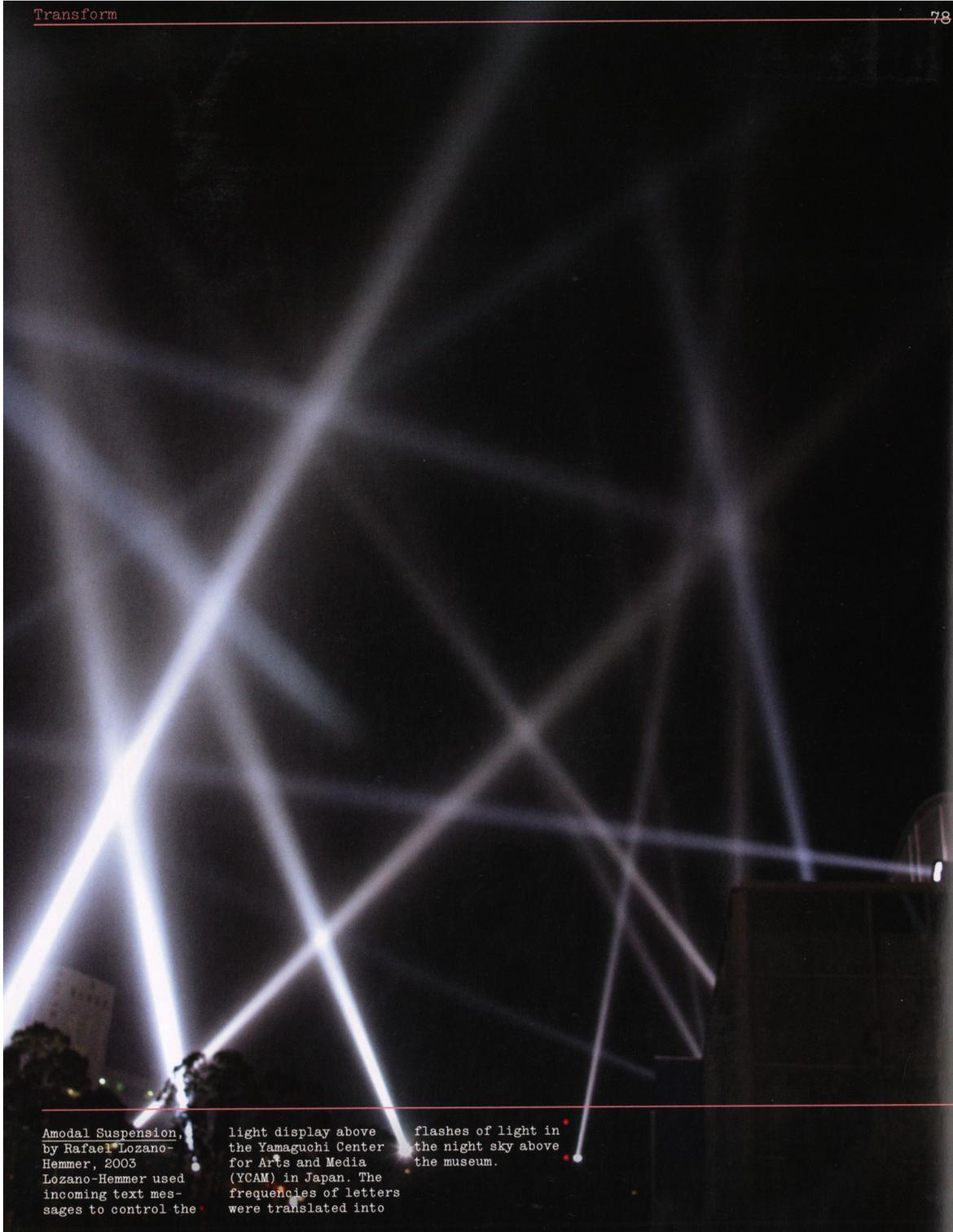


FORM + IN DESIGN, CODE ART, AND ARCHITECTURE



Transform

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Amodal Suspension,
by Rafael Lozano-
Hemmer, 2003
Lozano-Hemmer used
incoming text mes-
sages to control the

light display above
the Yamaguchi Center
for Arts and Media
(YCAM) in Japan. The
frequencies of letters
were translated into

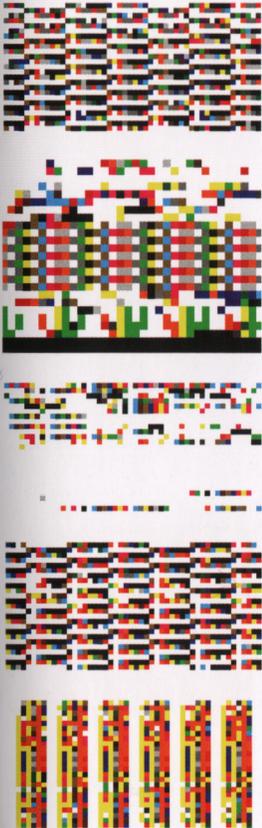
flashes of light in
the night sky above
the museum.

One direct consequence of describing information numerically is transcoding or the conversion of one type of digital information into another, for instance, converting a file from a JPEG to a PNG format. Transcoding can also be used to create completely new forms by interfering with how the computer handles a set of data. For example, it can allow the bits of an audio file to be read by a program that normally operates on the bits representing an image. Transcoding uses the file data as raw material for computation. A good example is a simple substitution cipher, where each letter is replaced with a number corresponding to its position in the alphabet. This cipher turns the name Ben into the numbers 2, 5, and 14. Once the conversion is made, the numbers can be used in a variety of ways to create new values. These values can, in turn, be used to create new images or artworks. For example, the number can be added together to get 21, which, in turn, can be used to set the red value of a pixel in an image. (But since the word "at" also has a value of 21, this will only create a very loose connection between the original word and the color of the pixel.) Because the letters have been converted to numbers, they can be transformed in atypical ways.

Rafael Lozano-Hemmer's 2003 installation *Amodal Suspension* transforms text messages into light beams, from spotlights projected into the sky above the Yamaguchi Center for Arts and Media (YCAM) in Japan. The transformation scheme used by Lozano-Hemmer produced a particularly striking display. The letters contained in each text message were analyzed based on the frequency with which they appeared. The frequency values were used to control the intensity of the spotlight: the letter A would push the light to full brightness, while Z would appear as a dim glow. In this way, our everyday language is transformed into something akin to the flashes of fireflies.

The continuity provided by the numerical representation of information is exploited to its fullest in the programming environment Max. Inspired by the patch cables of analog synthesizers, a Max program is composed of input and output patches that control the flow of data. When used with Jitter (a program extension that adds video features), Max can connect the frames of a video to a sound generator, run them through a filter, and reconnect the results back to a video generator. In the same way that the flow of electricity can be used to power any electronic device, the flow of binary data can be applied to any number of Max's software patches.

Transformation provides a way to express continuity between forms, data, and ideas. When a work utilizes techniques of transformation, it retains a connection between its original and transformed versions, and such radical transformations can reveal entirely new relationships.



Data Diaries, by Cory Arcangel, 2003. Arcangel tricked his computer into reading its memory as if it were a QuickTime movie.

No complicated substitutions or interpretations were necessary, and no predetermined conversions were set up, such that a certain

value from the memory file would cause a specific result. This was a direct translation, similar to reciting

driving directions aloud like poetry.