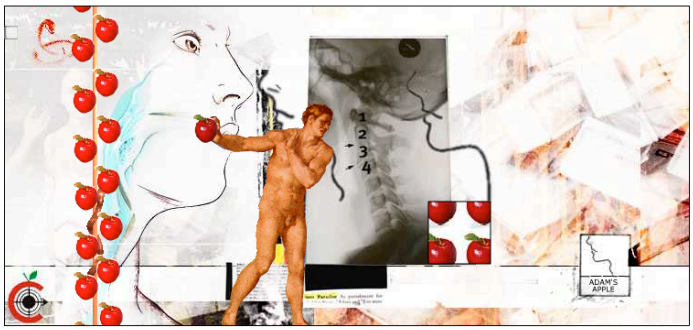
Once upon a time there was a database:
Database and narrative from a cognitive point of view

Let's play hide and seek /
I'll play God and you'll play man /
Now I'll create the meaning of your existence, /
just beyond the reach of your perception /
I'll hide it in my creation.

With this instruction that clearly demarcates agents and setting, goal and the rules of the game, David Clark's net artwork *A is for Apple* (2002)[1] begins. However, once we take a bite of the apple and enter the artwork an overall plot seems as well-hidden as the meaning of our existence. *A is for Apple* is an artwork that explores the associations and connotations of the apple. It does so by interlinking references from popular culture, religion, psychoanalysis, and cryptography, thereby establishing a database of human existence, knowledge, and perception. The way in which the artwork is organized replaces a narrative plot with the random shuffling of a search engine. It is in this clash between the narrative expectation and the database form that we shall find the artwork's statement about human existence and perception.



This paper originates in a puzzle that struck me when I first encountered this artwork - because if narration makes up a core element in how we perceive and understand the world, such as has been argued from various corners of the academic field within the last couple of decades, how should we then understand the anti-narrative logic of the database that seems to penetrate our contemporary environment, experience, imagination, and art? What are the cognitive and existential implications of this form of representation? This paper aims to illuminate the cognitive mechanisms underlying the juxtaposition of narrative and database in David Clark's net artwork *A is for Apple* and possibly in aesthetic representation more generally. My thesis is that aesthetic representation can be understood and described as mediating between a narrative urge and a database logic, an observation which especially comes to the fore in new media artworks such as *A is for Apple*.

[1] www.aisforapple.net by David Clark in collaboration with Rob Whynot, Randy Knott, Ron Gervais David Clark, "A Is for Apple," (2002), vol..

The narratives we live by

Narration has within recent decades become increasingly influential as a way of understanding human perception and representation within such diverse academic fields as sociology, psychology, philosophy, semiotics, literary theory, and history. Cognitive semantic theorists such as Mark Turner have even aimed at describing the operations of the mind as essentially narrative. In *The Literary Mind. The Origins of Thought and Language* Turner argues that: 'Story is a basic principle of mind. Most of our experience, our knowledge, and our thinking is organized as stories' (Turner i). The central concept in Turner's theory is the *parable*, which brings focus to the human ability to project one story onto another. Turner claims that this process is not merely an example of literary sophistication, but fundamental to everyday life. He finds the process of projection in everyday expressions and events and argues that our consciousness perceives everything that goes on around us as small spatial stories, which are not culturally determined but universally linked to the human body. In other words: we comprehend non-spatial objects through spatial modes of expression – the so-called 'image schemas'. For instance, an 'image schema' such as the 'source-path-goal schema' derives from the bodily experience that every time we move anywhere, there is a place we start from and a place we end up, the path being the journey in between which is determined by a direction. This leads to a metaphorical valuation in which achieving a purpose is understood in terms of passing along a path from a starting point to an end point (Lakoff 275). By regarding these schemas as universal points of reference that form the way we think, talk, and represent the world, it becomes possible to regard narrative as a fundamental characteristic of human perception.

This cognitive side of the argument for narrative also has an existential equivalent. Anthony Kerby eloquently sums up the broadness of the use of narrative as a model for human conceptualisation in his book *Narrative and the Self* (1991) by saying that:

> narratives are a primary embodiment of our understanding of the world, of experience, and ultimately of ourselves. Narrative emplotment appears to yield a form of understanding of human experience, both individual and collective, that is not directly amenable to other forms of exposition or analysis. (Kerby 3)

A core figure for the investigation of the relation between narration and self is Paul Ricœur (1913-2005). Not least in his chief work *Temps et récit* (1983-85) has he pointed to narration as the dominating cultural form, which makes the human being capable of understanding time, the world, and his/her own identity. Ricœur's point of departure is that we build another reality apart from the one directly given through myths, literature and art. It is through this other world that we attempt to understand our own, since we cannot relate to ourselves directly and unmediated, but are only capable of

understanding ourselves and the temporality in which we are situated through a cultural frame. When we construct a narrative we establish a model for understanding ourselves as subjects placed in time in the shape of a plot that makes out a sequence. Narration transforms the surrounding heterogeneous world into a plot – a construction of a whole which Ricœur describes as 'concordance discordante' – an incoherent coherency (Ricœur 13). The meeting between the reader and the narration, which orders the world and life in a sequence, makes man capable of understanding himself as a subject placed in time. This makes Ricœur argue that the identity of the human being is narrative. We understand who we are by narrating our lives as a story.

Both human perception and representation can thus be explained by narration as a conceptual model.

The database as symbolic form

Considering the popularity and agreeableness of this cognitive and existential belief in the intrinsic relation between human being and narration, it is interesting to observe how an inclination to challenge narrative sequentiality and causality by organizing the material as a database seems to pervade our contemporary environment, experience, imagination, and art. Christiane Paul highlights how 'database aesthetics itself has become an important cultural narrative of our time, constituting a shift towards a relational, networked approach to gathering and creating knowledge about cultural specifics' (Paul) and Lev Manovich has gone so far as to describe the database as a 'symbolic form' of our age, and defines it as 'a new way to structure our experience of ourselves and of the world' (Manovich The Language of New Media 219). The database is of course not a new invention. It has its predecessors in the archive, the encyclopaedia, the library, and the museum, but the advent of the computer medium and the challenges and increased possibilities that face archiving in digital databases seem to have initiated an increasing interest in this form as a conceptual model and a metaphor in art.

Manovich describes the database as a rival to narrative:

> As a cultural form, the database represents the world as a list of items, and it refuses to order this list. In contrast, a narrative creates a cause-and-effect trajectory of seemingly unordered items (events). Therefore, database and narrative are natural enemies. Competing for the same territory of human culture, each claims an exclusive right to make meaning out of the world. (Manovich The Language of New Media 225)

Although this very sharp distinction between narrative and database can be qualified (as for instance N. Katherine Hayles has done (Hayles)) the juxtaposition highlights the dynamics between these two ways of representing. What differentiates the database from narrative according to Manovich is primarily the cause-and-effect relation which is inherent in narrative but suspended in the database. Whereas in a narrative the acts and events are ordered in a *sequence*, the database

represents these acts and events as isolated moments. The narrative sequence can be causal, as Manovich here points out, but it could also be temporal. The important difference is that narration establishes these connections between the events and thereby ascribes meaning through an overall plot, whereas the database lets the moments flicker in sequenceless simultaneity.

If we accept this identification of the database as a prevalent cultural form that opposes narrative, we must ask ourselves whether the database likewise has a point of reference in human cognition and perception or whether we are dealing with a cultural form of representation that operates on another level than our supposedly fundamentally narrative way of perceiving things. In other words: is there a cognitive basis for the database as symbolic form?

The concept of *autopoiesis* might prove an adequate point of departure for this consideration. Autopoiesis literally means self-creation and was originally coined by the two Chilean biologists Humberto R. Maturana and Francisco J. Varela in the 1970s with regard to the biological cell. An autopoietic system is characterized by being an autonomous and self-maintaining unity which reproduces itself. It stands in opposition to an *allopoietic* system which produces something other than itself. According to Maturana and Varela the nervous system is such an autopoietic system. Through the theory of the autopoietic system Maturana and Varela aimed to answer questions of what life and cognition is. The answer at which they arrived was that life is not a property of a system's parts, but emerges as a result of the interaction of its parts, and cognition is the process of this interaction (Maturana and Varela). Regarding cognition as a process of interaction between the parts of a self-generating system seems an interesting analogy to the implications of the database form which forsakes sequence in favour of simultaneity.

A is for Agency and Autopoiesis

The opposition between narrative and database becomes especially urgent in new media artworks, since the very medium in which these artworks are created seems to further the database logic. I shall attempt to illuminate the questions raised by the juxtaposition of these two competing modes of perception and representation by taking a closer look at the net artwork *A is for Apple* as an example of what I shall call a 'database narration' in contemporary new media art. *A is for Apple* represents a mediation between narration and a database logic that manages to discuss human subjectivity as situated in the gap between agency and autopoietic systems, thus problematising how human existence can be perceived and represented.

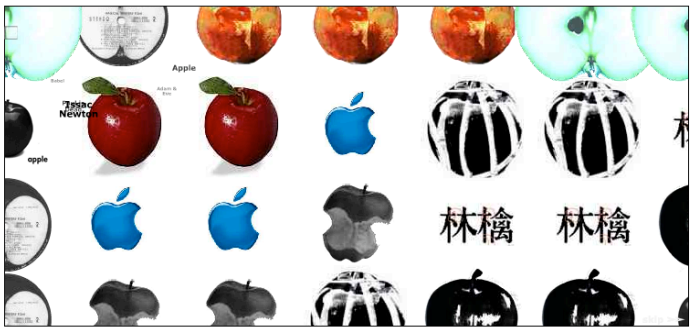
A is for Apple is created in Flash and consists of 61 collages of sound, image, and text which each has a headline and is linked associatively to other entries. For instance the collage 'Apple', which is the starting point of the artwork, gives the user the choice between links to: 'Apple Computers', 'Ringo', 'Isaac Newton', 'Snow White', 'Adam and Eve', 'Apple Records', and 'The Big Apple', all of which lead on to other links and so forth. In this way a database

experience is established that contains information about popular culture, religion, the history of cryptography, psychoanalysis, and our understanding of language. The individual records in the database display some pieces of information on the relevant topic by using collages of intersected images that can be made to move or disclose other images. These images are accompanied by electronic sounds and rhythms, and sometimes of a voiceover, the content of which is not always David Clark's own, but taken from different secondary sources.[2]

The relations between the entries are established through association. There are no temporal or causal connections. 'Snow White' for instance leads on to 'Psychoanalysis' and 'Alan Turing' as well as back to 'Apple' again. The association is often not apparent from the links themselves. Unless you know that Alan Turing died from eating an apple injected with cyanide the connection to Snow White is not obvious, but it is revealed by following the link. As Gary Kibbins comments in the essay "A is for Apple", which accompanies the artwork, the experience of the artwork in many ways resembles a search on *Google* (Kibbins 4). There seems to be no overall plot to penetrate. The artwork is rather made up of a countless amount of visual and verbal references to human knowledge that create a field of simultaneity.

What is especially interesting about *A is for Apple* is that although it seems to subscribe to a form of representation which does not have a protagonist, nor any temporal or causal form of sequence, it claims to be saying something about the nature of human existence. To explore the way in which this is done, let us look at the intro to *A is for Apple*: First we see a montage of shifting images of different alphabets, numbers, human brains, and of course apples, all of which are accompanied by disparate electronic sounds.

[2] See 'Attributions' in the 'About' section of the artwork for references.



The voiceover repeats the title of the work ‘A is for Apple’ repeatedly; then says:

> Let’s play hide and seek /
> I’ll play God and you’ll play man /
> Now I’ll create the meaning of your existence, /
> just beyond the reach of your perception /
> I’ll hide it in my creation.

After this the sounds begin to form a repetitious rhythm which almost becomes a catchy tune, while the images keep flickering restlessly until the first collage – that of the apple - comes on and the user has to engage by clicking on the image. What is obtained with this introduction is first and foremost that some ground rules for the reception of the artwork are set, which make the artwork readable and not just a disconnected pile of references. This is done by establishing the artwork as a *game*. Now, a game cannot be directly equalised with a narrative, as game theorists such as Espen Aarseth have pointed out.[3] However, the voiceover gives the viewer a role and a goal, thus introducing a notion of agency by turning the viewer into a player, which changes the perception of the visual stimulus which he/she is given. This change is furthered by the change in the audiovisual stimulus that moves from disparate sounds to a rhythm as soon as the parts are cast. The shifting images are still a row of disjointed images without a narrative sequence, but acknowledging the existence of the viewer as part of the artwork re-establishes a sense of agency, because the viewer is now on a search for a hidden meaning.

Looking at the volume of *AI and Society* on ‘Database Aesthetics’ from 1999 (Vesna et al.) the mention of agency is very dominant. This seems at first puzzling considering the dismissal of agency that the database form represents. However, the agency here referred to is that between the user and the artwork. Notions of agency have thus shifted to another level compared to narrative. It is not a question of immersion and identification with an acting subject *within* the artwork. The viewer has become the protagonist of the artwork, and it is thus up to her whether a narrative is created from the

[3] A discussion which I will not be able to go into in this paper in which the emphasis is on the database. See for instance Espen Aarseth, Cybertext. Perspectives on Ergodic Literature (Johns Hopkins, 1997). and Marie-Laure Ryan, "Narrative across Media: The Languages of Storytelling," (2004): 361-77.

available data material or not. This seems in keeping with the implications of autopoiesis, since the interactions within an autopoietic system can naturally only be observed and described as a whole from an external perspective.

The question of *agency* is an aspect of the difference between narrative and database which comes to the fore in *A is for Apple*. The whole concept of narration seems bound to the idea of an acting subject that enters a world and participates in actions and events that change this world. It is much harder to imagine a narrative without agents, than it is to imagine a database without agents. Since the database is not in the same way dependent on change, it is also not in the same way dependent on an acting subject. An explanation for this can be found in the sociological interpretation of the concept autopoiesis. Varela and Maturana's term has been adopted and developed by the German sociologist Niklas Luhmann. Luhmann describes social systems as autopoietic systems consisting of communication – not subjects or individuals. According to this conception, the self is not something already given. It is a product of the co-operation of the many local activities and is conceived of as a process rather than a precondition. In *In 1926. Living at the edge of time* (1997) Hans Ulrich Gumbrecht uses Luhmann's concept of autopoiesis when he discusses spaces of simultaneity as a way of representing the past that avoids the sequentiality and human agents that come with narrative representation (Gumbrecht 421). When Gumbrecht replaces the agency of the subject with autopoietic systems, it is because his project is that of generating an understanding of the year 1926 by bringing to mind all of the arrays, cultural codes, and code breakdowns that are potentially present at a certain historical time. He wants to replace sequence with simultaneity, and subsequently system must replace subject. Simultaneity cannot be combined with subjectivity because subjectivity presupposes a sequence in so far as an agent takes action and does something in a world: 'in the absence of a subject and its actions, the sequentiality of historical time becomes a space of simultaneity that does not allow for any relations of cause and effect' (Gumbrecht ibid.). In that sense *In 1926* is an example of the database logic at work and relevant in this context, because it illuminates the differences between narration and database. The way in which the data material is organized in *A is for Apple* means that the artwork stands forth as a field of simultaneity that resembles what Gumbrecht is doing in *In 1926*. Whereas Gumbrecht creates his field of simultaneity around the year 1926, Clark does it around the concept of the apple. The result is the same: sequence and acting subjects are avoided, and the representation appears as a pulsating field of correspondences. The artwork thus resembles an autopoietic system that generates itself through the interaction of its parts. The people to which the artwork refers, such as Yoko Ono or Alan Turing, are not acting subjects with which we are invited to identify. They appear as communication – elements of information.

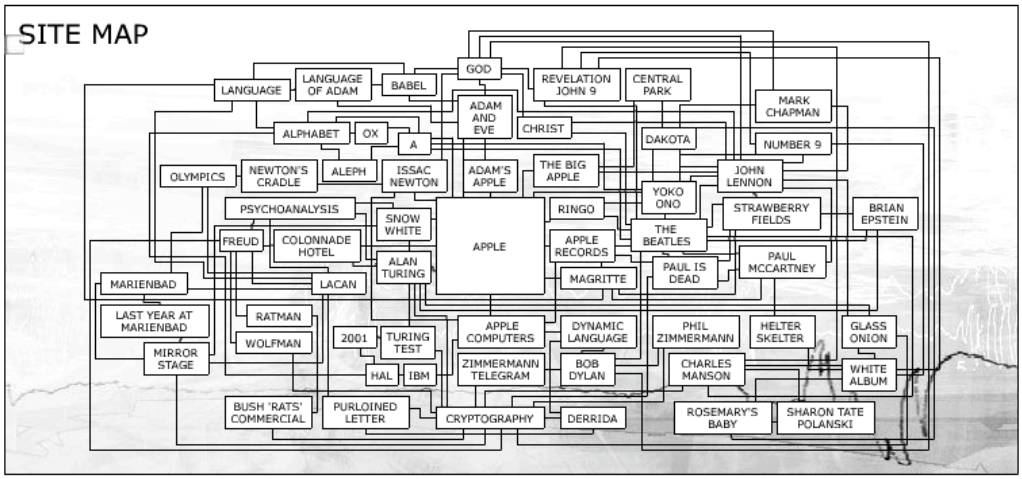
From storyteller to database

Another significant result of the intro is the establishment of a narrator who takes on an apparently omniscient perspective by volunteering to play God. The introduction of a narrator, especially represented as a voice which gives storyteller connotations, seems to imply the existence of a narrative and a plot which the narrator controls. Nonetheless, once we enter the artwork after this preliminary introduction, we are again faced with the incongruent data material that aborts sequence and constructs a field of simultaneity around the apple. Whenever there is a voiceover in one of the collages, it is the same voice which invited us to participate in his game at the beginning, but there is nothing to indicate that these are privileged statements or interpretational keys.

What we see in the ongoing negotiation between narrative and database is a clash between a conception of the self as an interpretational entity and a self-generating process. The representation of the self that the database can give is not that of an acting entity, but as a row of moments. The pleasure connected to narrating your life and thus assembling the disconnected material into an 'incoherent coherency', which Ricœur points to, is suspended in the database. The incitement to order the world as database responds to impulses that do not stem from a wish for coherence. Manovich might be on the scent of why the database feels like a representative form for the human being of the twenty-first century when he writes:

> For me, the real challenge of data art is <u>not</u> about how to map some abstract and impersonal data into something meaningful and beautiful – economists, graphic designers, and scientists are already doing this quite well. The more interesting and at the end maybe more important challenge is how to represent the personal subjective experience of a person living in a data society. If daily interaction with volumes of data and numerous messages is part of our new "data-subjectivity", how can we represent this experience in new ways? (Manovich "Datavisualisation as New Abstraction and Anti-Sublime" 13)

A is for Apple seems to give one possible answer to Manovich's question.



In the relation between the viewer and the narrator an aim is introduced which is to find 'the meaning of our existence' that is said to be hidden beyond the reach of our perception. On one hand it could be argued that this 'meaning' is beyond our perception, because the artwork presents its material as a database and not a narrative: the database form 'hides meaning' because it opposes narrative representation as our innate way of perceiving and experiencing the world. This would be the argument of a narrative approach to the artwork. On the other hand one could argue (as Manovich seems to imply) that a database artwork such as this represents our experience of contemporary society - in which there is often more disparate data than sequence - more adequately than a narrative. In which case it is the narrative that is responsible for concealing meaning.

As an artwork *A is for Apple* plays with the suggestion that it as a *representation* (be it a narrative or a database) supposedly hides something which we are not able to grasp. This consciousness of its own construction is not least shown by the Janus-faced position of the narrator who simultaneously refers to the artwork in its entirety as his 'creation' and renounces a privileged overview in the database itself. In a certain way the narrator's fall from the omniscient godlike viewpoint he ascribes to himself at the beginning and the reduced role he has in the database, re-enacts the biblical Fall of Man that the apple connotes. It is in this oscillation between a privileged overview and being immersed in data that I believe that we find the artwork's reflection on what human existence and perception are. Both stand forth as situated between agency and autopoiesis; between being an acting subject and being part of a complex system of self-generation; between perceiving the world as sequence and perceiving it as a field of simultaneity.

Conclusion

The two central concepts at work in this paper are *perception* and *representation*. It is in the fluctuating field between these two that I have aimed to capture the way in which human consciousness is reflected in an artwork such as *A is for Apple*. Art gives us an insight

into the intricate relation between perception and representation, because, as Ernst Cassirer eloquently puts it in *An essay on Man*:

> The forms of art […] are not empty forms. They perform a definite task in the construction and organization of human experience. To live in the realm of forms does not signify an evasion of the issues of life; it represents, on the contrary, the realization of one of the highest energies of life itself. We cannot speak of art as 'extra-human' or 'superhuman' without overlooking one of its fundamental features, its constructive power in the framing of our human universe. (Cassirer 167)

Narration and database provide two such forms which both have a foundation in human perception and cognition and which both provide powerful ways of representing human existence and subjectivity. The advent of digital media seems to emphasize the database form, which provides a reflection of a society which immerses its citizens in data, but it also shows how hard - if not impossible - narratives are to evade. *A is for Apple* is an artwork that on one hand stands forth as a database avoiding notions of sequence and acting subjects. On the other hand it creates a relation between a narrator and the viewer, thus re-establishing a notion of agency. In this way the mediation that goes on between narration and database in *A is for Apple* creates a discussion of human subjectivity as situated in the gap between agency and autopoietic systems, thus problematising how human existence can be perceived and represented. [4]

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[4] This paper was presented at the REFRESH conference, First International Conference on the Media Arts, Sciences and Technologies held at the Banff Center sept 29-oct 4 2005 and co sponsored by the Banff New Media Institute, the Database of Virtual Art and Leonardo/ISAST.

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