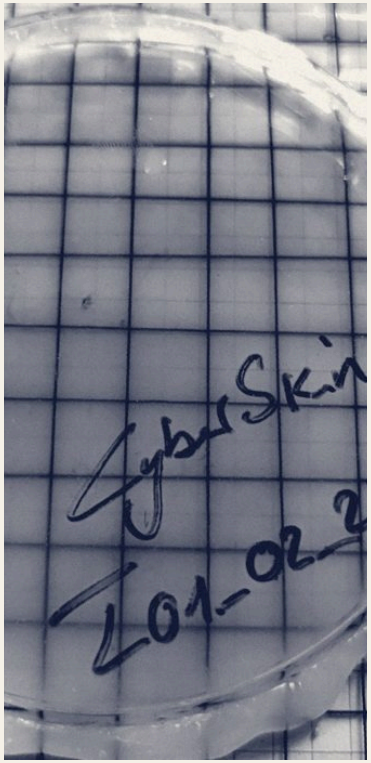
Nothing. The sensing never came about.

SET

The intended translation: arousal into erectile movement

NOT CAPTURED

Arousal



SERIES I · ATTEMPTS · ATTEMPT 00.1

CyberSkin

A skin that feels: silicone and conductive thread

2022 · Sensor skin · Silicone, conductive thread

How can a surface register what touches it?

A thin silicone skin, cast in a petri dish over a grid of conductive threads: an attempt to give the artificial body a surface that registers touch.

MEASURED

Nothing. The sample was photographed against a calibration pattern, as a first step towards measuring it.

SET

The grid of conductive threads in the skin

NOT CAPTURED

Touch





FURTHER WORK

Reshape Matter

A sauna for queer and trans BIPOC people, Berliner Projektfonds Kulturelle Bildung*

2022 · Participatory build project · Wagenplatz Kanal e.V., Berlin

It did not lament the gap. It built into it.

A community sauna for queer and trans* BIPOC people, built together from reused materials, with a window that lets you look in one direction only.

METHOD	Participatory planning, silent walk and gallery walk, skill-sharing build workshops, upcycling
ROLE	Concept, application, project lead, build workshops, accounting
FUNDING	Berliner Projektfonds Kulturelle Bildung

CV

Ilyas Baqa

ARTISTIC PRACTICE

since 2021 — Series I

since 2021 — Attempt 00 · The body in mechanics Penile Transplant

2022 — Attempt 00.1 CyberSkin

since 2026 — Attempt 01 · Preliminary study Algorithmic Somatics & Collapse Analyses

2026 — Attempt 01.1 · Collapse analysis Zahr & Tiryāq

2026 — Attempt 02 · Preliminary study Gel Gör Beni: Those Who Remained in Kadıköy

since 2026 — Attempt 03 · Main project The Translation Device: An Apparatus of Failed Attempts of Intimacy

2026 — Attempt 03.1 · Feasibility study Obedient Tremor

2026 — Attempt 03.2 · Feasibility study Kalp / Gönül

2026 — Attempt 03.3 · Feasibility study sil baştan (residual evidence)

2026 — Attempt 03.4 · Study olsaydı

since 2026 — Hesap (Series II)

2026 — II/01 Müstehcenlik Algoritması (The Obscenity Algorithm)

2026 — II/02 HTTP 451 (Erişim engellendi)

2026 — II/03 DURAK 12022 (a recursive gaze)

2022 — Reshape Matter

EDUCATION & RESEARCH

since 2025 — **M.Sc. Human Factors (in progress), Technische Universität Berlin**
Psychology meets engineering and computer science: cognitive and automation psychology, neuroergonomics, psychophysiology & biosensing, empirical research methods

2017–2022 — **Studies in Mechanical Engineering (Design Engineering), Berliner Hochschule für Technik**
Holistic product development: strength and durability analysis, lightweight design, numerical methods & optimisation, multibody dynamics; kinetics, mechatronics & bionics

2012–2016 — **B.Eng. Mechanical Engineering, Düsseldorf University of Applied Sciences**
Engineering mechanics, design and product development

SELECTED PROFESSIONAL EXPERIENCE

2023–2024 — **Continuum Innovation, Research & development**
BLDC drives, sensor systems

2019–2021 — **Novoluto, Research & development, working student, then technical specialist**
Real-time classification of sensor data, signal processing, machine learning (MATLAB/Simulink)

2016–2019 — **Fraunhofer IPK, Student assistant**
Automation, PLC programming

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