

MAEDA: a new approach.

“Mathematics by itself is indeed an art, translation to visual representations does not have any value.” John Maeda, Design

There has always been a link between mathematics and art. There is a strong link between how we see the world, often trying to imitate it. Pythagoras was obsessed with numbers and music, in some ways the closest that Pythagoras got to art. We can even argue that Plato argued that geometrical objects were

as easily demonstrable as art. He would have classed himself as an artist yet with this logical background he was the most important figure in the world. Michelangelo was an architect, an engineer, an artist, an architect, an engineer, a sculptor. The uses of mathematics in the renaissance and classical period were heavily Michelangelo use of mathematics. At this point in time science encompasses all these fields.

During the renaissance man or woman was a person of multiple disciplines. Leonardo da Vinci, both developing independently in the history of art and science, became a member of the court. A portion of his time to different subjects including law, architecture and technology. Developments in Calculus is a direct legacy (i.e. Newtonian) of the renaissance person to develop it. Leonardo da Vinci for aesthetic reasons, but

There has been a separation of the disciplines. Realizations that the industrial revolution led us to find that a scientist had never visited an artist.

... science apart from the basics of the modern world.

... who is trained in the hard sciences can appreciate a beauty to mathematics in its application but may have trouble interpreting the abstract of the expressionists. A conceptual artist may understand that there is deep seated methodology to the sciences, but still not perceive their essence in a way that will make them intrigued in it instead of shying away from those strange figures on the page. This is both a professional and personal one as institutions do not train students in different concepts but as differing fields that are not meant to view these ideas in the same way.

Is it a work of art?
In my opinion it is not.
It is an important
contribution to the
history of art.

... on exists? In my
opinion it is separation. It is
not art and look at
it to fix the blame on
the artist.

... remedy this issue through
educational programs. The Bauhaus and
the Bauhaus these principals, but with the objective
of creating a product. Other examples can be seen by
the Bauhaus this encouraging resident artist's presence. The
department (The University of Bristol, UK), for instance
to highlight some of the concepts that he came
up with.

... still does not get at the core of the argument
... visual language formed from math to show that the
art and design. The creation of a hybrid child
... compromising either, will demonstrate
... between the two then is present.

Computational media
is a demonstration
of mathematical functions and then interpret them by logical rules to create
images on screens. Computational essence is one of mathematics and
numerals; everything else is a demonstration of how maths can be interpreted.

The visual design and scientific communities have long used computers for
their own ends and therefore there is potential for this medium to demonstrate
the principals laid out in this document using a tool that is native to both. This
reduces the risk of producing a piece of work that inadvertently alienates the
audience by selecting a tool that they are not familiar with the lack of familiarity

is to analyse the interface between art and science through digital design media. The title refers to the central project Science Interface (SADI). This interface will primarily consist of a screen where numerals and equations can be entered demonstrating visually and typographically the different potentials of how data can be interpreted and information contained, as a dynamic process. The work parallels the work of the architect Frank Lloyd Wright and the physicist J. Robert Oppenheimer in his text on the atomic bomb, "The Atomic Bomb and the Future of Civilization". Lewis describes the interface as "a dynamic process of entering and editing text, adjusting parameters, and adjusting the interface."⁶



The Monkeys, no date
Lewis's TextEngine.⁷



Fig. 2: Benjamin Fry, Valence (2001). Fry's program being applied to a German text to analyse the structure of it. See reference No. 8.

of Benjamin Fry, a graduate of the University of California, San Diego, who used his program Valence⁸ to analyse the structure of the text and the parallels to the work of the physicist J. Robert Oppenheimer in his text on the atomic bomb, "The Atomic Bomb and the Future of Civilization". Fry's program will act to show the methodology that can be used to analyse the way the text is read.⁹

to speak, as digital art and science. While the work of the artist and art there is still a gap between the two, artists have little or no programming skills. The program will act to show the methodology that can be used to analyse the way the text is read.⁹

radical
understanding
that is
considered
both disc

Central to the work of the artist (numerals), which is creative. I wish to see

matter (typographic and functional properties) representing type and

research is

ences, and while it (
pe of this project. Not b
ring, but to the author c
n of mathematics used in
ticality as well. By explorin
easier to present this inform
to be of interest to the reader r
ult to con to a highly trained e
the subject

ness, centr
manner w
ness or cor
orm that it is
of a scientists mind,
of information be se
nformation. This pro

process to
in art. Rec
y been pos
is debate
point of view
process of
historical in
uld not hav
escribes frac

ently been used in m
een on the ordering
igh computers, nam
ages are art or not
esting as they offe
a specific visualisati
mathematical visualis
computational means. J
psycadelic colour pai

The other
purely p
Bliss¹²

art it has often beer
a be seen in the wo
Windows (1989-199

Bliss the works consist of scientific images/typography applied to form a visual mural (see reference no. 12 for provenance), Bochner writes numerals by cleaning areas of glass occluded by soap in To Count: Intransitive (see reference number 14 for provenance). The use of maths in this creates a barrier between the artist and the audience, and it can be argued it is being used only because of this barrier instead of the use of non-roman text which has a visual appearance but is behind it.

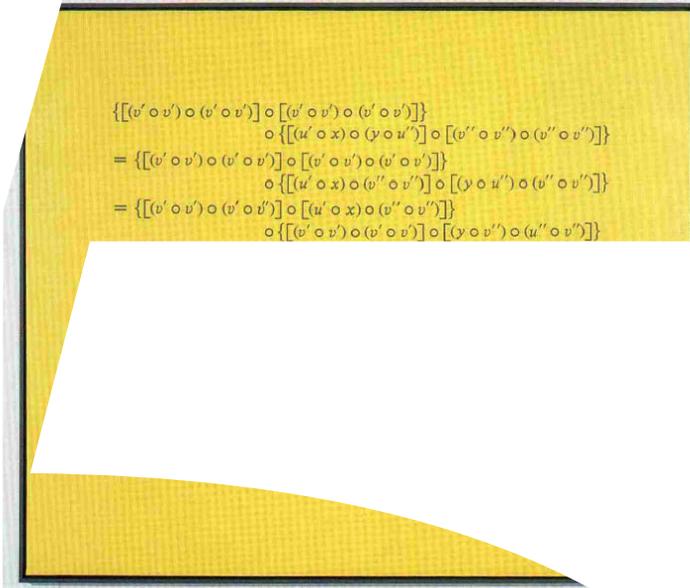


Fig. 3: Venet, Related to: "Communacative Operations", 2001. A 76 by 90 inches. See reference No. 13 for details of provenance. This is an example of Venet's work; extracting and re-printing elements from scientific text books.

changing the side that is demonstrated it should present new insights. This means that traditionally when art utilises science it is just that, art utilising science in the same way that it would utilise any different subject. However, when it involves the arts it has been traditionally to demonstrate what mathematics can produce. By reversing this process, Venet is showing their internal order and presenting an aesthetically pleasing side that is demanded upon to be

one of the more it gives and The central science can be stem and it's graphic work the poem

ected to p... experienced and unc...

A question that may be asked is... this interf...
 expression shown. This is a di... on to ans...
 becomes one of subjectivity. Bush... growing r...
 research. But there is increased evidence... are being...
 today as specialisation extends"¹⁵. Bush sees the specialisation...
 a bad one, but views the answer as a technological

assist human's mental process
language poses problems¹⁶

flow in place for the visual
the problem of people
perception of other fields
age and re-use it to
tend to work in a quarter
excluding pseudoscience

artist, by quantising a
to understand it. This
careful, way to view the
then see the inner art
artist lacks this perception
experiencing the world.

A scientist also loses our
purely conceptual view
aesthetic appearance.

ing does not lead
tools and see that they have

The unification needs to

current

¹ *Design By Numbers*, John M

² Özucan & Akarun; *Mathen*

³ William, K; *Leonardo* (US

⁴ Holtzman, S; *Digital Mant*

⁵ Betts, P; *Science, Semiotic.*

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⁶ Lewis, J, *Discussion of AC*

<http://www.thethoughtshop>.

⁷ OBX Labs, *Resaerch Area*

<http://obx.hybrid.concordia>.

Date.

⁸ Fry, B; <http://acg.media.m>

⁹ Peter Cho's website: <http://>

¹⁰ Tye, E & Pollock, G; *Phoi*

¹¹ ff

¹² Bliss, A C; *Leonardo* (US)

¹³ McEvelley, T; *Art In Ameri*

¹⁴ Kalina, R; *Art In America*,

Bush, V; *As We May Think*,

icklidler, J. C. R.; *Man-Co*

1:4-11, March 1960.

ues, vol. 17, No. 3, Summer 20

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