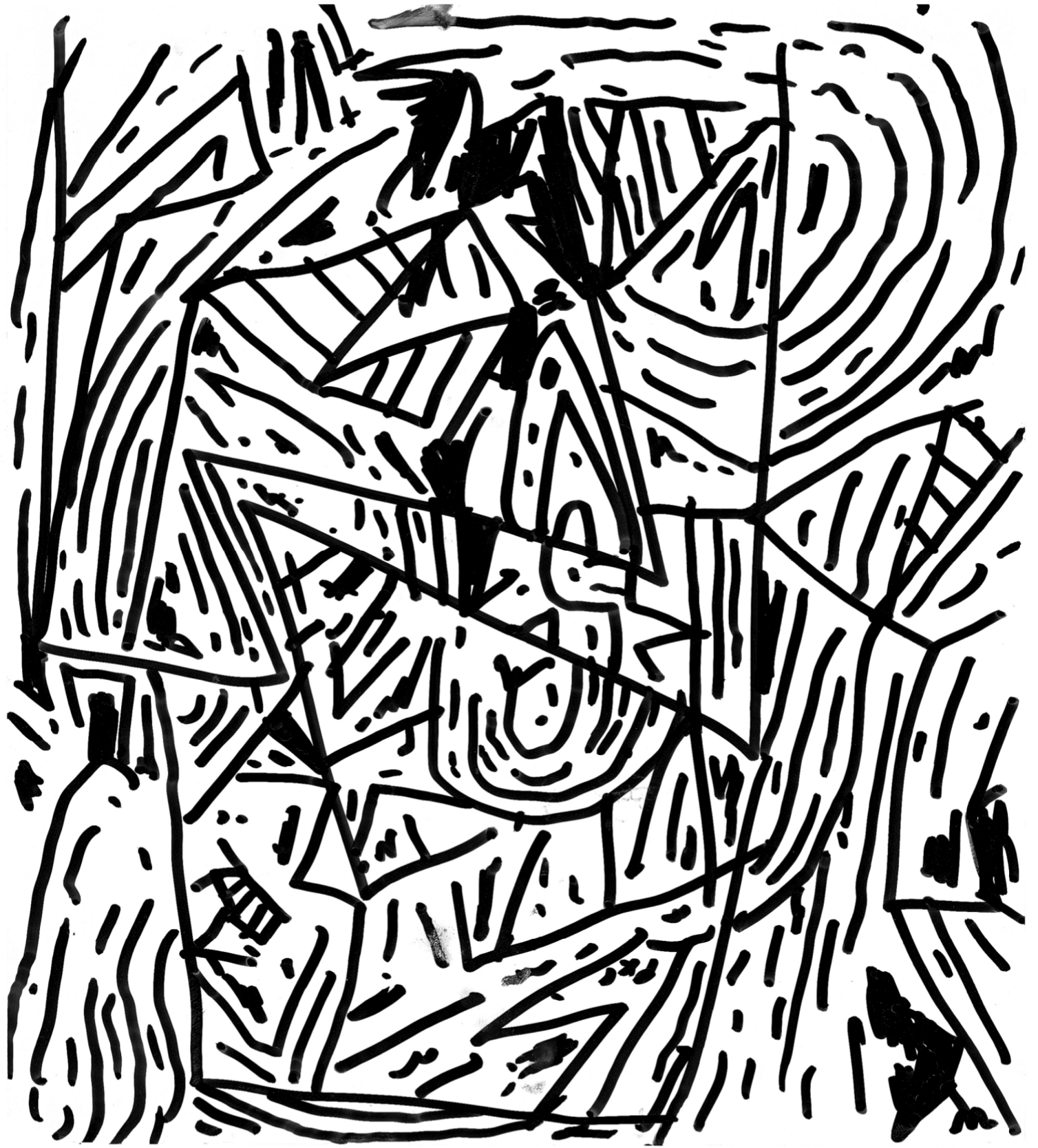# Vector & Golf

AUGMENTED ARTSPACE

Vector en Golf
Augmented Art space

The Vector & Golf artspace makes use of augmented reality.
Download the free *Aurasma* app to access this augmented content.
Close the introduction page, and search and subscribe [follow] to 'vectorengolf' channel.
Press [ ] on the bottom of the screen and center the camera on the drawings in the zine.
In some cases it may be necessary to restart your smart phone or tablet for the app to work.
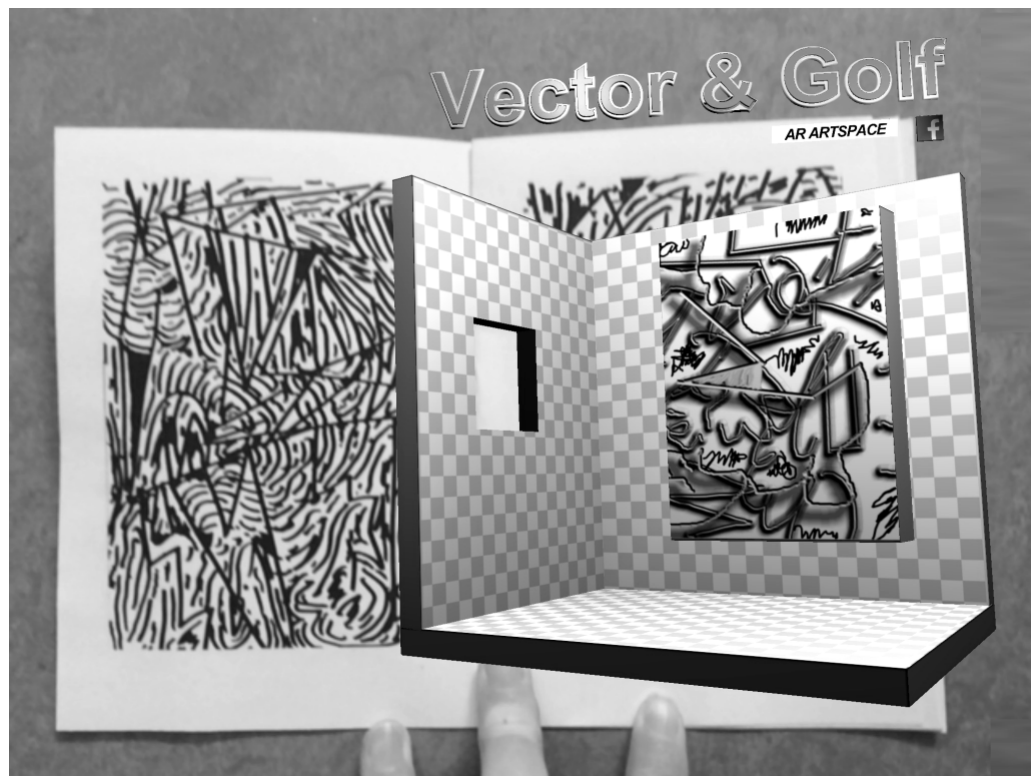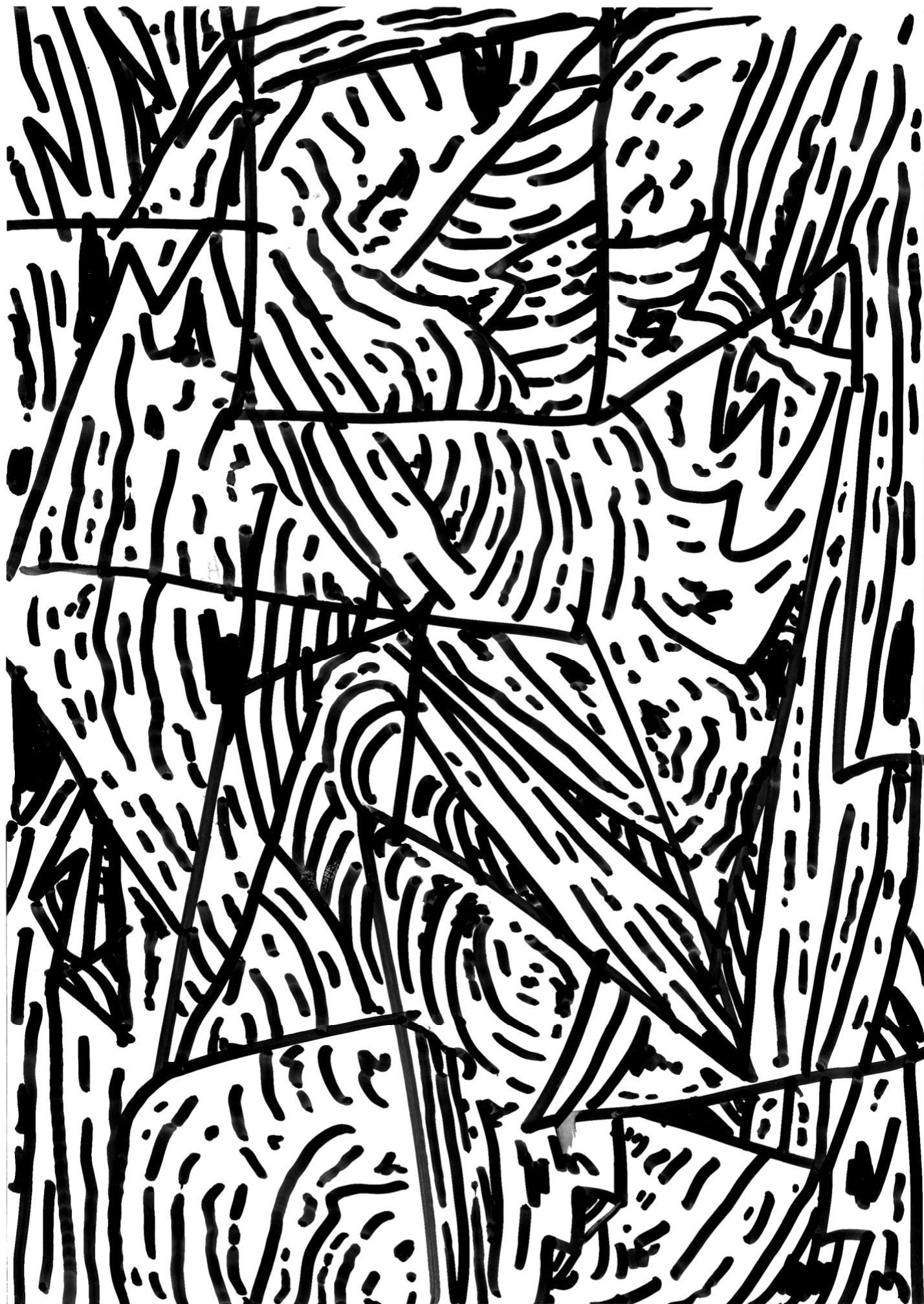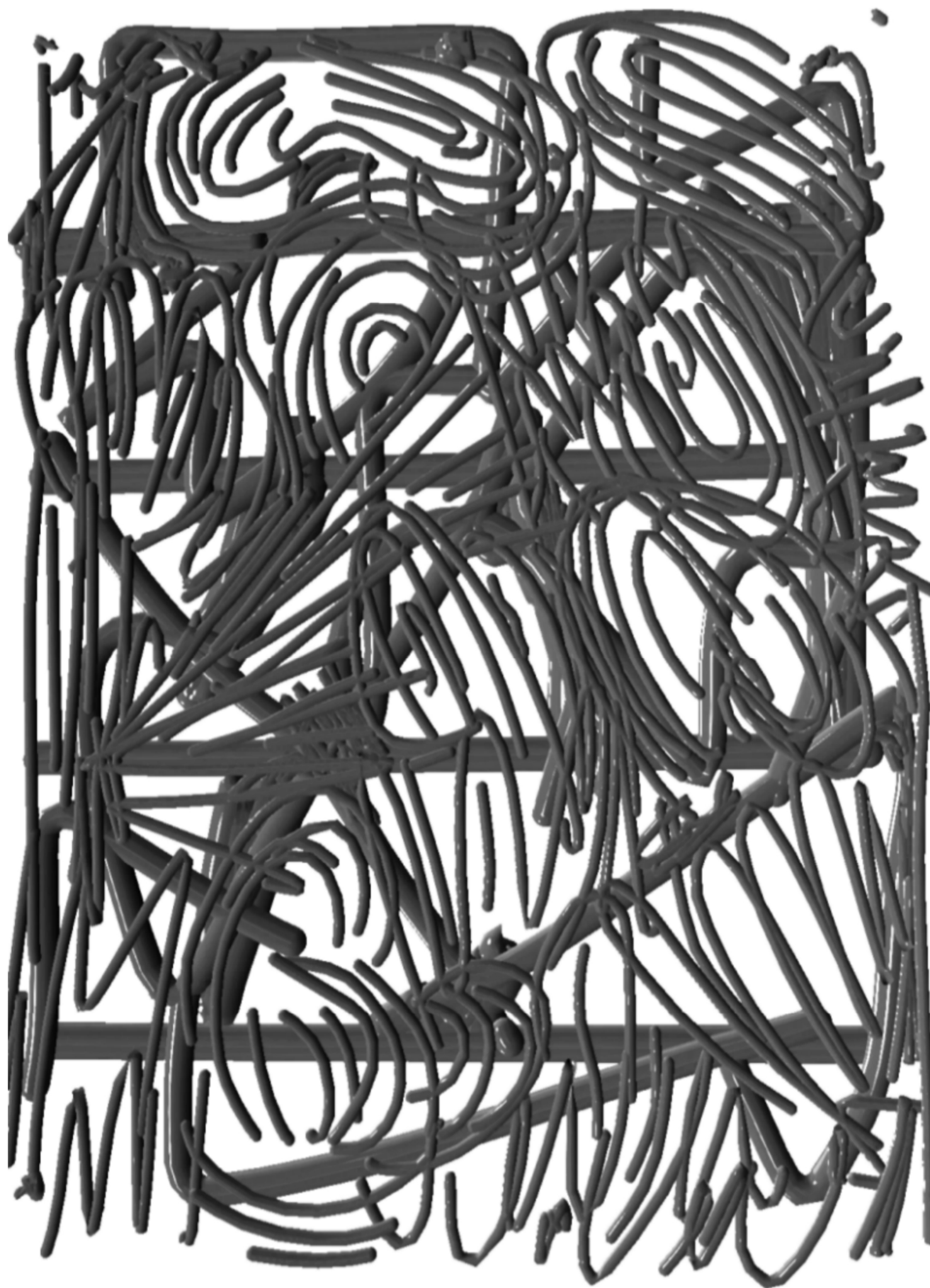
Some thoughts on the nature of this zine.

Symmetries and Triggers

Connecting an augmented reality file to a page requires a trigger-image.
What are the requirements for an abstract line-drawing to function as a trigger-image?

A good trigger-image is an image with a maximum of unique distinguishable qualities that prevent it from being confused with similar images.
A drawing with a minimum of distinguishabilities is a drawing with a lot of symmetries.
A drawing with a lot of symmetries will not connect to the server of the app because the image is too homogeneous. It would cause it to address multiple locations simultaneously.
The more symmetries in a drawing, and the more uniform repetition in a pattern, the worse it will function as a trigger.
Take for example the square;
All the angles of the square are identical, as are its sides. Its orientation (left, right, above, below) and scale cannot be deduced from its shape. And also when it is cut in half its symmetry remains.
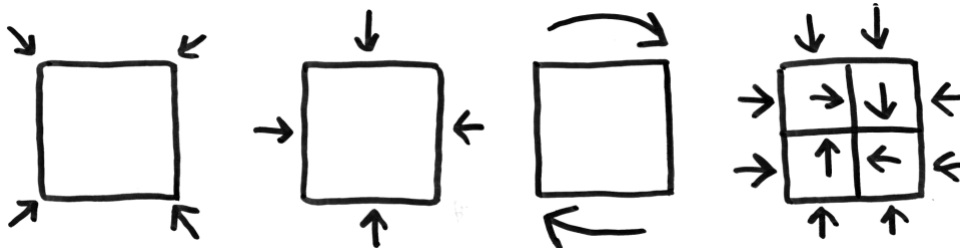
Within the context of a trigger, every line of a drawing has clear, distinguishable and unique qualities.
And within this context, a good drawing is a drawing that maximizes its distance to symmetry and repetition in order to make the connection between the external memory on the server of the app as clear and strong as possible.

With symmetry as a geometrical point-zero, the drawing process now has a clear direction and a general goal, that is; maximizing its distance to that origin. (1)
This move-away from symmetry is not an infinite process, because from the moment ink-lines can but overlap, the number of indistinguishabilities will also increase.
Therefore, an ideal trigger is a drawing that has *optimized* that distance.

The variation threshold

One might conclude that for an abstract drawing to function as a trigger, it needs a maximum of line-variations.

However, if this means that such a drawing would *always* have*, of *every type of line,* in *any given situation, one, unique example,* then the final outcome will not be one of optimum diversity.

Because if, for example, in every forest, there would be of every tree one single unique species, then every forest would be like any other forest that also has one unique species of every tree. A global symmetry has emerged because a program was executed too rigidly.

Therefore, a certain level of accidental symmetry is a necessary condition for structural diversity.

In other words; a flawless, perfectly executed program, or a program without replication errors, is a kind of procedural symmetry and therefore not suited to produce a good trigger image.

It follows that an ideal procedure, is a procedure that executes a program - *always, sometimes, here or there, more or less* perfect.

As a consequence, the outcome of the drawing process, even though it has a clear direction and a goal, has become unpredictable.
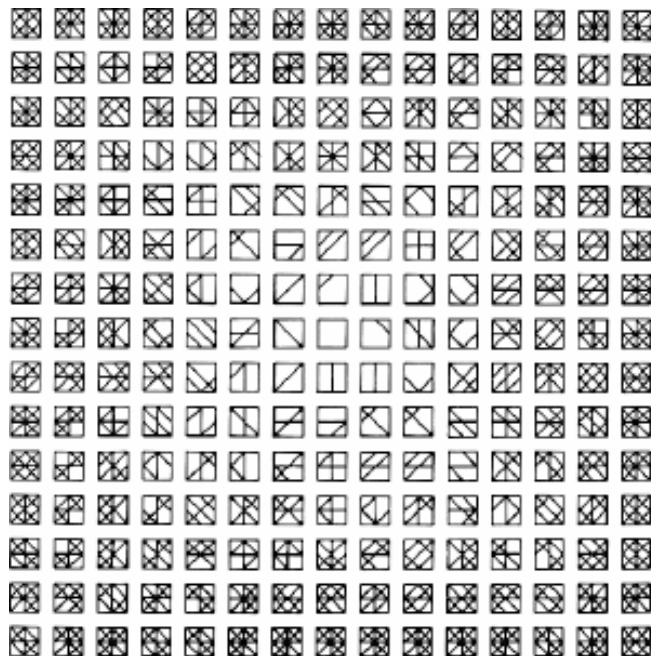
Structure Square Series Inwards
Coqart, Roger aka Kockaerts, Roger. Computer Graphics and Art (1976)

An example of a flawless program, step by step evolving towards ever increasing complexity, without losing symmetry.
A procedure that always leads to the same result.

Art, shape and memory

In the Vector & Golf artspace, the relation between the drawing and part of its content is arbitrary because the augmented files are not stored within the shape of the trigger itself. (2)
However, an effective trigger is a crucial link between the reader and the augmented data on the server of the app.
The triggers of the Vector & Golf artspace are works of art.
This defines a work of art as; *the structure that enables a connection with an external memory.*

Such a coupled, external memory is a creative memory. (3)
The material form of the drawing (ink on paper) is permanent, but the virtual, augmented content is not and can be altered at any given time.
This situation is not unlike the active visual experience of a work art like a drawing, where the material form of the drawing is permanent but the *perception* of that form may vary depending on personal experience, predispositions, and time.

The augmented artspace is a portal to the content of the work of art and at the same time it is a metaphor for the experience of art.

Notes

(1) Leyton, Michael. *The Structure of Paintings*, Springer-Verlag/Wien (2006)

(2)Shape itself is a kind of memory store. The shape of a dent holds information about the causal history of that shape. In other words; a dent is the imprint of the force responsible for its shape.
See also; Leyton, Michael. *The Structure of Paintings*, Springer-Verlag/Wien (2006)
According to prof. Leyton artworks are 'optimized shape' i.e. maximal memory stores and symmetry is the absence of memory().
In case of the Vector & Golf art space one might add that besides being a maximal memory store, the work of art is a crucial tool in a kind of procedural memory.

(3) According to Kevin O'Regan part of the human memory is also external memory.
O'Regan, J. Kevin. *The world as an outside memory.* Canadian Journal of Psychology Vol 46(3), Sep 1992, 461-488.
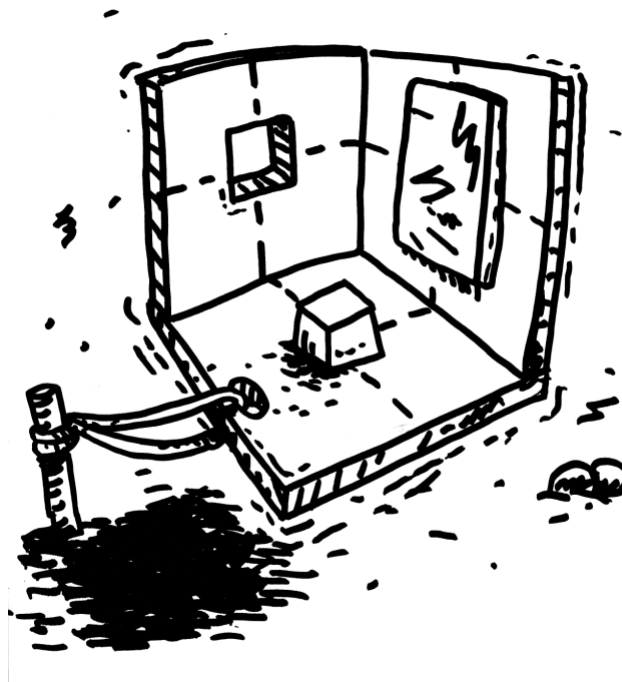
It is not unlikely that in the future a different
software will be used to display this content
For updates on technical aspects, participating
artists and latest news, surf to the 'Vector & Golf'
Facebook page.