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# The moment of unmoving

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## **The Moment of Unmoving**

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### **KEYWORDS**

animation, public screens, interfaces, film theory, sensors, movies

### **ABSTRACT**

Movies never wait they live in perpetual motion, locked in an illusion that merges a succession of static pictures into a new temporal image. If a movie stops because the projector breaks or the tape is stuck then the illusion is lost and the image collapses into its separate parts (Bazin and Gray, 1960:8). Movies move in one direction and can't respond to anything but themselves, they are governed by their own internal logic and remain unmoved by their external context.

As more screens become embedded into our physical spaces there is an opportunity for the movie to take pause and through sensors respond to its environment. Yet schedulers are stuffing the big screens with old content, movies designed for tv and cinemas. Adverts tightly cut into 30 second slots are screened repeatedly into a space where they have all day, they could take their time.

This paper will discuss examples of how a movie might pause while it waits for something to happen. Animators have used loops to bridge moments of dramatic action (Barrier, 2003). The onlookers in Popeye the Sailor (Fleischer, 1933) quiver with anticipation as they prepare for the action to unfold around them. Roobarb (Godfrey, 1974) waits in a shimmering tree, a looping construct that lives in between the edges of its drawings, an approximation of its constituent parts. The animated loop is a fixed temporal object waiting perhaps to cross over into the physical world and interact with the environment and passers by.

### **Dane Watkins short biography**

Dane is currently undertaking a practice based PhD that explores the use the playfulness in animation to critique and improve human engagement with the Internet of Things.

He has over a decade's experience of a research based, context-responsive practice that examines how conventional drawing and animation practices can be developed and shown in digital environments such as the web, computer driven installation, hand held devices and pervasive media.

Dane trained in animation at Liverpool Polytechnic (graduating in 1993), concentrating on hand drawn animation for film. Since then he has developed his work through using vector-based digital tools, undertaking commissions and international residencies, and by distributing work online. He has developed an extensive body of drawings, animations and interactive surveys that reveal audience motivations through experimentation with transactional media.

see <http://eatmydata.co.uk>

## The Moment of Unmoving

How do movies take pause, take in their environment and gossip with the passers by?

This article will discuss examples of how a movie might pause while it waits for something to happen.

I use the term movie to describe the moving image. Movie is a useful meta tag for the moving image, as well as describing film and television the term can also be used to describe an animated gif or a small screen running off a micro-computer. The term film is too medium specific and refers to the thin coating of photographic emulsion used in cinematography.

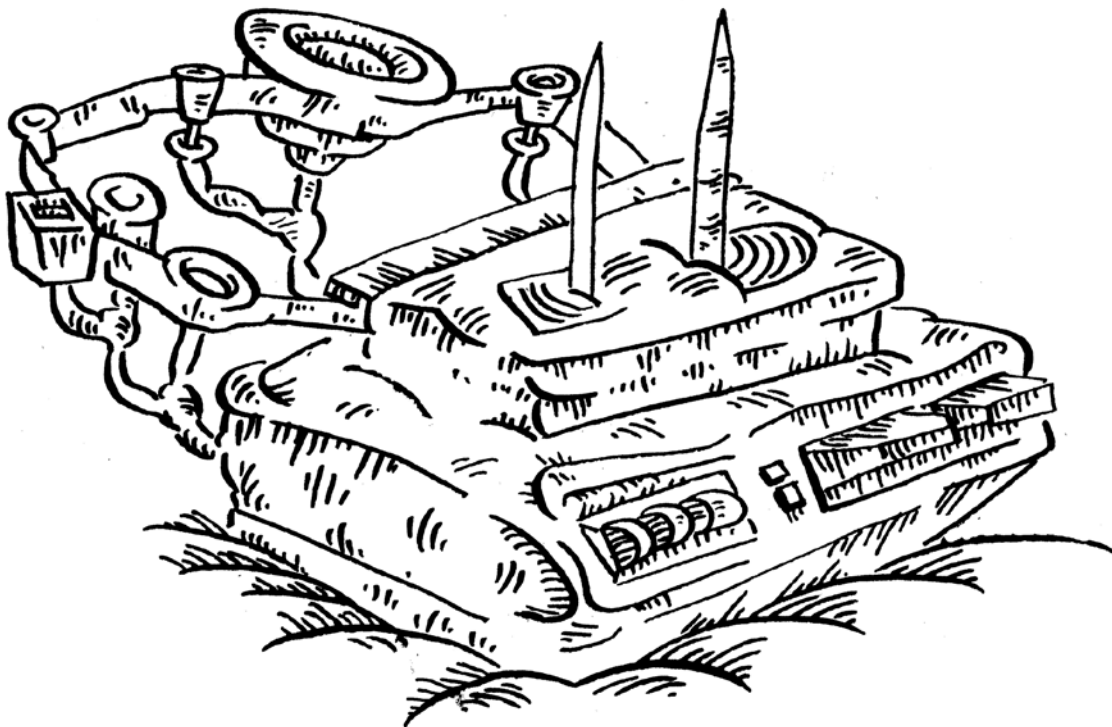


Illustration of a VHS machine by Dane Watkins

Video is a more accurate sibling word to audio but has connotations of ungainly VHS machines stretching the image beyond recognition. Movie can be used to describe a wide range of movie things such as Robert Breer's mutascopes, small sculptural animations with frames pinned around an axis like an animated rolodex.

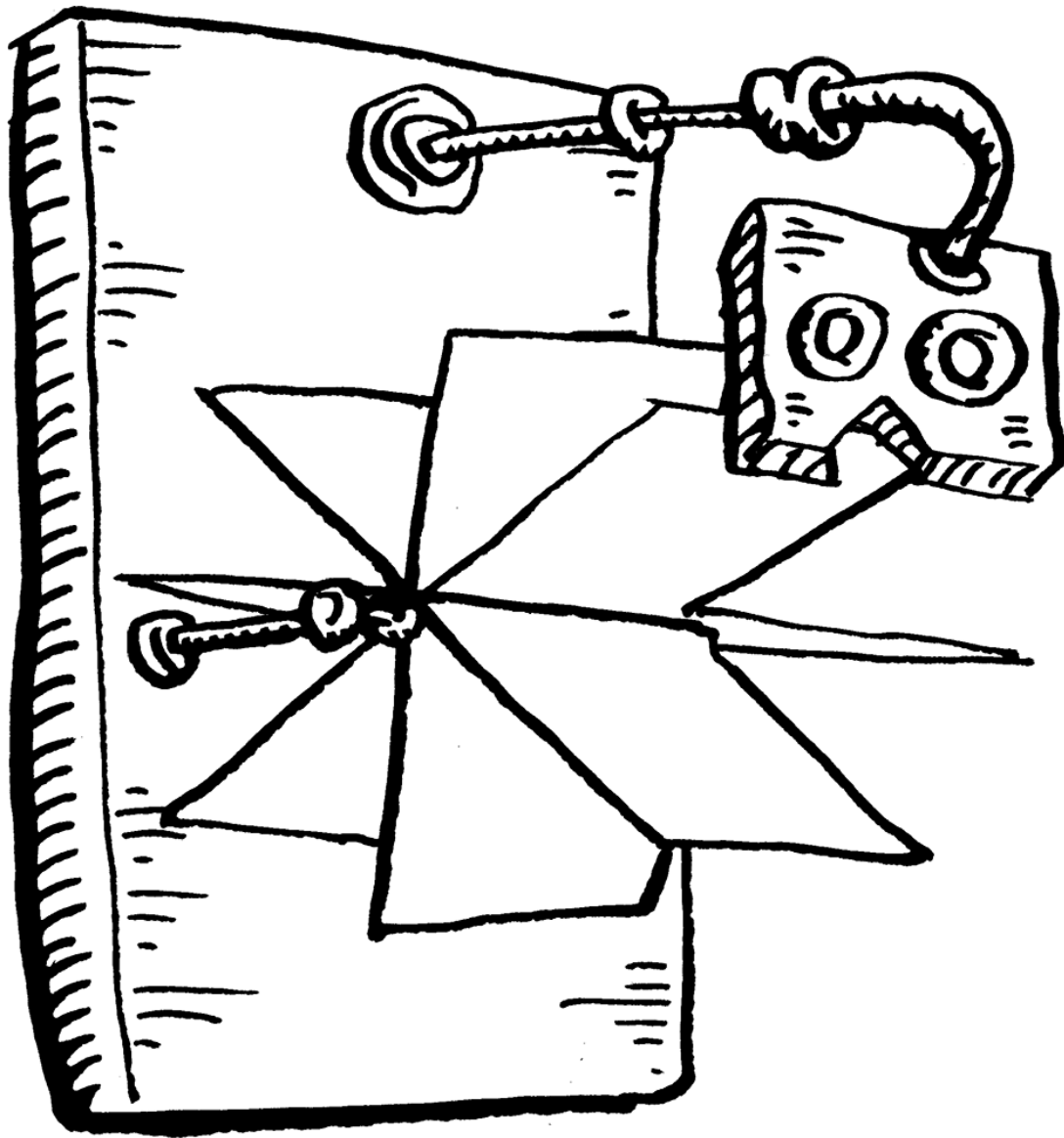


Illustration of a Breer mutascope by Dane Watkins

**So What is a Movie?**

Tom Gunning describes the moving image as a 'fusion of discontinuous instants'

(Gunning, 2014: 39) It is more than the sum of its parts, the sequence of images bring life to a new temporal image. A movie is a succession of images bundled into a moment projected in cinemas, a piece of time transmitted through television or a flicker caught in the pages of a browser.

The movie as temporal object can be demonstrated by the 19th Century optical toy the thaumatrope. A thaumatrope is a piece of card with two different images on either side, the illustration shows a bird on one side and a cage on the other, the bird is free and the cage is empty. Rotating the card fuses the two separate images and creates a third image, it shows the bird in the cage. But the bird only stays in the cage whilst the card keeps spinning, as soon it stops the bird is free and the cage empty again.

Traditionally movies cannot pause as they can never stop, they live in perpetual motion like a salmon forever swimming upstream, locked in an illusion that merges a succession of static pictures into a new temporal image. If a movie stops because the projector breaks, the tape is stuck or the space bar struck then the illusion is lost and the image collapses into its separate parts.

Film and video may have referred to non-linear ideas but the physical constraints of the medium, cassette tape and rolls of film are unable to be non-linear as they are locked into a linear sequence of events unlike the random access of computers. Malcolm Le Grice suggests that digital media is not 'confined to simple arithmetic sequence and proximity' (Le Grice, 1999) whereas film and video is dependent on its neighbours and the potency of montage.

Le Grice goes on to argue that film structures were developed to initiate a positive reflexive role for the spectator. But no matter whether the audience draws on the screen or the audiences' shadow delineates the screen size the film remains unchanged and unmoved locked into the same numeric sequence, with the same pictures sitting either side.

*Citizen Kane* (Welles, 1941) may have jumped through time but the film itself started at the beginning and ended at the end.

Gene Youngblood uses de Chardin's idea of a Noosphere 'a film of organised intelligence that encircles the earth' (Youngblood, 1970: 57) to describe the media network of film and print that conditions humanity. But film and video were one way and you can't have a telephone call with one person, a network needs a response. Film and TV fed a passive audience seated in expectation. The cinema audience was frozen by the bright lights and the TV audience soaked up the soaps in anonymity.

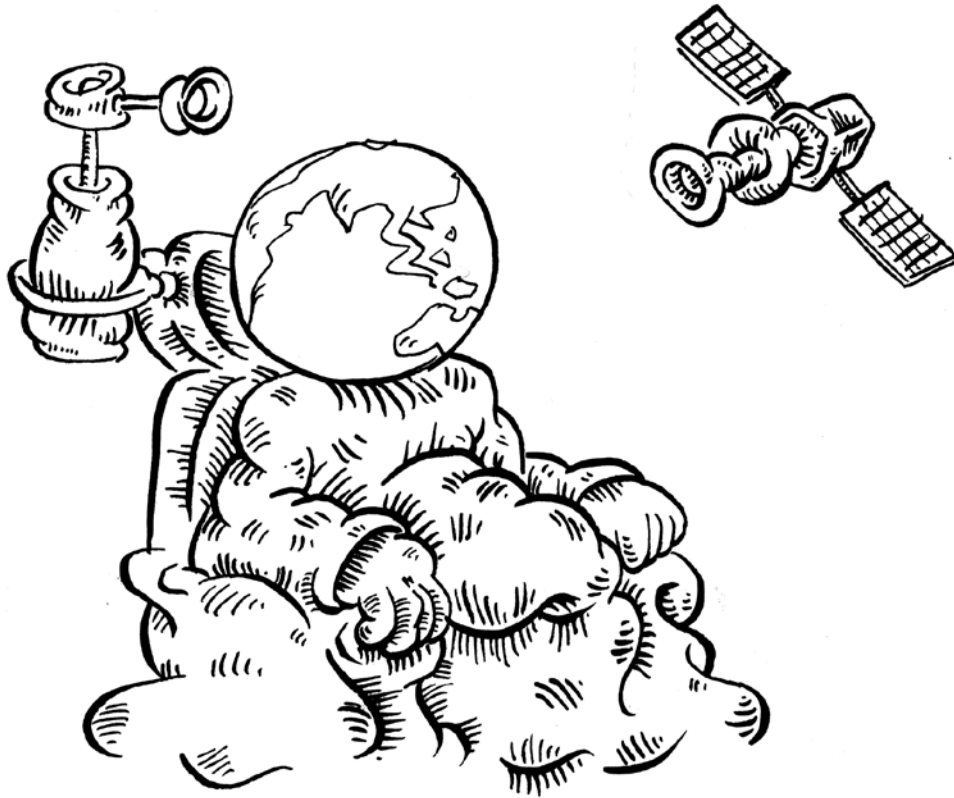


Illustration of the Noosphere by Dane Watkins

Film and video never knows where it is. The movement is always forward, always in the same direction, unable to respond to anything but itself and isolated from the network. Governed by their own internal logic film and video are unmoved by any external context and unable to respond to anything outside of themselves. Charles Foster Kane only ever dies in Xanadu (Welles, 1941) and his dying moments remain unmoved by Plymouth or the context of wherever those moments are projected.

There's no reciprocity

To bastardize Bazin film has mummified the moment (Bazin and Gray, 1960:8)preserved the action for posterity. Film and video is dead media, not dead like the Dead Media Project, a wonderful database of obsolete technologies but dead as in not live, unresponsive, unaware, a documentation of what was, an immutable memory of the past locked in a time capsule. As soon as it is committed to memory, as soon as the stock is developed it becomes a thing of the past.

So how can movies become aware of their environment?

Movies are becoming increasingly embedded into our physical environment and there is an opportunity for them to wake up and become aware, aware of where they are and aware of who is watching them. We might call them smart screens to distinguish them from the unthinking mechanical projector delivering frame after frame in a predetermined order.

Movies embedded in public spaces might be classified into two categories.

1. Movie billboard
2. Digital signage

This is a tentative classification and does not aim at a definitive taxonomy

A movie billboard is a screen showing moving images, usually adverts such as those lighting up Times Square in New York. Manovich calls them moving billboards (Manovich, 2005) but that would suggest the billboard itself was moving like a duck on a target range. Movie billboards are appearing in more places, airports are full of large movie screens and even Plymouth Train station has a movie billboard. The large outdoor screen at Plymouth University was designed to show movies although the council decreed it would be too distracting for drivers and restricted the content to still images.

While there have been some interesting interactive adverts such as the British Airways billboard that tracks planes as they fly over the hoarding and the brilliant Blinkenlights (Blinkenlights, 2008) that in 2002 turned a high rise in Berlin's Alexanderplatz into the world's biggest interactive computer, schedulers are stuffing the big screens with old content, movies designed for TV and cinemas. Adverts tightly cut into 30 second slots are screened repeatedly into a space where they have all day, they could take their time. The movies are designed for the focused attention of cinema and television for viewers channeling all their attention into a brightly lit rectangle. How does a 30 second movie work in a public space? Even the interactive adverts are in the same vein as the linear adverts. They may have a dynamic text box that changes but they usually have only a limited amount of movements.

Birmingham New Street station's magnificent new screen monitors the audience and broadcasts movies to match the demographic of the crowd (Cannon, 2016), though the crowd wouldn't be able to determine the difference. The smartness of the monitor is of a greater benefit to the advertisers in counting the type and number of people of walking within its glare than the viewers.

It would seem movie billboards have plenty of movement but very little pause

Digital signage are signs with dynamically updated information such as weather, public transit times, room bookings and adverts. They are becoming commonplace in universities, hotels and hospitals. The interfaces are built with content management systems that allow the user to create a grid of live feeds.

Dynamically updated information is usually text driven, such as scrolling news feeds and twitter updates. There is plenty of pause but very little movement. It is more difficult creating dynamically updatable moving images but not impossible as the thriving games industry can demonstrate. Most games require the focused attention of the viewer but there are interesting examples of animated games that live on the periphery of the viewers' attention, notably the Tamagotchi.

A Tamagotchi is an electronic creature that exists within its own dedicated circuit board. It is fed and cared for by its owner, and dies if the owner is negligent. It is a

movie that plays 24/7. The Tamagotchi demonstrates a way that movies might engage in public spaces.

A Tamagotchi has two principal movements. The first is the animated loop, a holding pattern that keeps the creature busy while it waits for something to happen, the loop keeps the creature alive and maintains its state of movie-ness.

The second are goal orientated movements that respond to real time information, with a Tamagotchi it is when the user interacts with the device. Clicking the feeding button triggers the feeding movement. A linear animation that plays through once and upon completion returns to the holding pattern.

Coffee vending machines have smart displays, the holding screen is the coffee cup, forever steaming, eternally promising delicious coffee and then the goal orientated movement indicates the progress of the sale and delivery of goods.

Animators have used loops to bridge moments of dramatic action, holding patterns that maintain a sense of 'movie-ness' until the story call for dramatic and linear action. The onlookers in *Popeye the Sailor* (Fleischer, 1933) quiver with anticipation as they bounce up and down and prepare for the action to unfold around them. Popeye was produced by The Fleischer Brothers whose early animations such as Bimbo and Betty Boop made extensive use of looped movements for comedic effect and to reduce the number of drawings for each film. In the opening scene of *Bimbo's Initiation* (Fleischer, 1931) Bimbo walks down the street and across three manhole covers before falling down the fourth.

The dog in *Roobarb and Custard* (Godfrey, 1974) waits in a shimmering tree, a looping construct that lives in between the edges of its drawings, an approximation of its constituent parts, waiting for the adventure to start. And filmmakers have used looped action to comment on the repetition of everyday actions, the brilliant Oscar winning *Tango* by Zbigniew Rybczyński (1980) the father of modern matte techniques builds a film through a series of layered loops. *Tango* starts with a boy throwing a ball into a room, he climbs in to retrieve the ball and the action is repeated as the memories and traces of other lives and times overlay the movement, until the movie is full of action, full of the previous existences looping through the room. The animated film *Revolver* (FilmTecknarna, 2008) is constructed from a series of looped scenes, a fish flaps up and down on a wet floor, a fisherman repeatedly reels in an eternally full catch, a photographer attempts to take a picture of a child who keeps moving round to the viewfinder

*Roobarb and Custard* was directed by Bob Godfrey and uses what has been called boiling line animation. Tracing the same drawing three times and running them on a loop produces a dynamic static image. Dan Torre argues that boiling line animation 'presents a dynamic being-state of a drawing in a vibrant form' (Torre, 2014). Eisenstein's much quoted plasmaticness he praises the unstable form of hand drawn animation 'which behaves like the primal protoplasm' (Eisenstein, 1988: 21) as irresistibly attractive and exciting.

The effect became apparent in Windsor McCays' animation *Gertie the Dinosaur* (McCay, 1914). According to the publicity McCays' assistant drew the background



'10,000' times each drawing similar yet slightly different to produce a shimmering landscape that was constantly moving. Animators of the time disliked the boiling line effect and the 'wobbly movements it produced' (Crafton and Messmer, 1982: 147). John Randolph Bray (Bray, 1914) patented the cel animation process in 1915 which eradicated the shimmering background and that process dominated the industry until the advent of computers.

Godfrey set up the animation department at the Royal College of Art in the 80s and boiling line animation is still popular within the college. It is the style of the independent animators Jonathan Hodgson and Bill Plympton. Whilst studying at the Royal College of Art Hodgson produced the film *Nightclub* (Hodgson, 1983) without traditional cuts instead the dynamism of the line morphs and merges one scene to another. Plympton used coloured pencils in *25 Ways To Quit Smoking* (Plympton, 1989) to shimmer and shake the standing character into life, and it seems boiling line animation is still a mainstay at animation festivals. It is a very filmic style that replicates the noise in the medium, the scratches and accidental marks that so impressed Len Lye to create his own experimental films (Horrocks, 2002). The vigorous and constant motion contrasts the limited animation of Hanna Barbera's television cartoons that Chuck Jones described as illustrated radio (Thompson, 1998) where characters describe the action through dialogue rather than drawing and movement. Limited animation focusses on efficiency rather than the liveness or plasmativeness of the animation, when it is still which is often limited animation is an illustration rather than a movie.

As movies start broadcasting 24/7 in fixed locations in train stations and hospitals they need to adapt and become aware of their environment. A tightly cut 30 second will be lost in a public space as the viewers dawdle or rush through the space, as they laugh or argue with each other. The well worked 30 seconds of edits will disappear in a blink.

Boiling line animation offers a way for movies to dawdle until the viewer notices them when it can change and do something different. It offers a cinematic technique to stand still and see what is happening around, a way for movies to sit within their environment.

As part of my research I have been experimenting with boiling line animation in interfaces. Falmouth Games Academy wanted a way of tracking the attendance of students in the studio. The Academy wanted to encourage students to come in every day and work with their team on the project.

We built a bar code reader that scanned their cards and logged their attendance. The student scans their card and the program checks their id against the database. At the same time as creating an efficient service we wanted to create an attractive and exciting interface that encouraged the the students to log in. The boiling line animation does more than register the students it sparkles in its own existence as it waits for something to happen. The movie is still but jittery, paused yet awake. The

dynamic style of animation shows that the movie is there, it is alive and waiting.

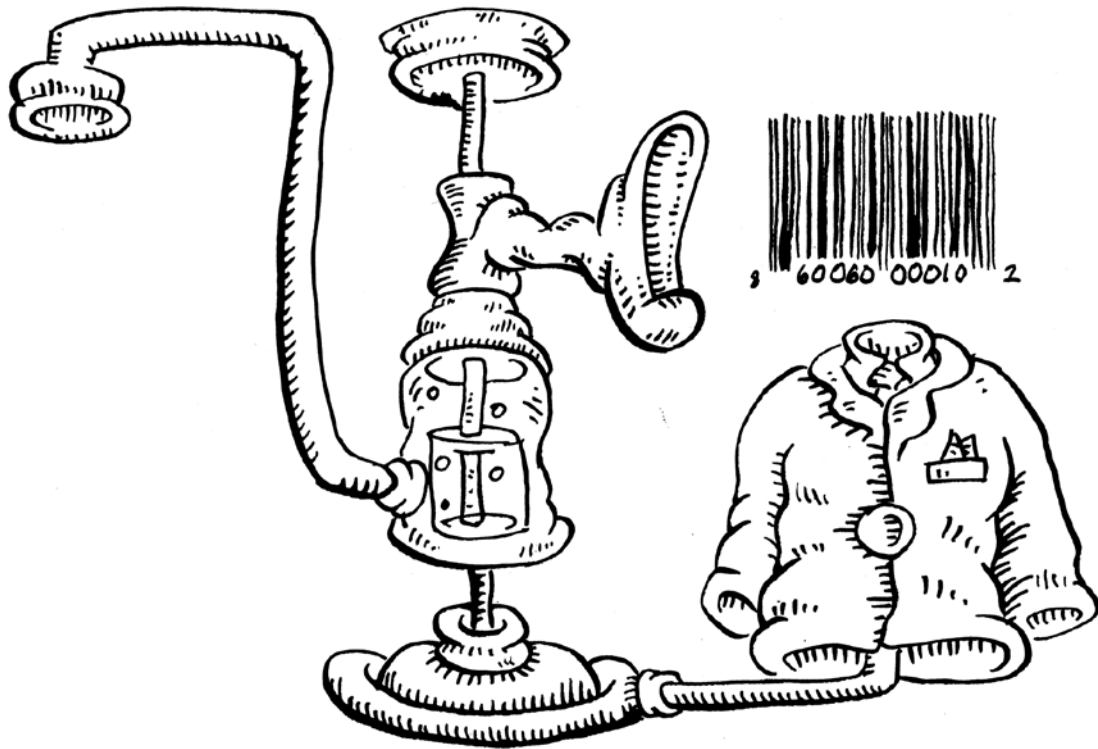


Illustration of the Games Academy Interface by Dane Watkins

This holding page, the animated stillness of the interface as it waits for a user has the potential for showing more information, the animation could incorporate the staples of digital signage such as transit times and weather forecasts. Rather than using traditional cinematic cuts *Nightclub* (Hodgson, 1983) uses the plasmaticness of animation to create a dynamic life form that morphs from one scene to another. Similarly a dynamic animation on the holding page could morph from one data stream to another, studio attendance, progress of projects, the busyness of the canteen and the shop.

To conclude boiling line animation has the potential to move while it is waiting. The animated loop is a fixed temporal object waiting perhaps to cross over into the physical world and interact with the environment and passers by, to offer a sense of wonder in the functional world of digital signage.

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