Screens "As Representation" and Screens "As Simulation" in Mainstream Cinema Detection

Between Blade Runner (1982) and Splice (2009)

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ABSTRACT Detection in contemporary genre films is in the process of being transformed: viewers see less and less of moving, traveling, and active human bodies entering in interaction and exchanging words. Instead, what takes up a significant part of film time is the view of computer screens, with digitally stored and retrieved traces, meaningful for detection, playing the lead role. One result of this type of detection on screen – rather than detection in the streets or on murder scenes – is that detection is (re)presented as a process happening on the human-computer interface. With reference to Lev Manovich the article asks how the "illusion of navigating through virtual spaces" is recreated, when the context of such an illusion is filmic diegesis defined by genre rules (in this case: detection films), where "the virtual spaces of the screen" should have a direct effect on "the real spaces of filmic diegesis"?

KEYWORDS Detection films, screen, representation, simulation, *Blade Runner, Gattaca, Minority Report, The Girl with the Dragon Tattoo, Splice,* Lev Manovich, diegesis

Topic and Questions

Detection in contemporary genre films is in the process of being transformed: viewers see less and less of moving, traveling, and active human bodies entering in interaction and exchanging words. Instead, what takes up a significant part of film time is the view of computer screens, with digitally stored and retrieved traces, meaningful for detection, playing the lead role. They may take the form of computer codes and computer graphics, word documents, scientific graphs, photographs or videos and sound samples. One result of this type of detection on screen – rather than detection in the streets or on murder scenes – is that detection is (re)presented as a process happening on the human-computer interface. Since more and more of our activities appear situated, (re)presented and conceived of as happening and existing in the realm of this interface, we can not be surprised that a specific and most iconic activity of mainstream cinema, detection, is also undergoing the same transformation. However, the human-computer interface is a complex and complicated temporal and space continuum, and its inclusion in mainstream-type filmic diegesis creates new situations open for

interpretation, situations certainly not devoid of metaphorical and/or allegorical undercurrents.

A human figure in front of a computer screen: this is a situation and view hardly spectacular in itself, the less so if compared with truly action- and excitement-packed sequences in films about detection in real or science fiction environments. Still, the human figure searching in front of the computer screen is but a specific representation of the topos described by Lev Manovich in *The Language of New Media*, and as such showcases many aspects of how we are able to conceive of our digitally interconnected human existence: "It is by looking at a screen – a flat, rectangular surface positioned at some distance from the eyes – that the user experiences the illusion of navigating through virtual spaces, of being physically present somewhere else or of being hailed by the computer itself. If computers have become a common presence in our culture only in the last decade, the screen, on the other hand, has been used to present visual information for centuries – from Renaissance painting to twentieth-century cinema."[1] Based on this observation of Manovich, my working research question may be formulated: how is the "illusion of navigating through virtual spaces" recreated, when the context of such an illusion is filmic diegesis defined by genre rules (in this case: detection films), where "the virtual spaces of the screen" should have a direct effect on "the real spaces of filmic diegesis"? As we know, the detective watching the screen needs to advance the narrative search by interacting with the screen, and while "having the illusion of navigating through virtual spaces."

It is interesting to signal that the narrative-thematic entity of a human figure detecting via a computer screen and "navigating through virtual spaces" may be considered an actual, although specific realization of the conception that space is conditioned by the user's interaction with it. In Per Persson's formulation: "'Space' is thus not a static entity, but a constant activity and a negotiation between an external reality and cognitive/motoric work performed by the mind/ body complex (as well as socio-cultural expectations on space). Space is not objectively 'out there' nor totally 'in here', but in-between the two."[2] The analyses of filmic sequences below fully fall into step with such an idea, since these sequences may be considered as trials in an experimental environment on how space becomes "a constant activity and negotiation between an external reality and the mind/body complex."

In order to make operational this general and complex direction of thought, I have chosen sequences when characters actively involved in a wide range of search and detection for information sit/stand in front

of computer screens, and center their specific activities on the computer screens, as well as in the interaction with these screens. The examples analyzed span the period of the years from 1982 (starting with *Blade Runner*, and on to *Gattaca*) and up to 2009 (*Minority Report, The Girl with the Dragon Tattoo, Splice*). This is roughly that period of film genre history that coincides with the advancement of digitization – first introduced in the field of special effects and sound technique, then conquering image-making, as well as the building up of the narrative-thematic universe, and currently distribution too –, a phenomenon the significance of which cannot be overstated concerning moments of detection performed on and through screens rather than while moving on the streets.

The categories of analysis employed with the aim to offer a generalized theoretical approach of the filmic situations of the mentioned kind are identical with three classifications and/or concepts from filmic narrative theory, and the aesthetic description of digital media, respectively. First, the differentiation between the diegetic onscreen, the diegetic offscreen, as well as the extra-diegetic space (and context) – as presented by David Bordwell in *Narration in the Fiction Film* (1985), but also Thomas Elsaesser and Malte Hagener in *Introduction to Film Theory through the Senses* (2010) – is invoked to describe specific filmic sequences. These space-types are also correlated with the physical space of the detective and the virtual world of the computer screen. Second, the differentiation between the conception of screen as representation and the conception of screen as simulation in Lev Manovich's *The Language of New Media* is used, and the temporal advancement from screen as representation to screen as simulation – suggested by Manovich as coinciding with the procession from pre-electronic media (painting) through electronic (television, film) on to digital media – is being partially questioned, at least based on the mainstream cinema examples examined. The final critical observation employed in the analysis is that of Sean Cubbitt, according to which "many aspects of digital media cannot be sensed": in this spirit the suggestion is made that such aspects "of digital media which cannot be sensed" need to be metaphorically and/or allegorically represented in specific filmic situations when a human figure is watching and searching (through) a computer screen, and some specific examples are presented in this respect.

Diegetic and Non-Diegetic Spaces: The Detective and the Computer Screen

The idea that narrative fiction films create diegesis and may be characterized as having diegetic worlds is a commonly accepted one. David Bord-

well gives the following short definition: "'Diegesis' has come to be the accepted term for the fictional world of the story."[3] However, terms such as "diegetic off-screen space" and "non-diegetic sound" show that the diegesis or the fictional world of the story is not seamless; it has its holes and folds. This question is also addressed by Thomas Elsaesser and Malte Hagener in their *Introduction to Film Theory through the Senses*: "The concept of 'diegesis' ... was originally used in narrative theory to distinguish between the particular time-space continuum created by narration and everything outside it."[4] Elsaesser and Hagener also use terms such as "non- or extra-diegetic levels of the 'world' of the film," with the "the world of the spectator ... also [being] extra-diegetic."[5] Off-screen space, non-diegetic sound, extra-diegetic levels of the world of the film: such are the holes and folds that interrupt and withhold the diegetic process.

Off-screen space and extra-diegetic levels are two concepts of particular interest for the narrative situations analyzed: detectives watching and searching through screens they face, with the diegesis showing a human figure and a machine, and the screen possibly opening on off-screen and/or extra-diegetic spaces that might advance the detection. In a concise formulation of Bordwell, who paraphrases Noël Burch, off-screen space (and non-diegetic sound) refers to the following elements of filmic diegesis: "volume and acoustic texture world: these regions comprise diegetic off-screen space. Noël Burch has itemized them: the spaces beyond the four frame lines, the area behind the camera, the space 'beyond' the horizon. It is evident that editing and sound contribute to the construction of off-screen space."[6] The specificity of film screen compared to other types of screens, in our case, computer monitors, becomes even more evident if we evoke the comparison of off-screen spaces in the case of film, and respectively computer interface. Per Persson observes that in cinema – which he also names "realistic space" in contrast to the "abstract space" of interfaces –

> the space "stretches out" beyond the frame; concepts of left-right/up-down off screen space are meaningful; objects look and behave more or less like everyday objects. However, many (if not most) interfaces are not realistic in this sense ... The space off screen (right-left or below-above) does not contain anything in particular and does not trigger any particular off-screen space expectations. Everything of interest is contained within the frame. The landscape does not "stretch out" into the distance in any direction.[7]

Thus the particular moments of detectives searching through screens may be also regarded as full with the tension of resolving the opposition

between the "realistic screen of cinema," where off-screen space is full with meaning, and the "abstract space of interfaces," where off-screen is devoid of meaning.

To this differentiation stemming from the idea of (filmic) diegesis and due to the particular narrative-thematic situation analyzed we need to align the observation of Manovich too: "a screen's frame separates two spaces that have *different* scales – the physical and the virtual. Although this condition does not necessarily lead to the immobilization of the spectator, it does discourage any movement on her part ... ."[8] Thus we may say that in the analysis of filmic sequences when human figures watch computer screens in order to gather information we have to work with the concepts of onscreen diegetic space, off-screen diegetic space, extra-diegetic space, but also the physical space and the virtual space as defined by the frame of the screen and the difference(s) in the scale of representation.

A sub-question to be addressed is referring to relationships possibly conceived of between the screen – as a framed surface focusing the most dense sort of information within the actual scene, and also off-screen, possibly extra-diegetic space – and the diegetic world of the films – which are classically constructed, Hollywood-type narratives, films about search and detection. What happens with the amount of dense and structured information on and of the screen: does it remain "entrapped" on the virtual, thus extra-diegetic (or at best: off-screen) space of the screen, as a non-living trace, or does it flow over to the outer, "first-level" diegesis so to say, the physical space, incorporating and coming to life there? This question may be also formulated as how should we imagine computer screens as surfaces for search in mainstream contemporary movies the narrative of which revolves around detection: as paintings, as mirrors or as passageways?

The differentiation between the conception of screen as representation and the conception of screen as simulation in Manovich's *The Language of New Media* is being built upon three types of screens: classical, dynamic and real-time ones. In Manovich's own words: "In my genealogy, the computer screen represents an interactive type, a subtype of the real-time type, which is a subtype of the dynamic type, which is a subtype of the classical type... . [T]he classical screen displays a static, permanent image; the dynamic screen displays a moving image of the past; and finally, the real-time screen shows the present."[9] Since these categories cannot be fully identified with how computer screens play their roles in the diegetic and the extra-diegetic spaces of the analyzed filmic se-

quences, a small correction is introduced in suggesting that screens may be regarded as paintings (or Manovich's classical screen), as mirrors (the real-time screen of Manovich), and as passageways (the dynamic screen of Manovich, but open for different temporalities and spatialities, not just the past).

If we consider computer screens to resemble paintings then these become imaginary representations that are safely limited from onscreen diegetic space, and though not accidentally in the scene, do not hold the power to enter diegesis except as aesthetic objects hanging around: "the screen ... [is] a window into the space of representation that itself exists in our normal space."[10] In this case, a theoretical approach based on intermediality and not convergent relationships between different media in our digital age may be argued for concerning the view of the digital embedded in the specific scenes of mainstream cinema detection. If computer screens are conceived of as mirrors, they become surfaces that allow for the creation of a human/non-human interface, where the boundary between human and non-human, or first-level diegesis and n-level abysmal structures, or diegetic onscreen physical space and virtual off-screen, or virtual non-diegetic space, is visibly, though not actually permeable. And finally, in some cases the computer screens used for search and tracing – and replacing the physical reality of streets and crime scenes – turn out to be not-so-secret, not-so-hidden passageways to other first-level diegeses (which are extra-diegetic compared to the detective watching the computer), where parallel, simultaneous lines of action take place: in such cases we may need further clues in order to assess their importance in the overall narrative architecture (such as screen time devoted to each of them for example).

In *Blade Runner* (Ridley Scott, 1982) a retired policeman is forced to find and exterminate artificial human beings known as replicants, who are escaping and running off from their space stations to Planet Earth. In a famous sequence, Deckard, the detecting figure is analyzing a photograph he found at the replicants' place of living. The analyzed photo, covering the screen of Deckard's computing device, is a shadowy medium total profile view of a table full with objects, on the right faraway end of which there sits a male figure, his face in darkness – possibly the runaway replicant by the name of Leon. According to my main argument I suggest that this photo on the screen and the depicted diegetic situation – a detective examining objective evidence on a screen – might be considered as forming a computer-human filmic interface mainly due to the screen representation influencing and flowing over the first-level

diegesis, an idea developed below. At this point it needs to be mentioned that the photograph of the replicant and Deckard's actual filmic situation strangely resemble and mirror each other: the table in front of the sitting Leon and the table in front of Deckard have similar objects placed on them (Fig. 1), and both Leon and Deckard sit in relative darkness compared to the objects in front of them.

Deckard sits opposite a computing device that seems to be a mix of a scanner, a printer, a computer and a television set, on which he performs the analysis of the found photograph. The device is governed by Deckard's voice, and he quarters, zooms in and out on the originally printed photograph introduced, up to the point when, among details reminiscent in their figurative manner of old Dutch masters, a new figure, unseen up to now in the mentioned setting, appears: a female replicant known as Zhora. This screen is an elegant yet hardly noticeable device in the bachelor detective's flat, almost disappearing in the low-key, brownish atmosphere. While to a degree it can be considered a mirror, the surface qualities of the dissected photo are reminiscent of paintings, and it is certainly the passageway to a formerly existing secret world, when all the replicants were still united and on the run. That this computer screen in *Blade Runner* is a passageway to an equally important, yet different diegesis is also suggested by the last element Deckard discovers on the analyzed photograph: the fake scales of which club dancer Zhora's shawl is made. This scale emerges as an actual object in the first-level diegesis of Deckard's drunk and motionless detection too, thus it becomes the next element that will advance the investigation for the rebellious replicants, among them Leon and Zhora. In this respect we may say that the (computer) screen opens on another diegetic universe, and that is where the diegesis – seemingly "first-level" up to now – will turn to unfold.

A diametrically opposite situation is observable in Andrew Niccol's 1996 *Gattaca*, where computer screens are used to identify employees at a high-security space-research station in the future, but biological samples such as blood or urine are also tested during identification. The formalized, uniform identity signaled by the computer-generated photographs takes hold of the hero character, Jerome, a genetically deficient young

man who dreams of becoming an astronaut in spite of his bodily shortcomings. In his physical reality he undergoes all kinds of terrible treatments and operations to pursue his dreams, also overtaking the identity of a crippled former "superman," Eugene, to consequently conform to the image the computer screen is showing. In a key sequence, "updated" and "tuned" Jerome provides Eugene's urine sample as an entrance-level data for a crucial interview to participate in a space mission. After the sample is accepted by the machinery, a computerized photographic portrait of Jerome-Eugene appears on the small blue laptop screen, which is positioned as a tiny, but essential object in the laboratory (Fig. 2). In the countershot we see Jerome as a uniform space-station clerk (Fig. 3), who has achieved his lifetime-dream: adequately identified by screen and laboratory, he might join the mission. Search in this case is for proving the identity of the diegetic body (Jerome's tortured flesh) and on-screen image (Eugene's stored data) in the most literal sense: the human-computer filmic interface (Jerome opposite his digital photo based on Eugene) is a membrane. Thus in the fictional world of *Gattaca* the computer screen becomes a mirror of diegetic reality because the protagonist in the diegetic reality is ready to change until he conforms to the image on the computer screen as if that was a mirror. In contrast, in *Blade Runner*, and especially in the analyzed sequence, what we are made aware of is that the computer screen is also the pulling or directing force in what concerns the process of investigation: the significance of Zhora's fake scale emerges at once with its being represented on the brownish, sound-governed computer screen.

In Steven Spielberg's 2002 *Minority Report* the computer screen is governed manually and through sensors by the chief detective figure who works to prevent crimes to be committed rather than detecting for crimes already done, so the science fiction environment is as pronounced as in *Blade Runner* or *Gattaca*. The computer screens in *Minority Report* clearly leave the representational model suggested by the functions such as paintings and as mirrors, and turn into passageways to alternative futures, the existence of which is depending on the skillfulness of the detective. Their design, as well as level and mode of interactivity differs from what we have seen in the previous examples: here the computer screens – as objects in the first-level diegesis – look like translucent window panes hanging horizontally, resembling air or water drops as for their texture and mode of existence. They are easy to manipulate, information may be organized and grouped, or processed through hand gestures and also voice, the screens may be turned off and seamlessly integrated in the background, or they may shine full with information (Fig. 4). The content of these screens is made up by short videos, recalling real-time television or web log transmission, only coming from the future, and in the detective's office (the diegetic world of the film) they are considered representations – a feature otherwise suggested by their beaming, truncated, not wholly satisfying visual and auditive qualities. In the opening sequence detective Anderton is manipulating a series of images that show a quiet morning in a stereotypical suburban home: mother and son preparing for school, father rushing to work. The detective's dark, futuristic office has a tense atmosphere, at first in stark contrast to the "transmissions" on the screen: however, the suburban home videos beaming on the air-like horizontal computer screens turn into a possible diegetic world (where a murder is taking place), only in future tense.

In the mentioned sequences from *Blade Runner* and *Gattaca,* the representations on the computer screens – the digitized print photo and the

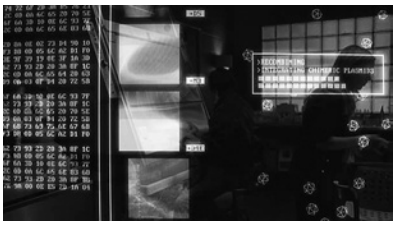
digital portrait photo – ensure the figures in search that their direction pursued in the diegetic detection (for the scale and replicant Zhora in *Blade Runner*, and for his own better self in *Gattaca*) are the right ones that need to be pursued further. The difference in scale observed by Manovich is fully visible and even accentuated in both cases, contributing to the differentiation between filmic diegesis as real world separated from computer screen content as virtual worlds to be navigated. In *Minority Report* difference of scale is much less accentuated, the design of the computer screen evokes less an object and more an environment, suggesting the regime of simulation discussed by Manovich: "The simulation tradition aims to blend virtual and physical spaces rather than to separate them. Therefore, the two spaces have the same scale; their boundary is de-emphasized (rather than being marked by a rectangular frame, as in the representation tradition); the spectator is free to move around the physical space."[11] The content of the computer screen is less a reassurance of what the detective already and intuitively knows (so of a redundant character) and more a concrete passageway to another possible diegesis, but also an off-screen and extra-diegetic space.

While in *Minority Report* the design and look of the computer screens, the mise-en-scène is innovative and futuristic in itself, with cinematography and shot-counter shot construction having to contribute less in order to evoke the regime of simulation as opposed to that of representation, in Vincenzo Natali's 2009 *Splice* in the mise-en-scène we see the frontal, theatrical view of a small biochemical laboratory, where we face a grayish window, with work desks and laboratory equipment all around, and a discrete flat computer monitor on the right of the room. However, the content of this computer monitor governed in the most classical manner through keyboards is presented, thanks to cinematography and editing, in such a manner so as to suggest its proximity to the regime of simulation, where the aim is "to blend the physical and the virtual space, therefore the two have the same scale, and their boundaries are de-emphasized, with the spectator free to move around."

Within the medium of film, and film spectatorship, the quality of "free movement" cannot be recreated in the same manner as in painting or Virtual Reality, and it has specific configurations in structures such as the shot-counter shot construction essential in separating the diegetic onscreen from the diegetic off-screen and also from the extra-diegetic, a process that is basically happening while on the thematic level the detecting human figure is watching a computer screen. So in such a tightly circumscribed situation "free movement" may be equated to direct ac-

cess close ups, when the viewer does not need the detecting figure in the shot to be able to interpret the content of the screen in the counter shot, but she can "freely" access and observe the image.

A good example for such a case is the sequence from *Splice* when the process of genetically splicing DNA-segments of different origin in order to create a hybrid creature, and the search for such a process "that cannot be sensed," is shown. On the computer screen we are offered close ups of computer graphics, figural representations of different animals, but also the four letters of the DNA and Latin species names as symbolic representations of the chemical-biological-genetic processes happening simultaneously. These symbolic elements cover the full screen, without explicitly being set as the counter shot of the shot which contains the detecting figure (in this case one of the scientists performing the splicing procedure of joining different-origin genetic materials: human, amphibian, mammal, bird). The detecting figure is shown from one side of the situation, in the same plane with the computer screen, and his dialogue and interaction with his partner is as much accentuated as his interaction with the computer screen. The computer screen content, with graphs, abstract images and letters, is also shown as an outer layer enveloping, covering curtain- or window-like the diegetic real space (Fig. 5), a method similar to what we have already encountered in *Minority Report*. Thus, in spite of the conventional mise-en-scène of the diegetic setting, through cinematography, colour and shading techniques, as well as editing choices, this sequence from *Splice* demonstrates a conception of the screen as simulation rather than representation, with the spaces of diegesis and that of the screen supposedly continuous and bordering on each other, thus forming a filmic human-computer interface. Here too the content of the information on screen will flow and materialize in the diegetic real space, in the form of the hybrid creature that is to be created through this splicing procedure. (S)he is Dren, the story of whom *Splice* actually will turn out to be.



These are choices on how to incorporate in the first-level diegesis the information presented on computer screens, choices which may be condensed in the conceptual metaphors of paintings, mirrors and passageways. Interestingly, the different paradigms are correlated to how the computer screens are imagined and designed as objects asserting influences and occupying space in the real world of the first-level diegesis. Computer screens that may be seen to conform to the painting idea as for the relationship between information stored on the screen and happenings in the first-level diegesis, as well as those that act as (pre- or post-event) mirrors of what is going on in the first-level diegesis, are conceived of as usually bulky objects that need to be watched and touched via keyboards. In contrast, those computer screens which present their surface (as storing information that is being searched for) in the form of passageways to further and differing diegetic worlds (or alternative universes, instead of simply extending the actual first-level diegesis) incorporate in their modes of functioning at least sound/voice control, so auditory channels too, as well as the body of the searcher, since information is being touched and manipulated manually not only on horizontal keyboards, but on vertically hanging screens as well.

2. The Screen as Representation and the Screen as Simulation

Elaborating upon the relationship between the physical space and the virtual space separated by the frame of the screen, Lev Manovich differentiates between screen as space of/for representation and screen as space of/for simulation, also setting apart traditions such as painting, television, film on the one hand, and computer screen and virtual reality displays on the other:

> The alternative tradition of which VR is a part can be found whenever the scale of representation is the same as the scale of our human world so that the two spaces are continuous. This is the tradition of simulation rather than that of representation bound to screen. The simulation tradition aims to blend virtual and physical spaces rather than to separate them. Therefore, the two space have the same scale; their boundary is de emphasized (rather than being marked by a rectangular frame, as in the representation tradition); the spectator is free to move around the physical space.[12]

Within this context and as generally valid remarks one can say that the visual-spatial structuring possibilities of scenes presenting a human figure searching information from a computer screen – filmic human-computer interfaces – are the following ones, also presented as a successive

transition from the screen as representation to the screen as simulation:

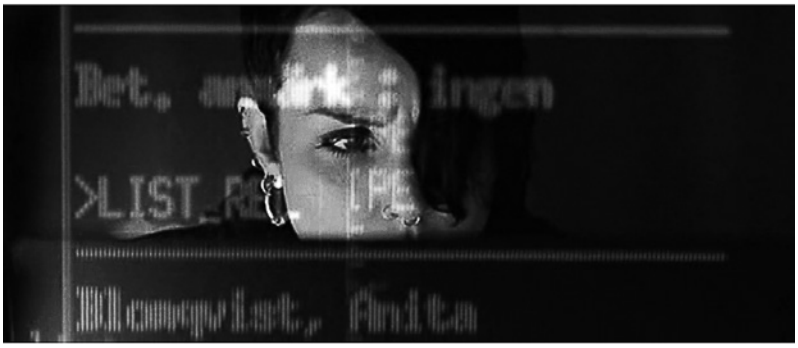
1. First of all, we may see classical and conventional shot/counter shot constructions: the oblique structuring of watching a man and a bit of the computer screen in shot A and computer screen and a bit of the gazing man in shot B, as in this example of journalist Mikael Blomkvist in *The Girl with the Dragon Tattoo*. Blomkvist watches the screen of his laptop while searching for data in the Helen Vanger mystery case (Fig. 6). This construction includes a rigid barrier between human figure and screen, thus stressing the idea of the frame Manovich speaks about, the frame that separates the physical world (in this case: also diegetic onscreen world) from the virtual (in this case: diegetic off-screen, or extra-diegetic world). Contemporary journalist Blomkvist is separated from the past four decades ago when young Helen disappeared from a Vanger family reunion.

2. We remain in the same regime of separating the physical space of the human detecting figure from the virtual space of the computer screen, e. g. the regime of screen as representation rather than simulation, with the second method: medium shots from one side of the two figures, e.g. human and machine, like in this long take taken from the analyzed sequence in Vincenzo Natali's *Splice* (Fig. 7), where we see the two researchers perform the splicing on the human-computer interface, with the computer screen also discernible in the room.

3. With the non-conventional shot-counter shot construction, as described by David Bordwell in *Narration in the Fiction Film*, when subjective optical standpoints of human detecting figure, and computer screen respectively, are shown, in my interpretation we enter the realm of screen understood as simulation rather than representation. In such cases in shot B the content of the computer screen, be that an image, or multiple windows, fills the whole frame, and formally become part of the diegetic onscreen world, thus the limit between physical space and virtual space starts to disappear discreetly. Such an example may be the subjective optical shot B of the computer screen, taken from the process when journalist Mikael Blomkvist analyzes photographs in *The Girl with the Dragon Tattoo*. The long-gone young Helen Vanger's street snapshot, represented here as a digitized image, fills both Blomkvist's computer screen, and the filmic screen we watch (Fig. 8).

4. A similar, though not identical effect is achieved when we are presented with such medium frontal shots during which the human detecting figure is mirrored or filtered through the computer screen, for example in the previously mentioned film when the heroine, Lisbeth Salander is presented as searching for data on the internet (Fig. 9).

Lisbeth's highly specific frontal close up is filtered through the symbolic signs (letters, numbers, computer commands) that represent her activity as shown on her laptop screen: a paradoxical spatial construction in itself, which synthesizes the classical shot of the human figure watching the countershot of the computer screen. With respect to this filtering method we may recall Elsaesser and Hagener, who, in accordance with the classification of Manovich about the screen being less and less representation and more and more simulation, make the following observation: "The discussion in contemporary (digital) media theory, around the layering practice of superimposition, video overlay, and the presence of multiple images of different intensity and contours within the same frame, comes much closer to the old concept of the screen as sieve and filter than it is to the idea of the screen as window or door."[13]



5. And finally, in my classification, the last example is circular camera movement that depicts the duo of human-computer (screen) by rotating around them, like in the already discussed screenshot/sequence from Spielberg's *Minority Report*. Through this method, the immersive effect of human figure and computer screen meeting so closely is circumscribed, strengthening our understanding of screen as simulation rather than representation. The filmic interface of human and computer screen is established due to the effect of camera movement, rather than "simple" mise-en-scène, shot-countershot construction or the overimposition of different image-layers, as in the other examples.

Lev Manovich clearly sees a historical progression from the conception of screen as representation (as in paintings or films) to the conception of screen as simulation (as in computers or virtual reality). The quotation from Elsaesser and Hagener about older and newer conceptions of the screen suggests that such a historical time-line is hard to uphold, if speaking from the linguistic-historical standpoint they occupy. As for my corpus of analysis, the epistemologically more radical idea of screen as simulation seemingly cannot be correlated to either a historical point/period in time (as the famous man-computer example from 1982 *Blade Runner* suggests, when chief detecting figure Deckard actually enters a photograph he analyzes by voice-control on screen), nor to a fundamental genre context, as science fiction and/or detection settings both offer epistemologically safe and epistemologically radical, unsafe imaginings of screen as representation and screen as simulation.

The single correlation that I am able to suggest is the bifurcation that is present in Oplev's 2009 *The Girl with the Dragon Tattoo* (an adaptation of Stieg Larsson's *The Millennium Trilogy*). Information that Lisbeth, the professional hacker girl, is finding, retrieving and organizing on screen

could be described as a belated representation of first-level diegetic happenings, and here we may think of her taking street photos of Blomkvist and his chief editor and lover, and then downloading these images on her laptop. In contrast, the journalist Mikael, an amateur computer user if compared to Lisbeth's professional hacking practice, is shown to succeed (with the help of Lisbeth, it must be admitted) in re-creating and giving birth to a new universe based on the scanned and digitally handled old photographs, a universe that may be called a parallel, hidden zone if compared to first-level diegesis. This is the decades old small city- and aristocratic mansion-entourage of the industrial magnate Vanger family, represented by the analogue family and press photographs extinct in Blomkvist and Salander's computerized present, revivable thanks to digital technologies. We could say that if the Zone in Tarkovskij's *Stalker* (1979) is spatially delimited, somewhere else than real space, then the true version of Helen Vanger's disappearance is simply somewhere else in time, and by its photographic bits and pieces being manipulated on a computer screen by an intuitive male detective, a parallel universe may be built, parallel if compared to events in the first-level diegesis.

3. Sensorial Richness and Rigid Computer Screens

The screen that opens on virtual spaces fully representable thanks to the filmic medium is but one interesting aspect of the filmic (diegetic) situation when a human figure watches a computer screen. Another significant feature of this banal, commonly experienced situation is the one that Sean Cubbitt elaborates upon in his essay "Digital Aesthetics," when he points to the fact that the digital (media) and aesthetics are terms that may be seen to exclude each other. While "deriving from the Greek, the term "aesthetics" refers to the study of sensory or sensori-emotional values,"[14] "this poses a first problem in digital aesthetics: many aspects of digital media simply cannot be sensed. In fact, as we shall see, what you *cannot* see is often the most significant thing about digital aesthetics,"[15] writes Cubbitt. He refers to, among other examples, to unseen-unheard information going through wires and sent to space via satellites.

That "sensory and emotional values" and "digital media" are mutually exclusive, and more so than "sensory and emotional values" and "painting" for example, may be also considered a commonsense opinion, and as such defining the design and make-up of mass-consumed mainstream genre cinema. However, mainstream genre cinema is also built upon the regime of classical storytelling as described by David Bordwell, with the viewer always offered the best possible view and thus possibility of iden-

tification on and of the diegetic world. In the case of storylines incorporating digital media the law of best possible view and access offered to the viewer is in need of metaphorical and allegorical solutions, if Cubbitt is right (as he is, in writing that "many aspects of digital media ... simply cannot be sensed").

The formal construction patterns that I presented may be seen as methods for the creation of such "sensory-emotional" metaphors (allegories) that represent digital media or the experience of digital media as rich with all kinds of sensorial stimuli, involving vision, sound, touch and movement. The analyzed sequence from Spielberg's *Minority Report* is a suggestive illustration of how mainstream cinema conveys the idea of screen as blocked between the idea of representation and/or simulation. A final quotation from Elsaesser and Hagener is, in my opinion, an adequate summary of what is happening while detectives are watching screens and detect meanwhile: "At the limit, film and spectator are like parasite and host, each occupying the other and being in turn occupied, to the point where there is only one reality that *un*folds as it *en*folds, and vice versa."[16]

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Notes

1. Lev Manovich, *The Language of New Media* (Cambridge, Mass.: The MIT Press, 2001), 94.

2. Per Persson, "Understanding Representations of Space: A Comparison of Visualisation Techniques in Mainstream Cinema and Computer Interfaces," in *Social Navigation of Information Space,* eds. Alan J. Munro, Kristina Höök and David Benyon (London: Springer, 1999), 196.

3. David Bordwell, *Narration in the Fiction Film* (Madison: University of Wisconsin Press, 1985), 16.

4. Thomas Elsaesser and Malte Hagener, *Film Theory: An Introduction through the Senses* (New York and London: Routledge, 2010), 5.

5. Elsaesser and Hagener, *Film,* 5.

6. Bordwell, *Narration,* 119–20.

7. Persson, "Understanding," 204.

8. Manovich, *The Language*, 112 (emphasis in the original).

9. Manovich, *The Language*, 103.

10. Manovich, *The Language*, 103.

11. Manovich, *The Language,* 112.

12. Manovich, *The Language*, 112.

13. Elsaesser and Hagener, *Film,* 53.

14. Sean Cubbitt, "Case Study: Digital Aesthetics," in *Digital Cultures: Understanding New Media*, eds. Glenn Greeber and Royston Martin (Maidenhead: Open UP, 2009), 23.

15. Cubbitt "Case," 23–24 (emphasis in the original).

16. Elsaesser and Hagener, *Film,* 11 (emphasis in the original).

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