

One Form, Many Letters: Fluid and transient letterforms in screen-based typographic artefacts

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Barbara Brownie
University of Hertfordshire
B.K.1.Brownie@herts.ac.uk

Abstract

Current understanding of the nature of type assumes it to be static, with properties of form and colour. With the introduction of temporal media, typographic artefacts may additionally have properties of behaviour.

Digital, temporal media allow type to perform and to evolve. 'Fluid'¹ type, as it appears in motion graphics, animation and film title sequences, is 'dramatized'². A single form may present multiple letters through processes of morphing, rotation or deconstruction, and multiple forms may present a single letter through processes of reorganisation.

Analysis of such artefacts not only requires us to re-evaluate our understanding of the nature of type, but also to reassess the notion that a single letterform may only have a single identity.

In this presentation I will discuss the nature of fluid type, referencing examples of typographic performance in screen-based media. I will ask whether these artefacts may be analysed according to established typographic theory, offering suggestions as to how such theory may need to adapt in order to allow for the introduction of temporal media.

Introduction: What is Fluid Type?

Kinetic typography, as its name suggests, is 'moving type'. It is most commonly encountered in motion graphics and film title sequences. Theorists have defined and described kinetic typography as the integration of "typography and motion"³ or "text that moves or otherwise changes over time"⁴. But these theorists fail to clearly differentiate between different types of kinetic typography. They neglect to acknowledge that kinetic typography can vary so wildly that properties often considered to be 'defining characteristics', such as motion, are not always present in all forms of kinetic type.

'Type in motion'⁵ changes location onscreen. It may simply be scrolling text, as commonly encountered in title credits, or text that follows multiple, complex paths. Such examples are

¹ Kac, Eduardo, *Key Concepts of Holopoetry*, Electronic Book Review, 1997.

<http://www.electronicbookreview.com/thread/electropoetics/uncontrollable> (visited 10/04/06)

² Helfand, Jessica, *Electronic Typography: The New Visual Language*, 1994, from *Looking Closer 2: Critical Writings on Graphic Design*, ed. Beirut, Michael, Drenttel, William, Heller, Steven and Holland, D.K. (eds.). Allworth Press, Canada, 1997. p. 49.

³ Hostetler, Soo C., *Integrating Typography and Motion in Visual Communication*, 2006

<http://www.units.muohio.edu/codeconference/papers/papers/Soo%20Hostetler-2006%20iDMAa%20Full%20Paper.pdf>

(visited 04/01/2007)

⁴ Lee, Johny C., Forlizzi, Jodi, and Hudson, Scott E., *The Kinetic Typography Engine: An Extensible System for Animating Expressive Text*, ACM Press, 2002.

http://www.cs.cmu.edu/~johnny/kt/dist/files/Kinetic_Typography.pdf (visited 24/03/2007) p.81

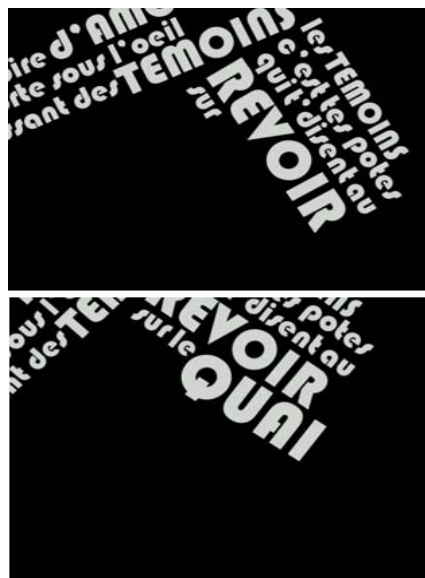
⁵ 'Type in motion' is a generalised term used in *Images from Bellatoni*, Jeff and Woolman, Matt, *Type in Motion*, Thames & Hudson, China, 1999.

concerned only with “direction and velocity”⁶. This results in change in overall typographic layout.

Kinetic typography can be far more complex than ‘type in motion’. Its characteristics can vary to the extent that the term ‘kinetic typography’ is not enough to differentiate between different types of artefact, which demonstrate different kinds of change.

In examples of ‘type in motion’, there is only change on a global scale; change in overall layout. What most kinetic typography theorists have failed to significantly analyse is change at a local scale; change within individual letterforms. Letterforms can be ‘kinetic’ without ever ‘moving’; they can exhibit behaviour without ever changing location. Letters can stretch, distort, disassemble and reassemble; they can display motion without actually ‘moving’. This can be referred to as ‘fluid’ typography.

The term ‘fluid’ typography was used in the 80s by Eduardo Kac to describe his ‘holopoetry’⁸. Kac’s holopoems are works of holographic concrete poetry which display letters and words that do not only appear to be in motion, but also appear to “exhibit... behaviour”⁹. He described the letters within these holograms as “fluid signs” which change their “overall configuration in time, therefore escaping the consistency of meaning a printed sign would have.”¹⁰ As viewers move around each of these holograms, they experience what *appears* to be a changing, evolving image. It *appears* to have a temporal dimension, in that the viewer sees different forms at different times. Using digital technology and animation, artists are able to create real ‘fluid’ typography. The features that *appear* to exist in Kac’s holopoems actually *do* exist in screen-based artefacts. Screen-based works can have a real temporal dimension, allowing the letterforms within them to change, and to evolve. These letterforms are not restricted to single, strictly defined silhouettes as they are in print or in much scrolling kinetic typography. It is this kind of typography, ‘fluid’ typography, that is the focus of my research.



Type in motion in David do van Minh’s *Les Voyages en Train Grand Corpes Malade*⁷. Such artefacts demonstrate change in overall layout but not within letterforms. The forms of individual letters remain fixed.

⁶ Hostetler, Soo C., *Integrating Typography and Motion in Visual Communication*, 2006

<http://www.units.muohio.edu/codeconference/papers/papers/Soo%20Hostetler-2006%20iDMAa%20Full%20Paper.pdf>

(visited 04/01/2007)

⁷ Stills captured from David do van Minh, *Les Voyages en Train Grand Corpes Malade*, France, 2006.

<http://www.youtube.com/watch?v=FzR4J2kHenU> (visited 21/05/07)

⁸ Kac, Eduardo, ‘Key Concepts of Holopoetry’, *Electronic Book Review*, 1997. Originally published in Jacksin, David, Vos, Eric and Drucker, Johanna (eds), *Experimental-Visual-Concrete: Avant-Garde Poetry Since the 1960s*, Amsterdam—Atlanta, GA, Rodopi, 1996, pp.247-257.

<http://www.electronicbookreview.com/thread/electropoetics/uncontrollable> (visited 10/04/06)

⁹ Ibid.

¹⁰ Ibid.

One Form/Many Letters, Many Letters/One Form

Through observations of examples of fluid typography in title credits, interactive artefacts, digital animation and motion graphics, one striking characteristic of fluid type has become evident: because a fluid letterform can evolve, it can assume multiple different identities. It can present one letter, then evolve to another. It may even evolve to adopt an identity that is not a letter at all – perhaps a shape or object. It “can operate metamorphoses between a word and an abstract shape, or between a word and a scene or object”.¹¹

In static or scrolling text (in print or on-screen), a single letterform presents a single identity. Each letterform is both a single letter, and a single form. It has a single identity. When an additional letter is introduced, it is introduced as an additional form. The number of forms present, therefore, matches the number of letters (and the number of identities). In static or simple moving typography, each form retains a distinct, permanent identity.

A fluid letterform, however, does not have a fixed form. It may evolve, change, and, crucially, it may assume new identities. This allows for the introduction of a new identity without the introduction of an additional form. This inconsistency between the number of actual forms and the number of perceived identities is a defining characteristic of fluid type.

In the example below, *Beer* by Komninos Zervos, letters morph into one another. Each form adopts new identities through a languid, fluid metamorphosis, which reflects the properties of a drunken slur.



Stills captured from *Beer*, Komninos Zervos, Flash, Australia, 2005.¹²

This inconsistency between the number of perceived identities and the number of actual forms is not restricted to metamorphosis between letters. There are numerous ways in which this inconsistency is presented, through processes of rotation, navigation, deconstruction and reconstruction. In some instances, multiple forms can come together to present a single identity, in others, multiple identities are perceived within a single form.

In *Letterscapes (W)* by Peter Cho¹³ (below) viewers initially perceive a number of different, triangular shapes. Each of these triangles is interpreted as having an independent identity. However, as these shapes rearrange, they merge to form a new identity, the letter ‘W’. Despite having been initially perceived different forms, when combined they are perceived only as parts of a greater whole.



Stills captured from *Letterscapes*, Peter Cho, USA, 2001.

¹¹ Ibid.

¹² Zervos, Komninos, *Beer*, Flash, Australia, 2005.

<http://www.allenandunwin.com/writingexp/beer.swf> (visited 01/01/2007)

¹³ Cho, Peter, *Letterscapes*, , USA, 2001. <http://www.typtopo.com/letterscapes/letterscapes.html> (visited 18/04/07)

In the following ident for Channel 4 (below), the viewer is presented with several architectural street signs. Initially, each sign is perceived as being a separate object, and as an integral part of the Tokyo cityscape. These distinctly separate objects align and adopt a new, group identity, that of a '4'. After being presented with this new arrangement, viewers no longer perceive the signs as integrated into the cityscape, but into the figure '4'. The primary purpose and meaning of each sign shifts from that of an independent object to that of a component part of a more significant arrangement.



Stills captured from *Tokyo*, The Moving Picture Company, UK, 2005¹⁴.

These examples raise questions of perception, specifically with regard to inconsistencies between “the objective event”¹⁵ and the perceived event. In the *Tokyo* ident above the separate forms do not literally merge to become a single form, but are perceived as becoming associated with one another. This is due largely to a combination of the similarity of the objects, their proximity to one another and the fact that ‘4’ is an easily recognisable form, one that we have come to expect, and perhaps actively seek out, in these arrangements.

Multiple Meanings

In examples of fluid typography, fluidity can lead not only to new identities being introduced, but also new meanings. Newly introduced identities can reinforce the initial perception of a form, clarify it, or, in some cases, contradict it.

In Kyle Cooper’s title sequence for *True Lies* (below), the initial identity presented to the viewer is that of the word ‘true’. When this word rotates, the viewer is made aware that the word is not formed of flat letters but the surfaces of three-dimensional shapes. Cut into the side of each of these forms is a void. These voids present the word ‘lies’. This second identity contradicts the initial meaning of the forms in two ways. Firstly the word ‘lies’ contradicts the word ‘true’, suggesting that we should re-evaluate our perception of the initial identity. Secondly, it presents this new identity as voids rather than as objects; as negative rather than positive spaces. This reaffirms our understanding that truth and lies are distinctly different, with contradictory properties.



Stills from *True Lies* title sequence, Kyle Cooper, USA, 2004.¹⁶

As the forms in this title sequence begin to revolve, the viewer’s perception of the nature of the forms, and indeed the nature of the space they occupy, also changes. Initially, as the

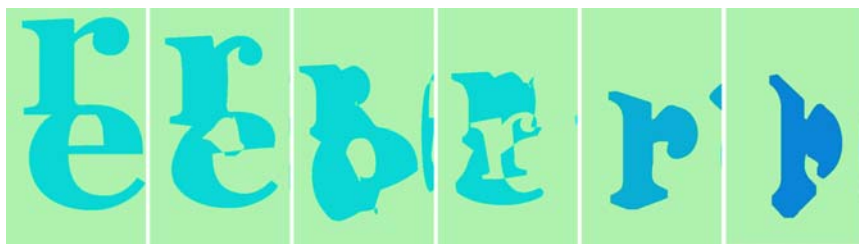
¹⁴ The Moving Picture Company, *Tokyo*, ‘Channel 4 Idents’, UK, 2005 <http://www.moving-picture.com/4idents> (visited 01/01/2007)

¹⁵ Rock, Irvin, *An Introduction to Perception*, Macmillan, USA, 1975. p.2.

¹⁶ Images from Bellatoni, Jeff and Woolman, Matt, *Type in Motion*, Thames & Hudson, China, 1999. p.42.

viewer is only presented with the face of the letters in ‘true’, they perceive them as flat forms on a single plane. However, once the forms have begun to revolve, they reveal themselves as having volume. This requires the viewer to reassess his or her perception of the form. At the same time, the viewer must acknowledge that the space which these forms inhabit must also have depth. The background itself is black, and contains no indication of whether it is intended as two-dimensional or three-dimensional. As a result, the viewer must take cues from the objects within it in order to assess its nature. As soon as the perceived nature of the forms changes, so too must the perception of the space they occupy. So, the viewer’s initial perception of two-dimensional forms must change to that of three-dimensional objects, while his or her perception of the space the forms occupy changes simultaneously. It is no longer perceived as a flat plane, but as “environmental space”¹⁷, that is, space with virtual depth.

When viewing examples of fluid typography, observers find that forms fluctuate between more abstract identities and more meaningful signs. There is a moment at the ‘poles’¹⁸ in which they present a perfect letter or sign, but between the poles abstract shapes are presented as one letter disassembles, and the next is formed.



In Komninos Zervos’ *Beer*¹⁹, the letters ‘r’ and ‘e’ morph and merge, creating intermediate glyphs before they begin to re-form into the letter ‘h’.

Matthias Hillner, who has created fonts intended for use in fluid artefacts, suggests that a fluid form is not only legible in the instant in which it presents a perfect letter, but also when it is an approximation of that letter – as it approaches the poles. These “fluctuating levels of legibility”²⁰ cause the viewer to anticipate forthcoming letters.

When handwriting, a writer will adjust the way a letter is formed in anticipation of the next²¹. Depending on what letter he expects to write next, the letter he is currently forming will vary in “thickness”, “curvature” and “slant”²². It is therefore possible to predict what letter a writer is about to create by observing the formation of previous letters. In fluid typography, the viewer can begin to predict what letter will appear next, and how it will appear, through various cues that are specific to the individual artefact. In general, as a form or arrangement begins to approach a letter, its next identity will become easier to predict.

¹⁷ Palmer, Stephen, Simone, Edward and Kube, Paul, ‘Reference frame effects on shape perception in two versus three dimensions’, *Perception*, vol. 17, 1988, pp.147-163. p.147.

¹⁸ Kac, Eduardo, ‘Key Concepts of Holopoetry’, *Electronic Book Review*, 1997. Originally published in Jacksin, David, Vos, Eric and Drucker, Johanna (eds), *Experimental-Visual-Concrete: Avan-Garde Poetry Since the 1960s*, Amsterdam—Atlanta, GA, Rodopi, 1996, pp.247-257.

<http://www.electronicbookreview.com/thread/electropoetics/uncontrollable> (visited 10/04/06)

¹⁹ Detail of stills captured from Zervos, Komninos, *Beer*, Flash, Australia, 2005.

<http://www.allenandunwin.com/writingexp/beer.swf> (visited 01/01/2007)

²⁰ Hillner, Matthias, *Research: Proposition*, ‘Virtual Typography’, <http://www.virtualtypography.com/navigation/menu.html> (visited 17/04/2007)

²¹ Orliaguet, Jean-Pierre, Kandel, Sonia and Boe, Louis-Jean, ‘Visual perception of motor anticipation in cursive handwriting: Influence of special and movement information on the prediction of forthcoming letters’, *Perception*, vol. 26, 1997. pp.905-912.

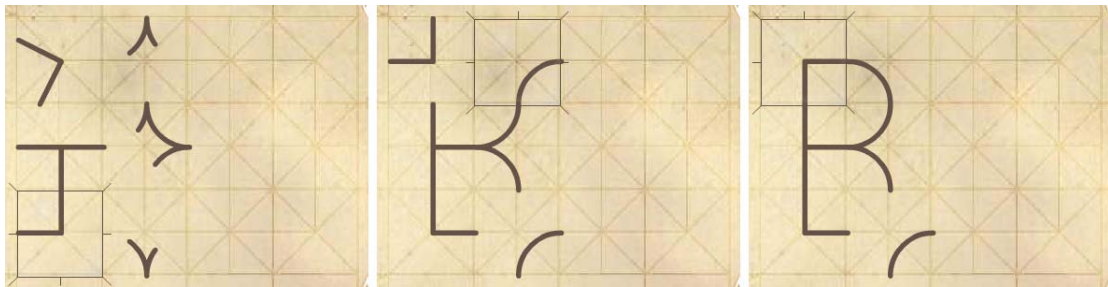
²² *Ibid.* p.911.

In the following example (*Poidog* by Dan Waber), a single string presents a series of words. As the ‘string’ begins to reform, the angles and curves that begin to appear give us an indication of the next form it is likely to assume.



Dan Waber, *Poidog*, from the *Strings* collection, Flash, 2005.²³ The text begins to become legible before it is fully formed, causing the viewer to anticipate the next word.

When a fluid letter is constructed out of separate parts (as in MPC’s Channel 4 idents and in the example below, Orgdot’s *The ABC Game*) the nature of the parts, particularly their curvature, can act as an indication of the role they will play when rearranged to form a letter.



Stills from *The ABC Game*, Orgdot, Norway, 2003.²⁴

When viewing examples such as MPC’s Channel 4 idents, it is likely to be the case that viewers will anticipate the ‘4’ both because of the visual cues given by the existing forms, and because they have come to expect it. Similarly, in many other artefacts, if viewers are made aware that an apparently abstract form will eventually present a letter they are likely to seek-out that letter by attempting to analyse various cues within the existing abstract forms.

However, it is important to note that the aim of fluid typography is not entirely to present letters. It is the nature of fluid typography that other shapes and signs are also presented within the same forms or arrangements as the letter(s). In *Beer*, for example, the forms fluctuate between legible letter and more abstract glyph. These “in-between” forms are “as important... as the meanings produced momentarily at the poles.” Fluid typography introduces this “new kind of verbal unit, in which a sign is not either one thing or another.”²⁵

In the title sequence for *Matzes* (Karst-Janneke Rogaar & Roel Wouters²⁶), the strokes that are used to create letters are initially part of a pattern. In the following advertisement for Audi, the ‘letters’ that spell out ‘vorsprung durch technik’ (meaning ‘progress through technology’)²⁷ are initially parts of a car. These identities – the identities that are *not* letters - are just as important as the letter identities. They may be abstract glyphs or shapes (like the

²³ Waber, Dan, *Poidog*, Flash, USA, 2005, <http://www.vispo.com/guests/DanWaber/poidog.htm> (visited 01/01/2007)

²⁴ Orgdot, *The ABC Game*, Flash, Norway, 2003. <http://www.orgdot.com/ABC/> (visited 01/01/2007)

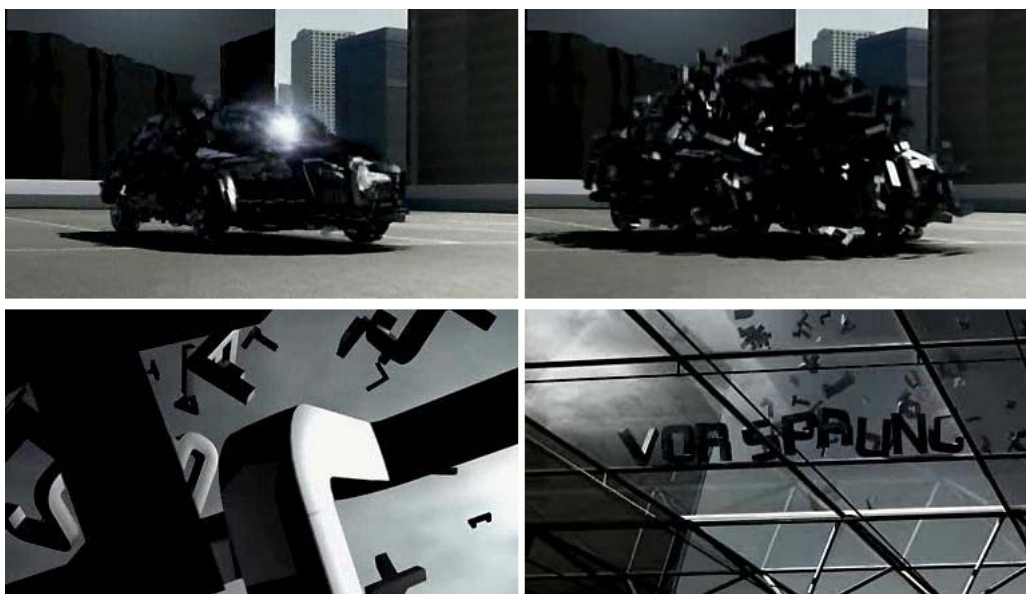
²⁵ Kac, Eduardo, ‘Key Concepts of Holopoetry’, *Electronic Book Review*, 1997. Originally published in Jacksin, David, Vos, Eric and Drucker, Johanna (eds), *Experimental-Visual-Concrete: Avant-Garde Poetry Since the 1960s*, Amsterdam—Atlanta, GA, Rodopi, 1996, pp.247-257.

<http://www.electronicbookreview.com/thread/electropoetics/uncontrollable> (visited 10/04/06)

²⁶ Karst-Janneke Rogaar & Roel Wouters, *Matzes*, title sequence, 2004. Can be viewed as part of a montage at <http://www.youtube.com/watch?v=aPP5jx-kx0Y> (visited 16/04/2007)

²⁷ Martin, Gary, ‘Vorsprung Durch Technik’, *The Phrase Finder*, 1996-2007 <http://www.phrases.org.uk/meanings/399450.html> (visited 29/04/2007)

Matzes pattern), or may be meaningful objects (like the Audi car), but always contribute to the intended purpose and meaning of the artefact.



Vorsprung Durch Technik, television advertisement for the Audi A6, 2005.²⁸

In this Audi advertisement, the fact that the text, ‘vorsprung durch technik’, is constructed from parts of a car emphasizes the meaning and significance of the slogan. It suggests that the car is as technologically advanced as its manufacturers, and that the A6 completely embodies Audi’s ethos. Therefore, although these forms combine and rearrange to create two distinct identities, the text identity and the car identity, they convey a single overall message.

Conclusion: The Need for Further Research

Various theorists agree that kinetic, fluid and “dynamic typography, by [their] very nature, negate[s] many principles that can be applied to static typography.”²⁹ that established methods of analysis often assume typography to be static, and are inappropriate for fluid type. Fluid type has properties that static type does not. It is capable of behaviour, of performance, and of reactivity. “In this dynamic landscape, our static definitions of typography appear increasingly imperilled.”³⁰ They are inadequate to define and analyse kinetic and fluid type. Familiar methods for the analysis of typography have failed to keep pace with the development of digital technologies. They do not allow for the additional dimensions that are seen in fluid type; type which is capable of performance and reactivity, and vitally, as I have described, type which separates letter from form (type which allows a single form to present multiple letters, and vice versa). Therefore, our understanding of the nature of type, and how it may be analysed, must be modified and updated.

²⁸ Stills captured from Ephinx, *Audi A6 - Vorsprung Durch Technik*, 2006.

<http://www.ephinx.com/tvadverts/17/audi-a6-vorsprung-durch-technik-advert.html> (visited 12/04/2006)

²⁹ Specht, Heidi, *Legibility: How Precedents Established in Print Impact On-Screen and Dynamic Typography*, 2000, https://eidr.wvu.edu/files/1426/Specht_H_Thesis.pdf (visited 24/01/2007) p.10.

³⁰ Helfand, Jessica, *Electronic Typography: The New Visual Language*, 1994, from *Looking Closer 2: Critical Writings on Graphic Design*, ed. Beirut, Michael et. Al. Allworth Press, Canada, 1997. p.51.